

# The Zero Sum Illusion: Industrial Relations and Modern Economic Approaches to Growth and Income Distribution\*

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## Abstract

This paper seeks to reconcile modern theories of economic growth and inequality with models drawn from the Industrial Relations literature. The paper contrasts economic notions of equity and performance with those found in IR. The paper argues that IR has a broader conception of equity that can potentially enrich economic models of inequality and growth as well as models which seek to account for differences in the extent of redistribution and social unrest across countries. The paper then goes on to explore the common assumptions behind both approaches and suggests appropriate policy conclusions.

**Keywords:** inequality, growth, redistribution, human resources, industrial relations

**JEL Classification:** D72,D74

## 1 Introduction

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"Our merchants and master-manufacturers complain much of the bad effects of high wages in raising the price, and thereby lessening the sale of their goods both at home and abroad. They say nothing of the bad effects of high profits. They are silent with regards to the pernicious effects of their own gains. They complain only of those of other people."

Adam Smith, *Wealth of Nations* [(1776) 1993,p.94]

Adam Smith -- typically viewed as the forefather of free-market conservatism -- was sceptical of the alleged benefits accruing from the pure application of efficiency (higher profits) at the expense of greater equity (higher wages). Not only did Smith view merchants and manufacturers with deep suspicion; he also qualified his praise of the self-equilibrating economy with a darker vision of the dehumanising potential of a profit-orientated society. Until recently, Smith's views would have run counter to the approach taken by many mainstream economists. The typical assertion regarding equity and efficiency was that a fundamental trade-off existed between the two objectives. According to Baumol et al. (1991: 124) "...policies designed to divide the proverbial economic pie more equally, inadvertently cause the size of the pie to shrink." In a similar fashion, Arthur Okun (1975: 1) once aptly remarked that "...tradeoffs are the central study of the economist. 'You can't have your cake and eat it too' is a good candidate for the central theorem of economic analysis."

The motivation for this paper stems from recent economic contributions that have been more supportive of Smith's intuitive concern over the dangers of unbalanced divisions of national income. Research by Romer (1994), Perotti (1994, 1996) and Benabou (1994, 1996, 2000) in particular, have demonstrated, both theoretically and empirically, the existence of a positive long-run association between income equality and economic performance.<sup>1</sup> Data for 23 OECD countries, spanning two 20 year growth periods supports this finding. Table 1 presents OLS, random effects and fixed effects results, where economic growth in per capita GDP beginning in 1960 and 1970 respectively, is regressed against initial income inequality and per-capita GDP. The negative co-efficient on initial inequality corresponds to the modern view that equity and efficiency are complementary objectives.<sup>2</sup>

The fact that countries with more egalitarian distributions of income experience, on average, faster economic growth is supportive of a positive contention long held in the field of Industrial Relations (hereafter referred to as IR). Perhaps more than any other discipline, IR has maintained that in the long run, equity and efficiency are complimentary goals and has sought to integrate this idea into the mainstream of its analysis (Meltz, 1989; Barbash 1997).<sup>3</sup> The purpose of this paper, therefore, is to demonstrate how recent theories linking income distribution to improved economic performance can be infused with broader conceptions of equity, strengthened with notions of co-operation and fairness and made more policy relevant with the help of IR theory. Similarly, we argue that the field of IR can be enhanced by an understanding of endogenous growth theory and the

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<sup>1</sup> The emphasis on long-run relationships is important since in the short-run, there can be trade-offs between equity and efficiency. Recent empirical literature also seems to support this finding. For more see Lloyd-Ellis (2001).

<sup>2</sup> For more on these results and details about the data, see Foot and Gomez (2001) in this volume.

<sup>3</sup> According to Meltz (1989) the balancing of both objectives is a fundamental normative proposition, one that underlies most ER analysis. Similarly, according to Barbash (1997: 91-118) "Industrial Relations as an academic field is best understood...as problem solving on behalf of equity in the employment relationship." Apart from this normative stance, Industrial Relationists also generally regard "equity or fairness...as more complimentary to

economics of information, which demonstrate how productive opportunities are often not capitalised upon because of credit market constraints and lack of insurance markets for risk.

Table 1 – Inequality and Economic Growth Within the OECD

Estimation Method	Dependent Variable: 20 year growth rate			
	Mean	OLS (1)	Random Effects (2)	Fixed Effects (3)
Initial GDP per capita	8,436	-2.52 (-6.25)	-2.94 (-13.56)	-2.40 (-2.57)
Initial Gini Ratio of Inequality	0.325	-0.027 (-1.397)	-0.029 (-2.28)	-0.047 (-1.74)
R <sup>2</sup>	--	0.469	0.595	0.377
Period	1960-1990	1960-1990	1960-1990	1960-1990
Countries	23	23	23	23
Observations	46	46	46	46

Note: The dependent variable is real per capital GDP growth between 1960-80 and between 1970-90. The t-statistics in parentheses. R<sup>2</sup> is within-R<sup>2</sup> for fixed effects and the overall-R<sup>2</sup> for random effects.

