

# **A Future for Labour in the Global Economy**

*Samuel Bowles*



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## ABSTRACT

From the standpoint of labour around the world, the problem with globalisation is not that it lowers market-determined wages and reduces employment; it is as likely to do the opposite, and what it will do varies from country to country. The more general problem is that labour depends on effective democratic states and trade unions to carry out policies of insurance, demand management, human resource development, and redistribution; the unimpeded movement of capital and goods may undermine their capacity to do this and destroy the political coalitions that historically have pursued these objectives. However, some of the more politically and economically successful examples of such policies – such as Nordic social democracy and East Asian land reform – have occurred in small open economies that would, on the above account, provide a prohibitive environment for egalitarian interventions. I seek to answer the following question: *in a liberalised world economy, what programmes to increase employment and real wages are implementable by democratic nation-states acting independently?*

While in the absence of international coordination globalisation indeed makes it difficult for nation-states to affect the relative (after tax) prices of mobile goods and factors of production, and for this and other reasons may limit the effectiveness of some conventional strategies of redistribution, a large class of state and trade union interventions leading to substantial improvements in the wages, employment prospects, and economic security of workers is not ruled out by globalisation. Included are redistributions of assets to workers in cases where the reassignment of property rights provides an efficient solution to incentive problems arising in principal-agent relationships such as wage employment.

## 1. INTRODUCTION

From the standpoint of labour around the world – meaning both Labour and workers – the problem with globalisation is not that it lowers market-determined wages and reduces employment; it is as likely to do the opposite, and what it will do varies from country to country.<sup>1</sup> The more general problem is that labour (and also Labour) depends on effective democratic states and trade unions to carry out policies of insurance, demand management, human resource development, and redistribution; the unimpeded movement of capital and goods may undermine their capacity to do this and destroy the political coalitions that historically have pursued these objectives. The problem is not new.

Although the word globalisation had not been coined, John Maynard Keynes sounded an alarm about its consequences that resonates today:

We each have our own fancy. Not believing that we are saved already, we each should like to have a try at working out our own salvation. We do not wish, therefore, to be at the mercy of world forces working out, or trying to work out some uniform equilibrium according to the ideal principles, if they can be called such, of *laissez-faire* capitalism ... We wish for the time at least ... to be our own masters and to be as free as we can ... to make our own favourite experiments towards the ideal social republic of the future. (1933):763, 768

Few now remember Keynes' prescient advocacy of local self-determination and policy experimentation; but the tension between global integration and national sovereignty has become a staple of the conventional wisdom, endorsed by scholars and diffused by the media. A leading mid-century international trade economist, Charles Kindleberger, concluded a generation ago that:

The nation state is just about through as an economic unit. ... It is too easy to get about. Two-hundred-thousand-ton tankers, ... airbuses and the like will not permit the sovereign

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<sup>1</sup> For presentation at the TIPS Forum on "Paths to Growth and Employment in South Africa," held in Johannesburg, South Africa, September 17-20, 2000. Thanks for able research assistance by Bridget Longridge, Yongjin Park, and Lawrence Evans, to Pranab Bardhan and Elisabeth Wood for comments on an earlier draft and to the MacArthur Foundation for financial support. Address: Department of Economics, University of Massachusetts, Amherst, MA, 01002, bowles@econs.umass.edu, <http://www-unix.oit.umass.edu/~bowles/>.

independence of the nation-state in economic affairs.  
(1969):207

Recent treatments have advanced the position that global economic integration has sharply circumscribed the latitude for egalitarian redistribution by national states. But is Kindleberger right?

For well-known reasons, a reduction of impediments to international flows of goods and factors of production – commonly termed globalisation – may enhance allocative efficiency both globally and within national economies, and the associated competition among nation-states may contribute to governmental accountability. However, globalisation is also thought to raise the economic costs of programmes by the nation-state to redistribute income to the poor and to provide economic security for their populations. Among the reasons is the fact that the more internationally mobile factors of production – capital and professional labour – tend to be owned by the rich, and a nation-specific tax on a mobile factor induces national output-reducing relocations of these factors. Similar reasoning demonstrates the high cost of attempting to alter the relative prices of factors of production, for example, by raising the wage relative to the return to capital through trade union bargaining. Even Pareto-improving insurance-based policies are compromised, as cross-border mobility of citizens allows the lucky to escape the tax costs of supporting the unlucky, thereby reintroducing the problem of adverse selection plaguing private insurance, which public insurance was thought to avoid (Sinn, 1997).

The result is a generalisation of what Arthur Okun (1975) called redistribution in *leaky buckets*: the net benefit to the recipient may fall considerably short of the loss to those paying the costs. In a democracy, leaky buckets make it more difficult to secure governmental support for egalitarian redistribution, and thus compromise both the ethical appeal and the political viability of redistributive programmes. By exacerbating the generalised leaky bucket problem, trade liberalisation and other aspects of globalisation are thought to restrict the range of redistributive policies that are politically sustainable in democratic nation-states.<sup>2</sup>

Some of the more politically and economically successful redistributive policies – such as Nordic social democracy and East Asian land reform – have been implemented in small open economies. This would, on the above

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<sup>2</sup> Globalisation can work powerfully to reduce inequalities, both between countries, and even within, where it may induce more competitive product markets (reducing the discrepancy between prices and marginal costs and thus raising real wages) and provide greater accountability for state and parastatal institutions often dominated by elites. It is in part for these reasons that centre-left parties such as the African National Congress in South Africa and the former Communist Party in Italy have supported trade liberalisation. On the basis of available data, however, one cannot conclude that either recent or long-term globalisation tendencies have on balance favoured greater equality in world income. The period of increased liberalisation from 1988-1993, for example was marked by a substantial increase in world inequality (Milanovic, 1999). See also Zimmerman (1962) and Schultz (1998).

account, seem to provide a prohibitive environment for egalitarian interventions (Moene, 1998; Huber and Stephens, 1998; Moene and Wallerstein, 1993; Yang, 1970; Putzel, no date; and Yager, 1980). Other cases of open-economy egalitarianism include: the Costa Rican welfare state (Mesa-Lago, 1989; Rosenberg, 1981; and Yashar, 1995); egalitarian distribution of health services and nutrition in Sri Lanka (Anand and Kanbur, 1991; and Isenman, 1980); wage compression in Singapore (Lim, 1984); and the public health policies and dramatic reduction in infant mortality under the socialist government of the Seychelles Republic (Republic of Seychelles, 1999).<sup>3</sup>

Particularly striking are the cases of two Indian states, Kerala and West Bengal. Goods and factors of production move freely across their boundaries, and their state governments have limited control over the legal and fiscal environment of their state economies. However, investments in health, schooling and other human capacities in Kerala, and land tenure reform in both states (especially West Bengal), have substantially redistributed income and improved the well-being of the poor (Ramachandran, 1996; Sengupta and Gazdar, 1996; Banerjee and Ghatak, 1996; and Besley and Burgess, 1998). The leftist governments credited with these policies have been repeatedly returned to office in democratic elections.