The paper is structured as follows. In Section 2, we provide an overview of the growth-inequality debate and a description of key theories linking income distribution with economic growth in both economics and IR.<sup>4</sup> We then highlight two political economic models which argue that social instability and economic disruption are caused by higher levels of inequality and suggest why the mechanisms involved need refining. In Section 3, we contrast definitions of equity and efficiency in both disciplines. In Section 4, we account for two standard empirical dilemmas currently found in the IR and economic literatures, and show how these can be explained by drawing on intuitions from either discipline. A major problem in IR at present, is why -- given the evidence surrounding the beneficial effects of high performance human resource management (HRM) practises -- very few companies have adopted these HRM practices (Godard and Delaney, 2000). Similarly, we examine the paradox of why in political economy models of inequality and economic growth, the anticipated relations between greater pre-tax income inequality and more redistribution do not appear in the data. We also show why it is not necessarily the case that inequality always generates socio-political instability, as expressed in a number of models that account for the inequality growth trade-off. The last section summarises the paper and offers policy suggestions and extensions of the research.

## 2. Equity and Efficiency: Economic and IR Perspectives Contrasted

Despite possessing differing conceptions of equity and efficiency, both IR and much of the modern economic growth literature surveyed below is premised on a similar underlying model of the economy. Both approaches recognise that real world economies operate far from their Pareto optimum. In a purely Walrasian economy the level of output and employment that prevails under full product and factor price flexibility is optimal. In this framework, any co-ordinated intervention

on the part of actors (government, labour, or employers) to alter existing equilibrium levels of employment or output reduces global welfare.

However, under conditions of imperfect information, market failure, or imperfect competition, the market prices of goods and labour generally exceed their shadow prices. Policies, therefore, that succeed in altering output are likely to increase welfare (Romer, 1993: 13). Once Walrasian equilibrium is abandoned, locally optimal actions cease to yield globally optimal outcomes. Markets themselves (in the classic cases of market failure) produce some of these circumstances while others are associated with institutions (such as the firm and its internal labour markets) which supplant market relations. Even under conditions that approximate the competitive ideal, problems of institutional inefficiency plague virtually all of the key relationship among economic actors in a market based economy.<sup>5</sup>

Because the IR and endogenous growth perspectives recognise that economies function far from the perfectly competitive ideal and because they acknowledge the importance of looking at labour markets as more than a series of spot market transactions, both approaches see a role for intervening in the economy. This role occurs either at the economy or industry wide (macro) level by equalising incomes or at the firm (micro) level by emphasising non-monetary (i.e., intrinsic) aspects of equity in the employment relationship. In the subsections that follow we discuss the mechanisms, first in economics and then in IR, which link inequality to growth. We begin by discussing the traditional view that incentives are the key to economic performance and that these are hampered when equity concerns take precedence over those of efficiency.

## **2.1 Some Background on the Inequality and Growth Debate in Economics**

The issue of incentives was (and still is) a major component of why inequality in the distribution of income is thought to spur growth and improve performance.<sup>6</sup> The question of how incentives to capital might decrease when societies try to reduce inequality is an old one. The argument, in brief, is that if the rich save and invest higher proportions of their incomes and if the poor spend nearly all of theirs, then savings, investment, capital formation, and hence economic growth will be higher the larger the initial share of the rich. On this precise point Joseph Schumpeter (1956) argued, in defence of inequality, that what often looks like excessive profits provides the bait that lures capital in to untried fields.<sup>7</sup>

It has also been argued that incentives to individual effort and to entrepreneurship are compromised when distributive concerns take precedence over performance outcomes (Mirrlees, 1971).<sup>8</sup> More recently, Lazear (1998) has revived the notion of piece rates and introduced

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<sup>4</sup> For a thorough review see Lloyd-Ellis (2001) in this volume.

<sup>5</sup> In Leibenstein's terminology, firms are not always able to act energetically to curb costs and are therefore said to exhibit X-inefficiency.

<sup>6</sup> The earliest theories such as those later popularised by Gilder (1981) and Friedman (1979) were generally supportive of the idea that a trade-off existed between more equality and less growth. Many of these ideas were framed (implicitly or explicitly) within the context of a Kaldorian consumption function and then applied to a Harrod-Domar model of growth (Fields, 1992). However, using the same theoretical framework, there were those who argued that more equality was in fact good for growth (Leightner, 1992).

<sup>7</sup> Schumpeter as quoted by Osberg (1984:228-231)

<sup>8</sup> The incentive argument carries over to the macro economy when agents are assumed to be identical and capital

tournament theory as a form of compensation that improves effort and performance. The performance boost occurs not only because of the incentives brought about by increased salary dispersion, but because of the sorting effects induced by pay structures that separate high quality workers from the low.

Despite beliefs in the instrumental value of inequality, economists working from an institutional perspective have never viewed existing distributions of income as being optimal and hence the question of incentives is secondary to the question of opportunity. Many institutional economists have maintained that inequality is often the result not of differential ability, but rather, the result of social exclusion, such as the unequal 'caste' societies of the Indian sub continent and racial and sexual discrimination in many other parts of the world (Myrdal, 1968). The argument is simultaneously made that these social forms of inequality depress national aggregate output by keeping many workers underemployed and undereducated. This has the dual effect of impairing the willingness and ability of those at the bottom to work intensively: "Greater economic equality would undoubtedly tend to greater social equality. As social inequality is quite generally detrimental to development, the conclusion must be that through this mechanism also, greater equality would lead to higher productivity" (Myrdal, 1968: 55).