As even this brief description of relatively successful egalitarian redistribution cases suggests, the reasons for the policies – as well as their design and the mechanisms by which they worked – have differed substantially. Some owe their existence to electoral competition in polities with substantial majorities of poor voters; others have been implemented to forestall populist political successes. Each case exhibits serious shortcomings, but I will not dwell on these. My point is not to elevate them as models, but is more modest: unless the cases are entirely idiosyncratic, they suggest that the commonplace opposition between globalisation and egalitarianism may be overdrawn.

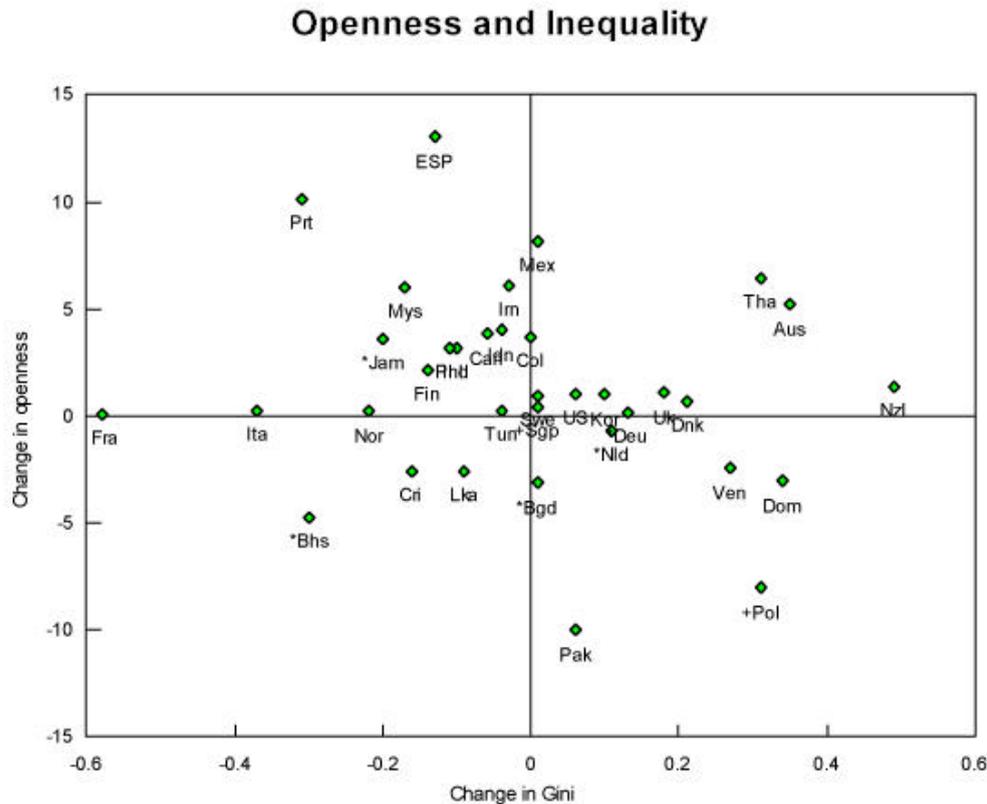
This impression is confirmed by a naive thought experiment using a larger sample of nations. One cannot learn much from the co-variation of measures of openness and of inequality in a simple cross-section of nations because there may be unobserved characteristics of nations that influence both. But to the extent that these influences do not vary over time, the relationship between the *change in openness* and the *change in inequality* may illuminate an underlying relationship of openness to income inequality. My measure of the change in income inequality is the time trend in the Gini coefficient of income estimated by Li, Squire and Zou (1997) from the 1970s to the early 1990s. In Figure 1 below, I used exports plus imports divided by gross domestic product (two year averages for 1974-5 and 1994-1995) as my measure of openness. It

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<sup>3</sup> The nature of the openness that characterises these cases differs of course; all have relatively large trade flows while some have (or had) relatively restricted capital flows.

is clear from the figure that the purported positive relationship between openness and inequality failed to materialise in these data (the statistically insignificant correlation is  $-0.17$ ). Experiments with alternative measures of openness did not alter this conclusion.

**Figure 1** *Change in Openness and Change in Inequality (Source: See text)*



I refer to the figure as naive both because it makes no attempt to specify underlying causal relationships and because I have not addressed the serious problem of measurement of the two underlying concepts. But its descriptive message is somewhat surprising: by these measures, the countries that have experienced the greatest increase in openness have not experienced above average increases in inequality. I do not conclude that openness has no effect, but rather that there are other factors.

In the pages which follow I present a model of globalisation and redistribution seeking to answer the following question: in a globalised world economy, what programmes of egalitarian redistribution and social insurance are implementable by democratic nation-states acting independently? A programme is implementable if its desired outcome is a stable Nash

equilibrium of the appropriately defined game.<sup>4</sup> An implementable programme must therefore be economically and politically sustainable and not susceptible to being undone either by the electorate or by private exchange.<sup>5</sup>

My response, drawing on recent work of many authors, is that in the absence of international coordination, globalisation indeed makes it difficult for nation-states to affect the relative (after tax) prices of mobile goods and factors of production, and for this and other reasons may limit the effectiveness of some conventional strategies of redistribution. However, globalisation does not rule out all egalitarian interventions. There remains a large class of governmental and other collective interventions leading to substantial improvements in the wages, employment prospects, and economic security of the less well-off. Included are redistributions of assets which are productivity enhancing, namely those which provide efficient solutions to incentive problems arising in principal-agent relationships such as wage employment, farm and residential tenancy, and the provision of environmental and social public goods in local commons situations.<sup>6</sup>

Because I will reason from a deliberately exaggerated model of global openness, a caveat on empirical realism is necessary. A number of empirical studies, beginning with Gordon (1988), have stressed that while cross-border flows have increased in recent years, by these measures the degree of both trade and investment openness in recent decades is quite limited compared to a century earlier.<sup>7</sup> The measure of globalisation crucial to the above argument, however, refers not to the aggregate quantities on which these studies focus, but to microeconomic responses. The relevant indices should measure the impact of globalisation on the elasticity of demand for labour with respect to the real wage (openness possibly raising the employment costs of wage increases), as well as the possibly heightened responsiveness of national investment to own-country wage levels and tax rates relative to the rest of the world. There is little hard evidence that by these microeconomic measures openness has increased in recent years, though it seems plausible to think that it has, or at least will.<sup>8</sup> In any case, given the widespread view that these aspects of globalisation will thwart attempts at egalitarian redistribution, it is

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4 More stringent requirements might be imposed, namely that the changes needed to enact the transition from the status quo to the desired programme (not just the programme itself) be implementable, or that the underlying preferences be stationary. I do not explore these problems here.

5 The cases of open economy egalitarianism cited above fail to meet some criteria of democracy over the relevant years (especially alternation of parties in power for South Korea, Taiwan, and Singapore) but none were outright dictatorships and most were exemplary democracies. Przeworski, *et al* (2000).

6 A review of these cases is provided in Bardhan, Bowles, and Gintis (2000). Asset-based redistribution is also stressed in Birdsall and Londono (1997). See also Franzini and Milone (1999).

7 See also Taylor (1999), Glyn and Sutcliffe (1999) and the works cited there.

8 Slaughter's (1999) estimate of an impact of openness on the wage elasticity of demand in the U.S. economy cannot be distinguished from a time trend, and the same is true of Heintz and my estimates showing a secular increase in the elasticity of demand for labour in South Africa (1997). Gordon *et al* (1998) found some evidence of a substantial negative "rest of the world profit rate" effect on U.S. investment, but while Koechlin (1992) also found a statistically significant negative effect of other countries' profit rates on domestic investment in the U.S., this was true in none of the six other countries for which he estimated investment functions. Epstein (1996) found little evidence of convergence of profit rates among nations.

worth finding out if this is indeed the case, under admittedly extreme globalisation assumptions. Whether the model illuminates real (if very long term) tendencies operating in the world, or alternatively is a more hypothetical exercise (how the world would work if it were like that), cannot be determined on the basis of existing empirical information.

In the next section, I explore some salient features of a national economy embedded in a globally competitive environment. The subsequent section addresses a range of conventional state and trade union policy measures. I then turn to asset redistributions, before concluding with a discussion of policies and institutions.

## 2. GLOBALISATION

The model described below seeks to illuminate the opportunities for egalitarian redistribution in a national economy integrated into a world economy characterised by minimal impediments to capital mobility among nations.<sup>9</sup> To focus on the contribution of globalisation *per se* to the leaky bucket problem (and because the problems constituted by corruption and other forms of governmental malfeasance and unaccountability are well-known), I will assume that governments are not self-serving leviathans (as in the public choice literature) but rather seek to improve the living standards of the less well-off. Redistribution takes the form of increases in the living standards of a homogeneous class of workers, either by raising their income or improving their prospects of being employed. Its focus is not on inequality *per se*, but on labour market outcomes affecting two important aspects of workers' well-being: jobs and pay.

The model thus abstracts from differences among workers, and much else of importance, but seeks to explore the ramifications of two important empirical regularities. The first is that under a wide range of institutional conditions real wages co-vary with the level of employment. The second is that investment relocates globally in response to differences in expected after-tax profit rates.<sup>10</sup> The deliberate exaggeration of the degree of globalisation – the *hyper-globalisation assumption* – is to suppose that capital is so mobile that national differences in the expected after-tax profit rate are unsustainable. This seems like an advanced version of the world that Kindleberger had in mind: we will ask if he was right to conclude that in matters of redistribution “the nation-

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<sup>9</sup> The model is presented formally in Bowles (2000).

<sup>10</sup> Econometric evidence of profit-led investment is presented in Catinat (1988), Clark (1979), Kopcke (1985), Feldstein (1982), Bhaskar and Glyn (1995), Boyer and Bowles (1996), Bowles, Gordon and Weisskopf (1989), Gordon, Weisskopf and Bowles (1998) and the works cited there. Evidence concerning the covariation of real wages and employment is found in Bowles (1991) and Blanchflower and Oswald (1994).

state is just about through as an economic unit” under these hypothetical conditions.

The basic assumptions of the model follow. All markets are perfectly competitive, but labour – which is homogeneous within countries – is not mobile between countries. The global economy is thus modelled as if it were a national economy with a single capital market but segmented labour markets; the difference, of course, is that each labour market segment is represented by an autonomous government. There is a single good that is both consumed and used as capital: corn is eaten and planted as seed. At the end of each period, after the payment of wages, wealth holders (those who own the corn surplus, if it exists) may either consume corn or allocate it as an investment good among many national economies in response to national differences in expected after-tax profit rates.

Actors differ by wealth level: the wealthy are risk-neutral, while those without assets (workers, employed and unemployed) are risk-averse. Neither work effort nor the promise to repay a loan is contractible, so the relations between employers and workers and between lenders and borrowers are principal-agent relationships. Employers use monitoring and the threat of dismissal to induce workers to provide satisfactory levels of effort. For this reason (and perhaps others), the equilibrium of the labour market in each national economy is characterised by involuntary unemployment. Thus labour suppliers are quantity-constrained in labour markets. Lacking wealth they are unable to provide collateral or other means of attenuating the incompleteness of the credit contract and they are also quantity-constrained in credit markets.

The competitive equilibria of this model for the single global markets in capital goods (corn) and credit support a common rate of expected profit and rate of time preference globally (and hence the risk-free interest rate). By contrast, nation-specific institutions and cultures concerning labour relations, government policies and security of property rights give rise to national differences in equilibrium wages and employment. There are thus  $n+1$  prices in this model: each of  $n$  nations’ real wage (price of an hour of labour relative to the price of corn) and the global risk-free interest rate (price of goods now relative to goods later). As I will investigate just a single national economy, I will not give national subscripts to the relevant variables.

I normalise national labour supply at unity (given exogenously); so  $h \in [0,1]$  is the fraction of the labour force employed and  $(1-h)$  is the unemployment rate. Effort is determined by workers in response to the incentives and sanctions devised by the employer. As these include monitoring and the threat of job termination, the worker’s optimal effort choice varies inversely with his or her fallback position, namely expected utility if employment is terminated, which depends on the expected duration of a spell of unemployment and the level of

support conditional on being unemployed, b. Employers offer a wage,  $w^*$ , which minimises the cost of inducing the worker to provide work effort given worker's fallback position, or

$$(1) \quad w^* = w^*(h;b)$$

with  $w^*$  co-varying with both  $b$  and  $h$ , because higher levels of both employment and income support when unemployed improve the worker's fallback position.<sup>11</sup> I will simplify by assuming that wages greater than or equal to  $w^*$  induce a given level of effort while wages lower than  $w^*$  result in no effort being provided. Equation (2) describes the locus of labour cost minimizing combinations of  $w$  and  $h$ , and thus may be called the *labour supply equilibrium condition*.

Of course (1) depends on the institutional structure governing labour relations, such as the costs to the employer of firing a non-working employee, the perceived fairness of the wage determination process, and the degree of effectiveness of the monitoring system. It will be important later to note that because employers pay  $w^*$ , employees do not shirk, so they are not fired, and hence bear no risk. Thus  $(1-h)$  are permanently unemployed.