As noted in our introduction, the question of whether income inequality fosters or hinders economic growth is one that was abandoned for some time, and has recently received renewed attention. For a variety of reasons, until the early nineties, not much theoretical or empirical work had been undertaken which linked distribution with macro-economic performance. Economists were in general agreement that the more relevant problem was the means by which economic growth and development affected income distribution and not vice versa. Most of this century's research on the subject was spawned by Simon Kuznets seminal work in the area. Kuznets (1955) theorised that as development progressed, structural changes associated with economic growth -- chiefly industrialisation, increased urbanisation and schooling -- would produce an initial increase in inequality. However, as societies advanced even further, they would eventually surpass a 'threshold level', whereby income distribution would become more rather than less egalitarian. Given that the Kuznets hypothesis seemed to account for the experience of many countries (OECD, 1993: 61-62) a natural question arises: What caused the breakdown in the growth and inequality consensus?

The answer to such a question can be found by examining two separate developments; one theoretical and the second empirical. From a theoretical perspective, the late 1980s witnessed a revival of growth theory. The revival was partly induced by the fact that since the early seventies, growth rates in many industrialised countries had fallen from their post-war highs. Casual empiricism also demonstrated that countries at similar levels of development were growing at different rates. Exploring the effects of alternative variables -- apart from the level of development and human capital -- on national growth rates was one way that macro-economists could begin to 'rescue' the neo-classical growth model from its absolute convergence implications.<sup>9</sup> One of the variables that varied across countries was income inequality and so economists began to construct models where differing initial distributions of income affected future national growth paths (Galor and Zeira, 1993).

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<sup>9</sup> The absolute convergence hypothesis stems from the Solow growth model, where all countries were expected to

From an empirical perspective, the equity-efficiency 'trade-off' was questioned much earlier. In a cross-sectional study of sixty-six countries, Ahluwalia (1976) concluded that "the rate of growth of GDP in [his] sample was positively related to the share of income received by the lowest 40%, suggesting that the objectives of growth and equity [were] not in conflict". Other researchers found no statistically significant relationship between inequality in the initial distribution of income and the subsequent rate of growth of GDP (Fields, 1991 and Osberg, 1984). And since the early 1990s, a number of empirical cross-sectional studies have established that countries with more egalitarian distributions of income tend to exhibit faster economic growth (Aghion et al.,1999).<sup>10</sup>

## **2.2 Modern Economic Approaches Linking Inequality to Lower Growth**

### **Imperfect Capital Markets and Human Capital Spillovers**

In one of the earliest and most often cited papers, Galor and Zeira (1993) provide a model where investment in human capital positively affects long run economic growth. In their model, borrowing is difficult and/or impossible, therefore those who inherit a large initial endowment of wealth are better able to invest in human capital.<sup>11</sup> If the number of these people is relatively small, then an unequal distribution of income adversely affects the 'aggregate' amount of investment in human capital and hence dampens output. The model also implies "that rich families remain rich and poor families remain poor." This is a function of imperfect capital market structures. Other researchers working within the financial imperfection paradigm have demonstrated in more explicit terms how inequality can persist across generations and how this same inequality subsequently affects economic growth.

Benabou (1996) demonstrates how small differences in educational technologies, preferences, or initial endowments of wealth, when combined with imperfect borrowing markets, leads to a high degree of social and geographical stratification. Stratification makes inequality in education and income more persistent across generations and this social polarisation leads to the formation of ghettos and large pockets of poverty. These areas can be very inefficient, both from Pareto criteria and in terms of long run aggregate growth. This can be seen by noting that in addition to local interactions in education, the wealthy and the less well off interact together at a number of levels in the production of goods and the delivery of services such as:

- (1) technological spillovers (some may be computer engineers and others service or repair the technology);
- (2) complementarities in the labour market (some are highly trained managers and others are low skill workers); or

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<sup>10</sup> Recently, work by Forbes (2000) has cast doubt on these findings. But these results are not necessarily incompatible with the view that in the long run, equity and efficiency are still complimentary. For more on this point see Lloyd-Ellis (2001) in this volume

<sup>11</sup> Temple (1999) notes the problem that in empirical work, human capital is measured only with formal education

- (3) community externalities (some are owners of expensive housing and others live adjacently in low income and unhealthy accommodation).<sup>12</sup>

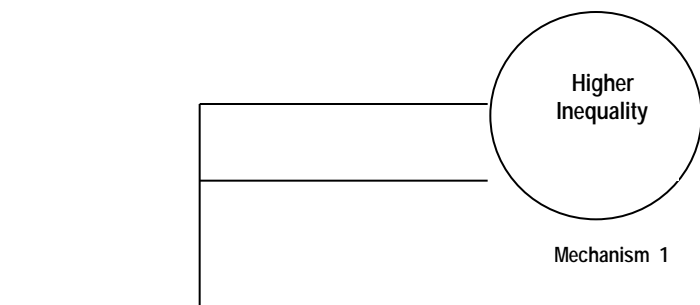
The implications of Benabou's model are rather intuitive. Depending on the level of economy wide human capital, marginal products may be lower for individuals living in areas with a high degree of inequality, even if personal human capital levels are the same or even greater than those living in areas with low inequality. In evaluating this model of growth, Romer's (1994) observation that worker's with high levels of human capital migrate not to places where it is scarce, but to places where it is abundant, is a powerful a piece of illustrative evidence (perhaps as strong as any number of cross-country growth regressions).