Labour demand (and hence the level of unemployment) depends on the allocation of the global capital stock among national economies in response to differences in the expected after-tax profit rate. If we assume that production requires a given amount of labour effort and capital per unit of output, then we can express the before-tax profit rate as an inverse function of the wage rate:  $r=r(w)$ . Suppose that to finance its activities, the national government levies a linear tax,  $t$ , on profits so the after-tax profit rate is

$$(2) \quad \pi = (1-t)r(w)$$

Wealth holders finance a project if its expected return exceeds their rate of time preference, which I will assume is globally equal to the return on some risk-free instrument,  $\rho$ . Projects are exposed to a risk of "confiscation" or other unexpected reduction in their value, the probability of which,  $c \in [0,1]$ , varies among countries, reflecting national differences in political stability, criminality, macroeconomic policies, and the like. (In a less abstract model with distinct national currencies, risk includes adverse changes in foreign

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<sup>11</sup> Equation (2) is the so-called "no shirking condition" or optimal wage in labour discipline models (Shapiro and Stiglitz, 1984; Bowles 1985). An alternative formulation yielding similar qualitative results would make the wage level and effort level the outcome of a collective bargaining process, with the (Nash) bargain struck depending on the fallback position of the two parties, and labour's fallback rising with  $h$ .

exchange rates.) Suppose the return is zero in the period of the confiscation: wages are paid but the expected costs of contestation occasioned by the confiscation exactly exhaust the profits. The expected profit rate is thus  $\hat{p} = \pi(1-c)$ . Writing the insecurity premium,  $\mu = 1/(1-c)$ , the national economy's level of investment is stationary if expected after-tax profit rates are equated across nations and are jointly equal to the risk-free interest rate ( $\hat{p} = \rho$ ) or:

$$(3) \quad \rho\mu = \pi$$

Because  $r$  is monotonically declining in  $w$ , there is just one wage rate,  $\underline{w}$  that will satisfy (3), defined by

$$(4) \quad \rho\mu = (1-t)r(\underline{w})$$

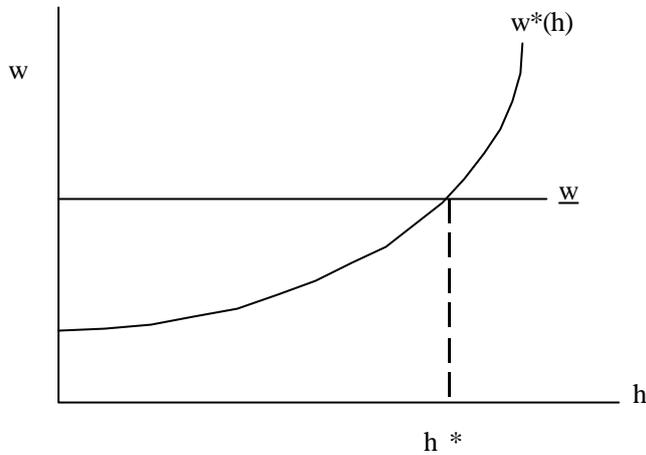
When (4) obtains the level of the capital stock, and hence employment is stationary, it is the *equilibrium labour demand equation*.

Because  $w^*(h)$  is monotonic, there is just one  $h$  consistent with  $\underline{w}$ . The general equilibrium of the national economy (taking  $\rho$  as exogenous) is defined by

$$(5) \quad w^* = \underline{w},$$

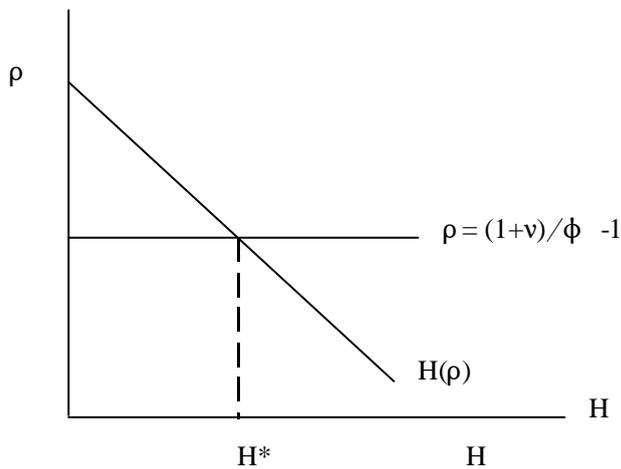
satisfying the condition for stationarity of both the employment rate and the wage rate. Figure 2 illustrates the equilibrium of this model for a given national economy.

**Figure 2 Equilibrium Wages and Employment**



The joint determination of employment and the wage may be described as follows: the nation's specific institutions that influence the net after-tax productivity of labour and the risk premium also determine the national wage rate consistent with optimising by the owners of mobile investment resources, and the nation's institutions concerning labour markets and work organisation determine what national level of aggregate employment makes that wage consistent with individual optimising by firms and workers.

**Figure 3 World Labour Demand**



To analyse the determination of global employment, notice that a common global  $\rho$  implies country-specific  $\underline{w}_i(\rho)$ 's for each of the  $n$  national economies: the wage rates consistent with the stationarity of the capital stock differ among countries due to differences in labour productivity net of monitoring costs, tax

rates, and insecurity premia. Given nation-specific  $h_i(w)$ 's, the  $h_i$ 's are determined as well and we can write each nation's level of employment as a function of the global risk-free interest rate or  $h(\rho)$ . So we may define global employment  $H(\rho)$  as the horizontal summation of these  $h_i(\rho)$  functions, giving  $H(\rho)$ , with  $H' < 0$ , where the variation in world employment is simply that generated by varying  $\rho$  given the equilibrium condition (6). Figure 3 illustrates the determination of global employment.

Finally, the global supply and demand for the investment good, together with the above conditions, determine the risk-free interest rate,  $\rho$ . This process is described in Bowles (2000) where it is shown that if  $\phi$  is the fraction of the returns to capital that wealth-holders allocate to investment (the rest being consumed) and  $v$  is the rate of growth of world labour supply, the equilibrium risk-free rate of return on capital is:

$$(6) \quad \rho = (v + 1)/\phi - 1.$$

Countries with labour force growth slower than the world average will be permanent exporters of corn-capital and vice versa. An implication is that when national labour forces all grow at the global average, in equilibrium all investment is domestically financed.<sup>12</sup> In the following analysis of a single country I treat  $\rho$  as exogenous.

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<sup>12</sup> Note that in this "hyper-globalised" economy, there are no investment or trade flows in equilibrium, underlining the importance of distinguishing between aggregate flow-based and microeconomic response-based measures of openness.

### 3. INCREASING WAGES AND EMPLOYMENT

Where, as in Figure 2, the equilibrium is unique and stable, the effect of country-specific policy interventions may be studied (as I will do presently) by a comparative static analysis of the displacement of the exogenous terms in  $w^*(h;b)$  and  $\underline{w}$ . However, the more complicated case of multiple equilibria – some of them unstable – cannot be ruled out. To see this, suppose that the confiscation probability  $c$  varies inversely with  $h$  – high levels of unemployment supporting a populist or criminal environment, for example – so  $\mu = \mu(h)$  with  $\mu' < 0$ . Then  $\underline{w}$  is increasing in  $h$  because higher levels of employment support a lower risk premium, allowing for lower profit rate on successful projects and hence a higher wage rate.