In the class of models described above, complementarities in the labour market (e.g., the combination of well educated senior employees or managers coupled with workers with low levels of training) may not be very efficient. In a dynamic setting, the presence of imperfections in capital markets can prevent successive generations from improving their human capital requirements or from acquiring necessary skills and this could lead to the formation of ghettos and poverty traps. Eventually, productivity growth should slow and in turn depress aggregate economic output (Benabou, 1994: 824-825). Observations drawn from the IR literature point to a similar conclusion; organisations do well when employers invest in the multi-skilling of employees and well educated senior employees encourage input from subordinates on improving the quality and efficiency of the production process (e.g., increasing employee participation).<sup>13</sup>

### Political Economic Approaches to Inequality and Growth

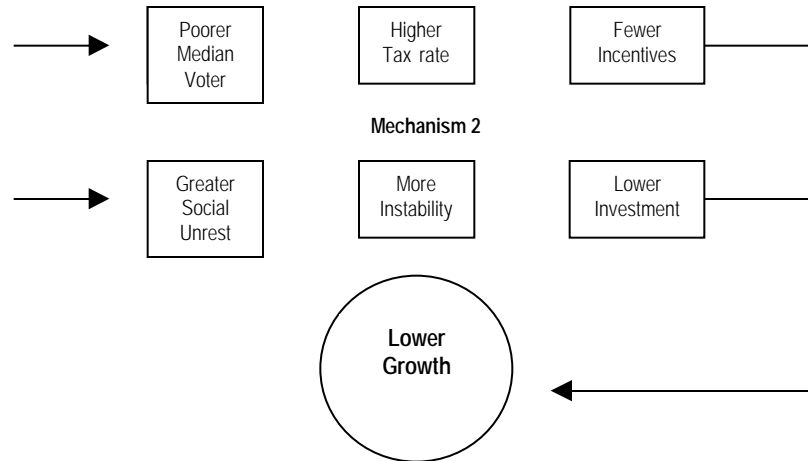
Two major political economic models have been advanced in order to explain the observed negative relation between inequality and growth; they are fiscal policy models based on public choice theory and models of political instability. Their mechanisms are similar and are sketched out in figure 1 below.

Figure 1: Political Economic Channels Linking Inequality to Lower Growth



<sup>12</sup> There is epidemiological evidence which demonstrates that even high income groups are affected by greater levels of inequality through higher incidence of disease. The spread of these diseases occurs either directly through dilapidated housing stock or indirectly as inequitable income distributions have consequences on people's perception of their social environment that influence their health. For a more detailed review of the health research see Lynch and Kaplan (1998).

<sup>13</sup> Betcherman et. al. (1994, p. 68) found a "... positive and statistically significant impact of the participation-based approach on three of the four labour performance measures ...".

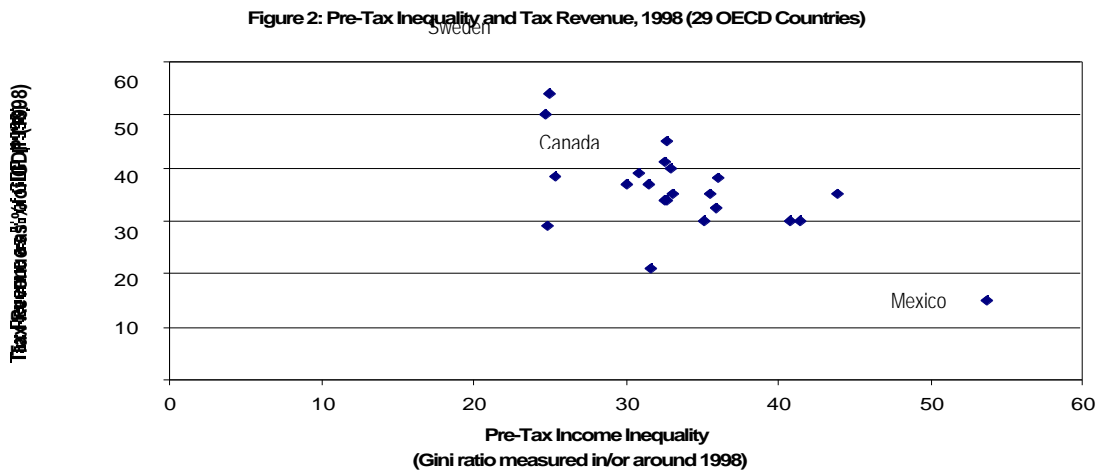


The fiscal policy theories have been simultaneously advanced by Persson & Tabellini (1992, 1994) and Alesina & Rodrik (1992, 1994). Both are quite similar and follow the logic of public choice theory, in that they both assume that voter preferences presumably influence government policies. When income inequality is quite large, large segments of the population are more willing to tax growth promoting activities, such as investments in physical and human capital. Policies that maximise growth are optimal only for a government that cares solely about the 'capitalist' class. In both versions, the higher the inequality of wealth and income, the higher the rate of taxation and consequently the lower the growth rate. Countries that have large initial disparities in income inequality are faced with political pressures to redistribute and it is the effect of 'distortionary' taxation and redistribution that ultimately lowers growth.

This theory, however, is not supported by available cross-country data, which demonstrates that higher income inequality before redistribution is associated with lower degrees of state transfers. This stylised fact fits with the archetypal idea we have of the United States and Europe, and is also borne out by a comparison of Gini ratios to tax revenue as a percentage of GDP among the 29 member states of the OECD (see Figure 3). The slope of the regression line is negative, indicating that countries with more pre-tax inequality have lower tax to GDP ratios. Canada, as always, lies in the middle with Mexico and Sweden occupying opposite ends of the spectrum. Empirically, income inequality before and after redistribution is also highly correlated and countries with more egalitarian pre-tax distributions of income tend to support higher levels of transfers and higher growth rates (Benabou, 1996).

The evidence concerning the effects of progressive taxation also seem to run in an opposite direction to that predicted by fiscal policy models, with many countries seemingly stuck in low taxation/high inequality traps. Thus higher optimal taxes -- by moving people out of poverty and into education and productive sectors of the economy -- would increase growth rather than dampen it. A natural experiment of sorts can be found in the U.S where under the Clinton administration the top income tax rate was raised to 36 percent from 31 percent in 1993. Republicans labelled it the biggest tax increase in the history of the world and predicted that the economy would fall into recession. Instead, the pace of economic growth increased and sustained itself for the following seven years of Clinton's presidency.

Alesina and Perotti (1993) have advanced a more direct politico-economic model where the link between inequality and growth does not depend on fiscal policy, but rather, inequality fuels social and political discontent. Discontent (which can take on varied forms from riots and coups, strikes, industrial conflict, and increased crime rates) creates socio-political instability and this reduces investment.<sup>14</sup> The evidence is more strongly in favour of the instability model than the high tax fiscal policy channel, but there are still problems.<sup>15</sup> In section 4 we provide an explanation for the failure of median voter predictions as a function of three concepts borrowed from the IR perspective.



### 2.3 IR Approaches Linking Equity and Growth

In this section we highlight two areas where IR provides potential links between equity and efficiency, but which are absent in the current literature on economic growth and inequality. The first is the high performance paradigm which argues that ‘good’ employers are also profitable ones. Second we explore the effects of equity on co-operative behaviour.

#### The High Performance Workplace and Human Resource Model

The field of IR, especially in North America, has undergone a transformation over the past decade and a half. As noted by Godard and Delaney (2000) the new paradigm’s initial thesis was formalised by Kochan Katz and McKersie (1986) who argued quite persuasively that competitive pressures beginning in the early eighties elicited a change in the ‘shared assumptions’ of the IR system among employees, the state and chiefly among employers. This resulted in a breakdown in traditional forms

<sup>14</sup> The recent strike of engineers at Boeing in Seattle is an excellent example of the impact of industrial discontent on output. A major factor underlying the demand for substantial salary increases was not dissatisfaction with ‘own pay’ but was said to be the large increases in executive salaries at Boeing.

<sup>15</sup> Perotti (1994) has tested the various mechanisms underlying the effects of income distribution on investment and growth and has concluded that "the results [of his regressions] seem to cast doubts on the empirical validity of the endogenous fiscal policy explanation of the relation between income distribution and investment, while the imperfect capital market approach and especially the political instability explanation receive more convincing support from the

of collective bargaining and a decline in union power and forced firms to adopt new policies to manage labour. Some of these policies were of the low road variety (slashing labour costs, decertifying unions, more contingent work) but many of them were also of the high road variant which included flexible work arrangements, performance based pay, employee participation, team work, and job security. This latter model has been termed the **high performance human resource workplace model**. The high performance model has spawned two research streams. The first examines the effect of these HRM practices on firm level performance and has generally concluded that high performance policies (if implemented jointly and not piecemeal) are beneficial to firm profitability (Ichnowski et al. 1996). Put simply, as the recent title of a new book surveying the literature has stated: 'Companies seem to *do well by doing good*.'

The second approach has tried to explain why these practices have not diffused across firms. Although there is some debate, many IR scholars buy into the high performance paradigm and therefore ascribe the lack of diffusion to a combination of strategic failures and cultural obstacles rather than a deficiency in the HRM model itself.<sup>16</sup> Much like 'the famous one hundred bill' on the sidewalk, high performance practices (if they produce such tangible benefits) should have been 'picked up' by now. The explanations on offer by the IR literature are not convincing nor rigorous. In section 4 we take the 'market imperfection' approach found in the economics of information and adapt it to the firm level in attempt to explain why these innovations have failed to spread across the economy.