Because  $w^*$  is also increasing in  $h$ , there may thus exist many values of  $h$  equating the two.<sup>13</sup> Figure 4 illustrates an upward-rising equilibrium labour demand function, with one labour market equilibrium exhibiting the vicious circle of low employment, low wages, and high insecurity premium ("Nigeria") and another exhibiting the virtuous converse ("Taiwan"). The possibility of multiple stable equilibria enriches the policy analysis considerably, as it allows small one-time interventions to have permanent, non-marginal effects, and it provides a framework for analysing possible divergent growth paths ("high road" vs. "low road" wage strategies, for example). A one-time demand expansion, for example, pushing the employment level above the critical value  $h^*$  in Figure 4 could permanently shift the equilibrium from the low wage/high insecurity poverty trap to its virtuous converse.

The impact of strategies to raise wages and employment may now be assessed through their curve-shifting effects in Figures 2 or 4. For example, enhanced security of property rights by reducing  $c$  (for any level of  $h$ ) lowers  $\mu$ , hence raising  $\underline{w}$ , and increases both  $h^*$  and  $w^*$  (from figure 4, it can be seen that the implied upward shift in  $\underline{w}(h)$  might also eliminate the "low road" equilibrium, displacing a national economy previously entrapped there to a rapid transition to the "high road").

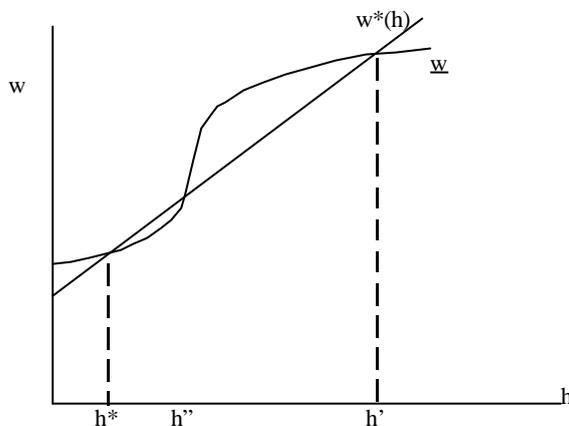
The effects of changes in labour relations and labour market structure are equally transparent. Efforts to protect workers from dismissal for cause through job protection strategies shift the  $w^*(h)$  function upwards without

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13 I provide no reason to expect multiple equilibria -- they are not difficult to imagine -- but simply note that their possibility may help explain the pattern of contrasting growth trajectories of national economies with similar initial income levels (Nigeria's per capita income exceeded that of Taiwan, for example, in 1950 (Summers and Heston, 1984) and more generally what Quah (1996) calls the "twin peaks" pattern of divergence in income levels among countries.

affecting  $\underline{w}$ , leaving the wage rate unaffected but reducing employment (if these policies also altered the labour discipline environment so as to require more monitoring of employees in order to elicit work effort, the  $\underline{w}$  function would also shift downward, lowering the wage). Raising  $b$ , the magnitude of transfers whose availability is conditional on being out of work, has a similar effect, but unlike protection against termination for cause, the welfare implications of an increase in  $b$  are ambiguous, as it raises the well-being of the least well-off (the jobless), while increasing their numbers.

**Figure 4 Multiple Equilibria (Endogenous risk)**



Trade unions may increase wages and/or employment in a number of ways, however (Bowles and Boyer, 1990b). First, unions may draw on workers' private information concerning the performance of other workers to improve the disciplinary environment of the workplace, thereby increasing labour productivity net of monitoring inputs, for example, and thus raising  $\underline{w}$ . Second, "union voice" effects (Freeman and Medoff, 1984) may raise labour productivity and reduce the disutility of labour (the latter would lower the  $w(h)$  function, supporting a higher level of employment). Third, collective bargaining agreements to provide well-defined job ladders and security from cyclical job loss provide greater incentives for firm-specific investments by workers (Pagano, 1991) shifting  $\underline{w}$  upwards.<sup>14</sup> Fourth, negotiated incomes policies may lower or flatten the  $w^*(h)$  function. Finally, if  $\underline{w}$  becomes accepted as a fairness norm – perhaps because it is the wage rate that will give the employer a rate of return equal to what other employers receive, or to the marginal disutility of foregoing current consumption – and if, as seems likely, perceived fairness is a determinant of work effort, the  $w^*(h)$  function will flatten, thereby increasing the employment gains associated with upward shifts

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<sup>14</sup> In a multi-period context, a reduction in the probability of job loss for reasons other than insufficient effort (protection from cyclical layoffs, for example) reduces the no-shirking wage because it increases the value of not shirking.

in  $\underline{w}$  due to productivity gains. Because in equilibrium no employee is working harder as a result of any of these changes, and because the unemployed prefer employment, the welfare gains associated with the implied trade union induced increases in wages and/or employment are unambiguous.

The effects of government expenditures and the efficiency of public service delivery may be explored in similar fashion. Suppose the productivity of a unit of effective labour depends on the effectiveness and level of public expenditure on productivity-enhancing complementary inputs (such as nutrition, health care, schooling and infrastructure), which along with expenditures on the unemployment benefit (amounting to  $(1-h)b$ ), absorb the sum of tax revenues. Then for a given tax rate, there is a level of employment,  $h_0$ , such that unemployment benefits exhaust the entire budget, and productivity per effective unit of labour is  $\underline{y}(0)$ , namely that associated with no public expenditure on productivity-enhancing inputs.

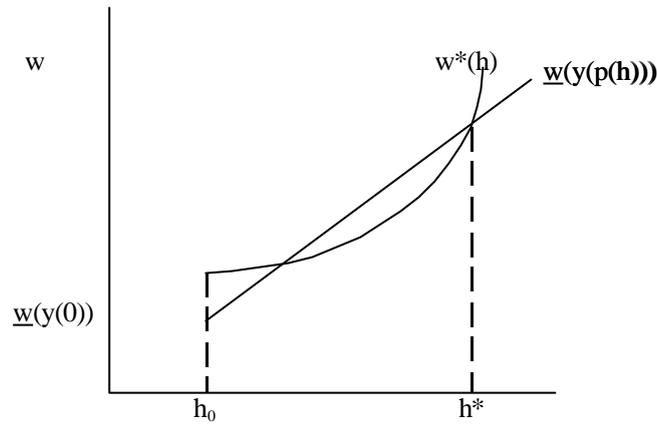
Above this level of employment, productivity-enhancing public expenditures increase, requiring a higher wage to equilibrate the capital market, and yielding the upward-rising  $\underline{w}$  function in Figure 5. The also upward-rising  $w^*(h)$  function (as drawn) intersects the equilibrium labour demand function twice, suggesting a possible high and low public investment divergence among nations. Because for any level of  $h$ ,  $\underline{w}$  co-varies with the level of productive public expenditures, and varies inversely with  $b$ , and because (as we have seen) decreasing  $b$  also shifts the  $w^*(h)$  function to the right, it follows that reallocating expenditure from transfers conditioned on unemployment toward productivity-enhancing public investment will simultaneously raise the (stable) equilibrium wage and employment level.

Similar arguments apply to measures that would increase the efficiency of public service delivery, of course. It might appear that this change is unambiguously welfare-enhancing, but a more realistic model in which the employed periodically lose their jobs would show that for sufficiently high levels of risk aversion among workers, the lost insurance would more than offset the higher expected wage. It also follows that there is a policy choice concerning the manner in which productivity increases should be shared with the unemployed through expanding the number of jobs on the one hand, or by raising the average income of those remaining unemployed on the other.

As the examples in this section make clear, opportunities for raising wages and/or employment arise when allocative inefficiencies can be corrected either at minimal cost (as when 'union voice' effects may attenuate the misalignment of incentives arising from the incomplete employment contract) or through expenditures on which the expected social rate of return exceeds  $\mu\rho$  (as when credit constraints or other reasons induce workers to acquire inefficiently little

schooling). The problems of credit constraints and incomplete contracts may also be addressed more directly by a redistribution of assets, or more precisely by a redistribution of the rights of residual claimancy and control (commonly bundled with asset ownership), and by extending to the asset-poor the credit market and insurance opportunities of the wealthy as is proposed in Bardhan, Bowles, and Gintis (2000) and Bowles and Gintis (1998).

**Figure 5** *Endogenous Transfers and Public Investment*



#### **4. POLICIES**

Of course actual governments and trade unions may fail to implement efficient redistributions for a variety of well-known reasons. However, on the basis of the above reasoning, there appears to be ample scope for the implementation of policies capable of raising wages, employment levels and living standards of the less well-off owners of globally immobile factors of production, even in the empirically unlikely world of hyper-globalisation posited in the model. It seems likely that substantial majorities of the relevant populations would benefit from these policies, so the policies might be sustainable in democratic polities.

Figure 6 Annual Rate of Change of Real Wages and Initial Wage Levels, 1970 - 1992

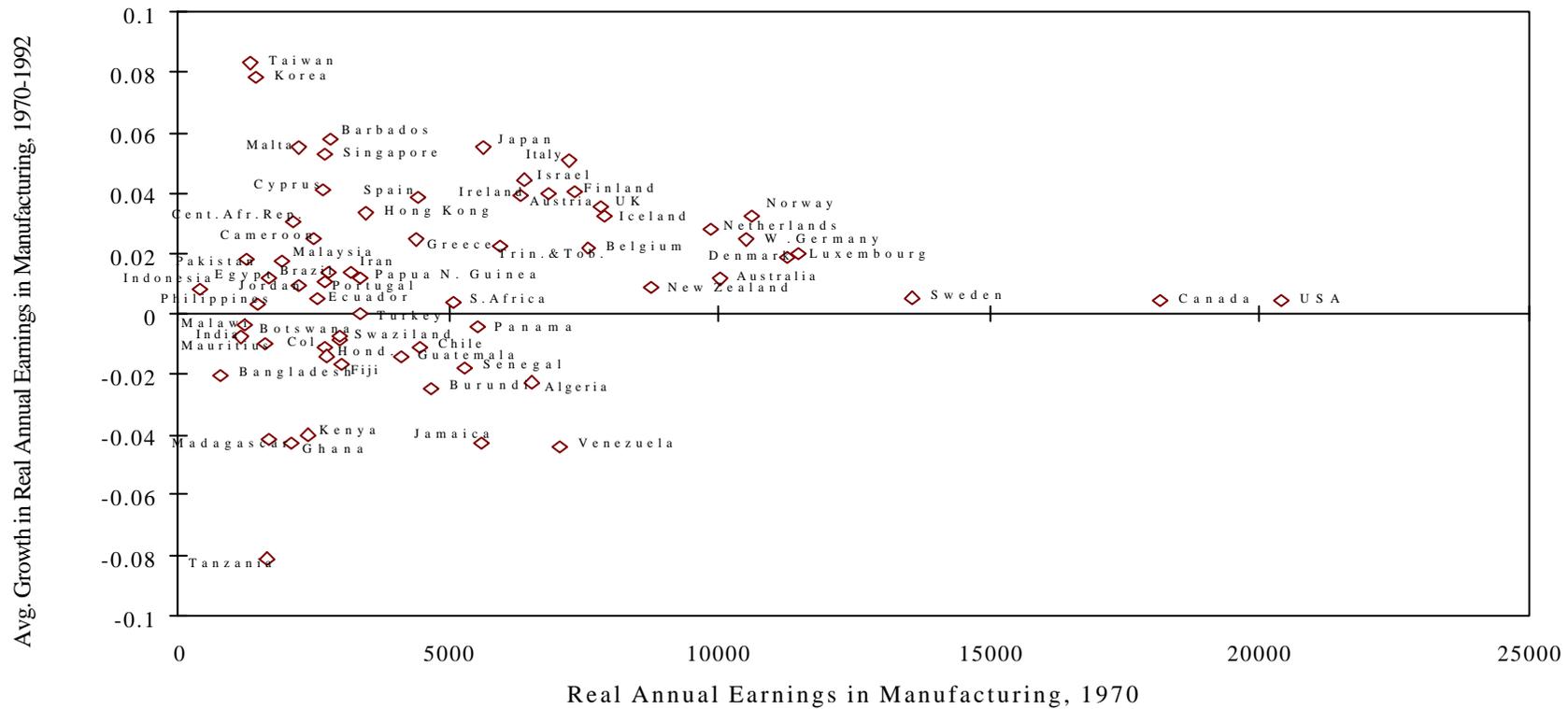
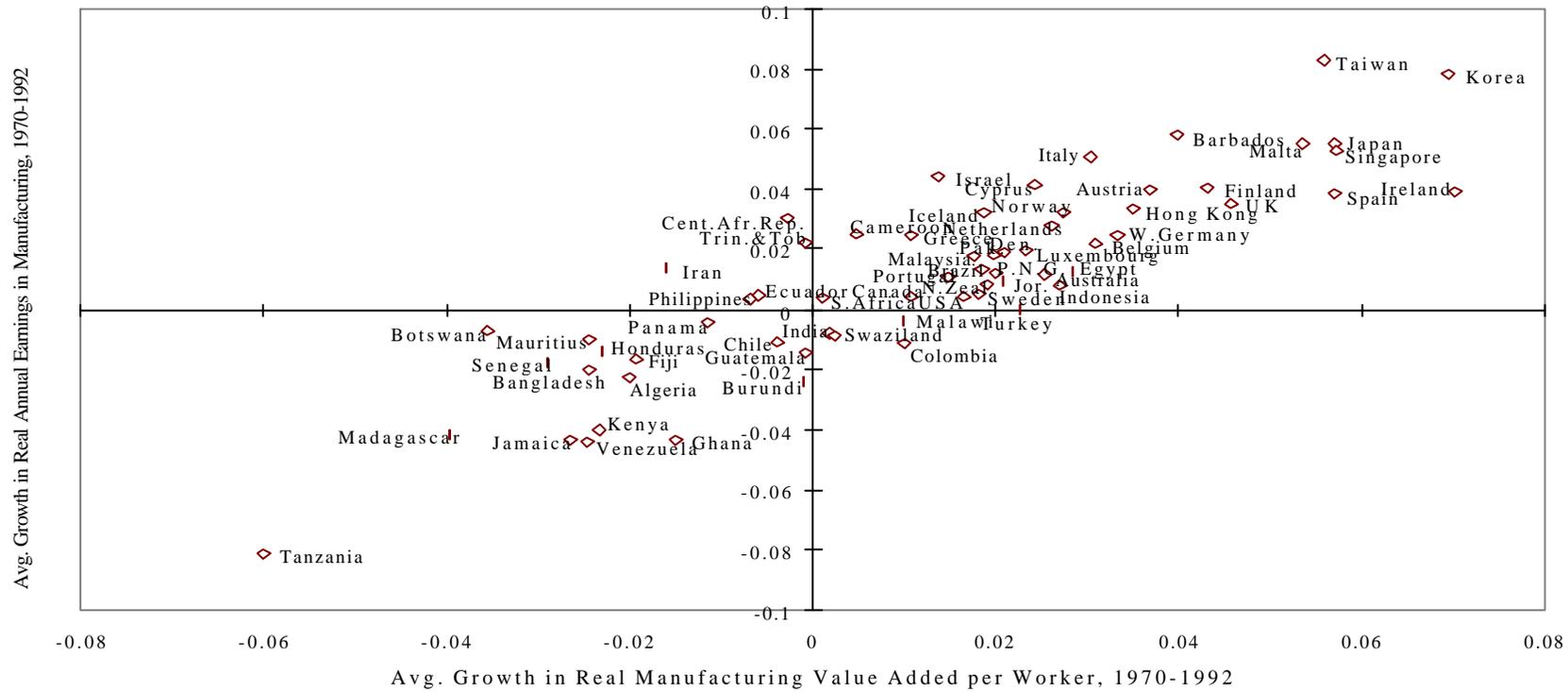