### **Equity and Co-operation**

Another area where IR theory can add value to economic theories of equity and growth centres on the role of co-operation and performance. Economists recognise that obtaining globally optimal outcomes in the face of imperfectly competitive or incomplete markets requires co-operative behaviour among economic agents so as to limit rent seeking behaviour (Olson, 1982). What is less often mentioned is that non-market institutions -- such as unions, works councils, HR departments and labour relations boards (typically viewed as a 'constraints' in the Walrasian framework) -- can act in ways that generate ongoing relationships between employers and employees. Once in place, these relationships place limits on the extent of pecuniary gains that one party can extract over the other.

Ongoing relationships also produce repeated interactions among actors, which are conducive to the sharing of information and the development of trust. Trust in the employment relationship is not exogenously determined; it needs to be supported by considerations of distributive justice. In cross-country comparisons of IR systems it has been found that successful team based and 'lean production' systems, require employees who are highly committed to improving the production process. This commitment is forthcoming, in part, because of job security but also because employees recognise that the financial results of productivity improvements will be equitably shared (Adams, 1995). Indeed, if economic success ultimately depends not only on individual productivity but on team based interactions and co-operation, as Benabou's (1994, 1996) growth model suggests,

then considerations of equity imply that a strategy of low wages and large wage differentials is sorely deficient.<sup>17</sup>

Examples drawn from the field of IR serve as particularly illustrative case studies. One of the most famous labour cost-cutters was Frank Lorenzo whose small Texas Air Company expanded through take-overs and cutting wages. His initial success came apart when he tried the same tactics on Eastern Airlines. The battle ended in a lose-lose result with the airline torn apart and Lorenzo filing for bankruptcy. The end result was the same for Peoples Airline, which started up as an employee partnership when the “open skies” policy permitted new competitors to enter the passenger field. Peoples was used in university business school cases as an example of how small companies could survive and prosper in the new competitive environment. That is, until the company went bankrupt. The lesson seems to be that competing on the basis of relatively low wages is not sufficient, by itself, for long-term prosperity in industrialised economies.

The most innovative sectors of the economy do not manage to develop flexible work practices by forcing wages lower or by exchanging major parts of their labour force with the external labour market. Rather, they generally rely on reassigning workers internally. Where external labour markets are utilised, costs associated with search, negotiation, and monitoring are typically higher. Moreover, in the external labour market, because neither employers nor employees have any certainty that the employment relationship will persist, each is encouraged to act with very short time horizons. Betrayal early on, in the form of layoff on the part of an employer (say because of a downturn in the economy) or turnover on the part of an employee (say at the first opportunity for a better job prospect) negates potential benefits accrued over the course of the entire relationship.

It is for the purpose of overcoming these and other inefficiencies that employer/employee relationships have traditionally been organised within firms (Cappelli, 1995). Employee acceptance of structural changes, multi-skilling and acquiring additional skills increases not only with job security but with remuneration that is felt to be equitable. Ultimately, wage structures that are felt to be inequitable manifest themselves in a lack motivation and an unwillingness to adapt and co-operate with management (Akerloff and Yellen, 1986).

Gordon (1996), in a summary of studies of co-operation at both the micro and macro-wide level, suggests that token gestures in the co-operative direction are not sufficient conditions to improve commitment and hence performance from workers. Rather, observations drawn from studies of labour market economics and employment relations point to at least three conditions necessary for successful co-operation: a real and perceived equitable sharing of productivity gains with workers; significant employment security (so that workers do not worry that production innovations will result in layoffs); and substantial institutional changes to build up employee voice and group involvement and not just individual participation (since much of a worker's contribution to production depends on group effort and co-ordination).

What is interesting to note from the list above is that despite being a macro-economist, Gordon's list is heavily informed from the field of IR where equity involves more than just the

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<sup>17</sup> Roach (1996) makes this point in relation to how US business leaders during the early and mid nineties managed to gain profitability improvements through the unsustainable low road approach of cost cutting. Nevertheless there may be micro-economic settings where these kind of wage differentials can work to motivate employees (see Lazear, 1998).

remunerative dimension. In this sense, we see how IR differs from the economic approach in that non-pecuniary or intrinsic outcomes are an essential input to the observed inequality efficiency trade-off. These differences in approach between economics and IR are discussed in more detail below.

### **3. Equity and Efficiency: Industrial Relations vs. Economics**

#### **3.1 Conceptions of Equity Contrasted**

An important part of the distinction between economic notions of equity and those found in industrial relations is that economists confine equity to monetary equality.<sup>18</sup> For economists, equality typically refers to equality in the distribution of income, which has two meanings. In one sense, it refers to the distribution of national income or gross domestic product (GDP) among factors of production (e.g. labour and capital). Alternatively, income distribution can refer to the distribution of income within labour's share or among individual income earners.<sup>19</sup> Recent literature has tended to emphasise the latter definition.<sup>20</sup>