Figure 7 Rate of Change of Real Wages and Value Added per Worker, 1970 - 1992



That these objectives can be furthered by nation-states acting singly is suggested by the dramatic national differences in real wage growth that have been sustained over long periods. Figure 6 presents data (from Verhoogen 1999) on real manufacturing wage growth over a 22-year period.<sup>15</sup> Even taking account of the possible importance of productivity catch-up effects (by comparing national economies initially at the same wage level) one finds extraordinary differences: the *annual* rate of change of real wage was 16 percentage points higher in Taiwan and South Korea than in Tanzania and 10 percentage points higher in Barbados and Italy, than in Jamaica and Venezuela. Some of the high wage growth economies have also experienced very rapid employment growth.

Figure 7 confirms what one would expect: that wage growth is closely tied to productivity growth. Even for economies experiencing similar rates of increase in manufacturing value added per worker, the differences in wage growth are substantial. Productivity in Indonesia grew at the same rate as in Italy, for example, but wages grew over 5% faster *per annum* in the latter. While much of the differences are due to idiosyncratic events and circumstances – the differing impacts of the two oil shocks, for example – national contrasts of this magnitude suggest that institutional and policy choices do matter, even for small open economies. This is consistent with the fact that economies in which wages exceeded \$10,000 in 1972 and shared broadly similar institutions experienced far less variability in subsequent wage growth.

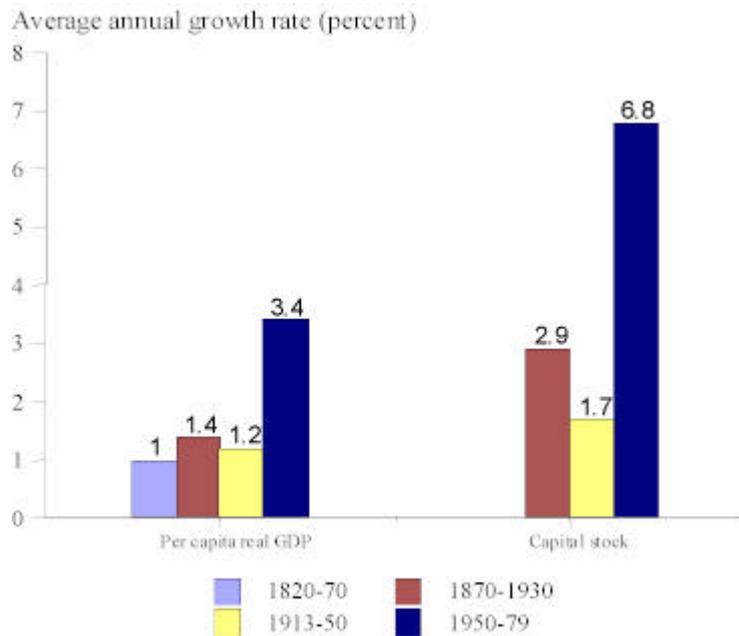
We know little, it seems, about which institutions and policies account for the success stories. A common opinion in some policy circles is that strong unions and substantial redistributive programmes are counter-productive in attempting to raise living standards of the less well-off. The reasoning behind this view is that these institutions favour the egalitarian division of the pie, rather than more promising long-term strategies of rapid growth in investment and average incomes. Examples confirming this reasoning are all too easy to produce. However, this view finds little support in the above data. Indeed, a long historical perspective suggests the opposite: as Figure 8 shows, the golden age of the welfare state and of trade unionism in the advanced economies witnessed by far the most rapid rates of growth of income per capita and investment in the history of capitalism.<sup>16</sup> In most countries, the improvement of living standards of the less well-off was correspondingly rapid.

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15 The data (for this figure and the next) are from the United Nations Industrial Development Organisation Industrial Statistics Database. The wage measure is average annual earnings in manufacturing. The subsequent productivity measure is value added per employee in manufacturing.

16 The data refer to 13 economies comprising most of world output over the period covered, and are from Glyn, et al (1990), based on Maddison's (1982) data set. The measure of capital accumulation is based on the tangible reproducible non-residential fixed capital stock.

**Figure 8 Growth and Investment, 1820 - 1979**



The model presented here and the empirical evidence suggests three ways that egalitarian redistribution in open economy settings may have succeeded. The first is by increasing productivity (or certainty-equivalent income, where risk-bearing is involved). Examples include the East Asian land redistributions and the Nordic (especially Swedish) policy of eliminating wage disparities among similar workers, thus putting competitive pressure on low productivity firms and sectors and driving resources into higher productivity uses.

The second is improving the labour discipline environment and thereby reducing monitoring costs and shifting the equilibrium labour supply condition to the right. Examples include the effect of wage increases, the disutility of effort (through the fair wage effect), trade union and work team participation in monitoring, and the effect of centralized wage bargaining on flattening the labour supply function. The fact that supervisory labour input is strikingly lower in countries with more egalitarian earnings distributions (Sweden, Japan) may reflect these and related effects (Gordon, 1994).

The third strategy is simply to redistribute labour income in a more egalitarian manner without eroding effort incentives. Suppose that instead of providing income conditional on unemployment, the government gave all adult members of the population an unconditional grant and financed the grant by a tax on wages supplemented by the general revenue savings occasioned by setting  $b=0$ . Assume the government sought to do this while maintaining the status quo work incentive situation, as modelled in Bowles (1993). As  $b=0$ , the equilibrium labour supply condition (no shirking condition) is now

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(1')  $w^* = w^*(h;0)$

the removal of the unemployment benefit having displaced the function to the right. Suppose the tax on wages were just sufficient to restore the status quo *ante* no shirking condition, the after-tax wage reductions just offsetting the lost unemployment benefit, so that the expected cost of a job termination is unchanged.

As the labour demand equation has not been altered, the employment and (before tax) wage level would thus remain at the status quo levels. The effect would be a redistribution from the employed and the unemployed to those not in the labour force, obviously favouring the old, the young, women, and other groups sometimes considered "excluded." It might be thought that the effects of the unconditional grant would be slight because family structure and other sharing arrangements allow income pooling. However, even in the empirically implausible case that all of the differentially-affected groups were paired in pooling arrangements so that the expected income of each was unaffected by this policy, dispersion of unconditional income claims to those not in the labour force would predictably alter the intra-family bargaining power in favour of women, and possibly also the credit market status of the previously relatively poor and powerless. This appears to be the case, for example, of the quite generous transfers to the elderly in South Africa (Ardington and Lund, 1995). Of course the grant need not take the form of a cash transfer, but could rather be dedicated claims on health, education, recreation, and other services.

As this last example suggests, in the design and implementation of policies consistent with the supply-side egalitarian approach surveyed here, the heuristic distinction between the asset redistribution approach advanced in Bowles and Gintis (1998) and the wage and employment policies of the section on Increasing Wages and Employment will lose some of its salience. Where labour contracts embody both job security and group- or firm-level gain sharing, for example, employees, may become *de facto* residual claimants on a substantial fraction of the income streams they generate. Trade union bargaining can thereby capture some of the peer monitoring advantages of outright asset distribution.

This is particularly likely to be the case where the monitoring labour effort by outsiders is ineffective (as in many information-based and other service activities), where firm-specific human resource investments are important, and where the capital required is either limited in amount or general (rather than transaction-specific) and not subject to depreciation through misuse. The land tenure reform in West Bengal mentioned at the outset embodied exactly this logic: the outright transfer of assets to farmers was precluded by the property clauses in the Indian constitution. Rather, the farmer's share of the crop was increased from a customary one-half to three-quarters, and tenants were given protection from eviction as long as they granted the landlord the stipulated reduced share. The result was a substantial increase in the rights of residual claimancy due not only to the increased share, but also to the reduced threat of eviction and hence the greater likelihood that the farmer would enjoy the future returns to land improvements and other investments.

## 5. CONCLUSION

Does globalisation impede egalitarian redistribution? Was Kindleberger right?

What globalisation does is make it quite costly and possibly politically infeasible to depress the expected after-tax rate of return to capital, or to alter the relative prices of tradeable goods and services. Yet while globalisation – at least in the “hyper” form illustrated here – fixes the relative prices of some productive services, it does not preclude an egalitarian redistribution of the tangible and human assets from which those services flow, the enhancement of the assets currently owned by the less well-off, or the improvement of the institutionally determined flow of services from labour assets. Thus, while gain-seeking competition does restrict the range of economically and politically sustainable relative prices, it does not preclude egalitarian redistribution. The fundamental theorem of welfare economics defines conditions under which *any* technically feasible and Pareto-optimal distribution of welfare can be attained by *some* redistribution of assets followed by perfectly competitive exchange. The theorem is not intended as a guide to policy, but it does underline an important truth: to the extent that globalisation heightens competitive pressures, it may reduce the attractiveness of redistributive approaches that rely on altering relative prices. However, this hardly exhausts the set of egalitarian strategies.

An implication of the above is that the traditional vehicles of egalitarian aspirations – trade unions and states – have a different but no less important role to play in a highly competitive world than in closed economies. The scope for conventional governmental and trade union measures that reduce the after-tax expected rate of profit is indeed restricted. However, policies to implement Pareto-improving productivity gains may in some respects require a greater – rather than lesser – degree of collective interventions in atomistically competitive outcomes. Examples include an expanded role for publicly-provided insurance to improve the tradeoff between peer monitoring gains and suboptimal risk-taking losses entailed by more extensive residual claimancy and control of assets by the non-wealthy, and greater involvement of collective bargaining in more closely aligning the incentives of employers and employees with respect to both working and learning on the job.

A notable effect of globalisation, unremarked thus far, is that (in the extreme form assumed here) it makes the non-wealthy members of a national population residual claimants on the results of both their productive efforts and their success in solving productivity-dampening coordination failures. It thus inverts the more common relationship in which the wealthy are the residual claimants on the income streams generated by the efforts of the less well-off. While in competitive equilibrium the wealthy cannot get *less* than  $\rho$ , they also cannot get *more*, so productivity improvements are fully captured by the non-wealthy. To the extent that conditions approximate those assumed in this model, globalisation may reduce collective

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action problems confronting would-be coalitions of the non-wealthy to enhance productivity by attenuating coordination failures.<sup>17</sup>

The theoretical results presented here, as well as the data in the previous section, suggest that efforts to raise the living standards of the less well-off may succeed where they attenuate the incentive problems arising when property rights are ill-defined or insecure, contracts are incomplete, and wealth is highly concentrated. The rationale for the egalitarian supply-side interventions summarised here – in contrast to policies restricted to pie-dividing or demand expansion – is dramatized by globalisation, but it is no less compelling for closed economies.

This is not to say that globalisation makes no difference. Even in the very long-run perspective taken here, the effect of globalisation on the out-of-equilibrium dynamics may be decisive. A one-time aggregate demand expansion may be crucial, for example, in permanently displacing an economy from a low road to a high road equilibrium of the type illustrated in Figure 4, but the effectiveness of the necessary macroeconomic policies may be reduced by greater openness.

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<sup>17</sup> The argument is not that the non wealthy have identical interests, but simply that the difficulty of securing mutually beneficial cooperative solutions with mobile wealth owners may be circumvented.

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