For industrial relationists, the important point is the notion of fair compensation, which does not necessarily require income equality, but rather, it requires looking at compensation as only one component of equity in the employment relationship (Barbash, 1987). The five other aspects of equity are the extent to which there is: (1) secure employment; (2) the right to a say at work; (3) due process in the handling of complaints; (4) fair treatment at work; and (5) meaningful work. This means that there can be tradeoffs among the five intrinsic components of equity and extrinsic rewards such as wages and bonuses. While economists have introduced the concept of efficiency wages and have even gone so far as to model the employment relationship as partial gift exchange (Akerlof, 1982) industrial relationists examine the impact of all aspects of equity on employee welfare and on the productivity of the workplace. Even in the absence of a change in the wage structure, considerations of the non-wage dimensions of equity can contribute to both improved productivity and employee attachment to an employer.<sup>21</sup>

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<sup>18</sup> The concept of inequality also has a wealth and income dimension (Aghion et al., 1999). The former is relevant when examining the effects of distribution on aggregate output through its effects on individual investments in physical and human capital, whereas the latter dimension is relevant when examining the feedback effects of economic growth on distribution. In this paper we assume that income inequality and wealth inequality are interchangeable. This is not too problematic an assumption given the high correlation between both measures in cross-sections but the two concepts offer competing channels linking distribution and growth.

<sup>19</sup> Two measures are often used to capture this definition. Quintile shares – or the proportion of wage and non-wage income accruing to five distinct groups ranging from the poorest 20% of the population to the richest 20% - are often used. In a perfectly equitable society every quintile would receive 20% of total income. A second proxy, the Gini coefficient uses a Lorenz curve to measure income inequality. The higher the Gini coefficient the lower the level of income equality.

<sup>20</sup> However, the distribution of income among factors of production is an important concept and one that cannot be ignored. Indeed, it is with regards to this former definition that a trade-off between equity and efficiency is likely to exist. If too little national income goes to capital in the form of profits, investment may suffer and thereby dampen future consumption for workers.

<sup>21</sup> This was the finding of Betcherman et. al. (1994) in their survey of human resource practices in Canada. Such non-wage initiatives as progressive decision-making (employee involvement) and social responsibility (involvement in issues of concern to society) produced a statistically significant improvement in the economic performance of the

## **Why is Fairness so Important to Industrial Relationists?**

Economists sometimes find it difficult to understand the importance of fairness. The following quote by Milton Friedman (1979: 127) is illustrative of this tendency:

"Much of the moral fervour behind the drive for equality of outcome comes from the widespread belief that it is not fair that some...should have a great advantage over others simply because they happen to have wealthy parents. Of course it is not fair...[but what does fairness have to do with it?]"

The problem resides in ascribing to fairness only its normative meaning. Apart from it being something 'good' in a moral sense, fairness is instrumentally important because its absence is a primary source of distributive tension. For Industrial Relationists, fairness is important because it is only the perceived fairness of the rules of the game that ensures voluntary acceptance of those rules. This occurs at every level of the employment relationship and also extends beyond the confines of the organisation to an economy as a whole. If a citizen is born without a large initial endowment of wealth and he perceives that the system is unfair and that there is no serious effort on the part of either government, management or labour, to reform those rules, then why should he follow or respect the rules in the first place? The role of fairness expectations in wealth distribution also has some interesting historical antecedents.<sup>22</sup> In an agricultural society land is the primary source of wealth. In the Bible, among the 12 tribes of Israel, every family, no matter how difficult the situation, had the expectation that their land would be restored to them, "... it shall be a jubilee unto you; and ye shall return every man unto his possession..." (Leviticus 25, 10). Dr. J. H. Hertz observes that "In this way the original equal division of the land was restored. The permanent accumulation of land in the hands of a few was prevented, and those whom fault or misfortune had thrown into poverty were given a 'second chance'..." (Hertz 1978, p.533). Interestingly, from an IR perspective and in keeping with the tenets of equity-efficiency theory, there is no record of a slave revolt in ancient Israel.

Turning to the economic growth models presented in section 2, productivity was seen to depend not only on individual performance but also on the interaction of individuals working within firms and interacting within communities or regions. In such instances, considerations of fairness pointed against excessive income differentials. In a similar fashion, section 2 presented a political instability model of economic growth. In that model, mention was made of the disruptive socio-political effects that income inequality could exert. Increased instability, in the form of excessive work stoppages and general labour unrest, was highlighted as one potential channel by which income inequality can dampen investment and hence economic growth (efficiency).

As appealing as such a model may be it ignored the fact that unequal distributions of income are able to coexist with little labour unrest so long as workers perceive that their social

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<sup>22</sup> The Bible mandates that, after the land of Israel was divided among the 12 tribes, in every Jubilee (fiftieth) year land was to be restored to the families within their tribes (Leviticus, 25, verses 8-55). Even if a person was forced by economic circumstances to sell his land and become a servant, the sale was only until the next Jubilee, no more than

mobility is not compromised. Moreover, beliefs about social mobility are intimately linked to the perceived fairness of the system of employment relations. How, then, can systems maintain this sense of fairness in the face of wide disparities of wealth and income? Clearly, one avenue is the provision of education and training and the associated social mobility implied in such provision. To the extent that education is removed from the market and provided equally to all workers (either by firms or government) cycles of poverty are reduced and social mobility is enhanced. However, to the extent that education and training is allocated via the market and its 'consumption' depends on the financial resources of individuals, then the distribution of income and perceptions of fairness take on a great deal of importance.

### **3.2 Conceptions of Efficiency Contrasted**

A less striking but still significant contrast emerges when we compare economic and IR notions of efficiency or performance. Efficiency in the economic models of growth seen earlier, is usually defined as the rate of GDP growth per capita and often measured over a five to twenty-five year period. However, this is a somewhat myopic view of performance, since a proper measure should look beyond first moments (averages) and also include the variance of output, or the volatility of economic performance over time. Would a country be willing to tolerate higher average per capita growth if it entailed greater volatility in output? Put simply, would Canadians prefer a recession every five years even if it meant a slight increase in our rate of growth over a twenty year period? As noted by Stiglitz (1998) these are questions often pushed aside by economists, but limiting risk (e.g., the business cycle; industrial restructuring) is an important measure of national performance that takes on more weight once we acknowledge the presence of imperfect capital markets, imperfect information and hysteresis in labour markets (e.g., the persistence of involuntary unemployment).

The IR concept of efficiency is broader in this respect, as it incorporates what is of value to labour as well as management. Therefore, in order to understand why equity is a necessary condition of a workable industrial society, one has to first make a distinction between what Barbash (1989) terms allocative and real efficiency.

#### **The Distinction Between Allocative and Real Efficiency**

Allocative efficiency encompasses the technical procedures needed to maximise output given certain constraints. Although necessary, in the context of labour markets (whether internal or external) allocative efficiency gives rise to a distributive tension between worker wages and enterprise profits. The rationalisation of the workforce along formally efficient criteria can create problems of alienation, shirking, and low morale. Therefore, in order to enhance real efficiency, allocative efficiency needs to be mediated by equity. Equity considerations (broadly defined as Barbash's five intrinsic components of fair compensation) impede the dictates of allocative efficiency because labour is not a homogeneous input, nor is it simply a factor of production that can be maximised in the same way as capital. Capital requires no moral or psychological inducements to put its potential to full use (e.g., you do not have to compliment your computer on how dependable it is in order for it to print out your documents every morning); labour, on the other hand, does.

Workers are therefore distinct from other organisational inputs because of their intrinsically human requirements for fairness, voice, and job security as preconditions before making maximal contributions to real efficiency. In this regard, the equity-efficiency principle implicitly recognises that the sole pursuit of allocative efficiency within organisations can create counter forces that in the end dampen actual output. If one applies the logic of allocative efficiency to the question of how to set pay within a firm, for example, one is led to the conclusion that wage flexibility is the logical pay scheme to adopt. Flexible pay schemes dictate that workers should be paid differentially depending on how productive they are. This flexibility should be applied across individuals (clearly not everyone doing the same job is as productive) and for a single individual over time (clearly, on any given day, the same individual can be more or less productive). The idea is simple: to ensure allocative efficiency low productivity should be remunerated with low wages and vice versa.

Two problems, however, characterise the flexible conception of worker remuneration. First, Barbash's notion of real efficiency recognises that the productivity of an individual worker is hard to measure within organisations, as personal output is often dependent (both directly and indirectly) on the work of others. The obvious examples are quality circles and work teams where the interdependence of production is readily apparent. But difficulties in apportioning an individual's contribution to the success of an organisation occur even within traditional "Tayloristic" assembly line and processing operations -- where one would expect that individual output is easily identifiable and hence lessening the need for more equitable compensation schemes. Even if output was directly observable (as in piece rate systems) employees can still conceal inherent levels of ability and maximal effort. This is so because the setting of piece rates requires some benchmark estimate of the average time or output for a given task, and workers can therefore collude to keep those initial benchmarks low.<sup>23</sup>

In practice, even after Tayloristic de-skilling, workers manage to hoard information that "scientific" management lacks (Kusterer, 1978).<sup>24</sup> Any form of non-automated production or service delivery (i.e., work which involves labour and not solely capital) is always social and is therefore never just a technical process. The nature of worker involvement in that process is necessarily a critical ingredient in the realization of real efficiencies for organizations.<sup>25</sup> The idea that employees hold a great deal of knowledge that their employers do not have and would otherwise like to get is not new. For over a century, most theorists of work and management have embarked from just this starting point. One of the most famous passages in this regard can be found in Marx with his discussion of the difference between the bee and the architect. According to Marx (1976:284):

A spider conducts operations, which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what

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<sup>23</sup> An illustrative case of just such a phenomenon, is provided by Roy (1952). While there are clear cases of where piece rate systems do work (Lazear, 1998), Roy's article is a classic study of a piece rate incentive system which is possibly the worst designed and most ineffective system ever documented.

<sup>24</sup> As noted by Jackson (1993:10) "...production ultimately depends upon the ability and willingness of workers to solve problems and to maintain a smooth flow of production or operations."

<sup>25</sup> Even under conditions that approximate the competitive ideal, problems of institutional inefficiency plague virtually all of the key relationships among economic actors in market based economy. As Harvey Leibenstein has emphasised, an organisation's costs depend not just on its technology, but also on the vigour with which it pursues

distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally.

The notion alluded to by Marx in the above passage is quite intuitive: unlike other factors of production, labour is unique in that it houses a productive potential which for firms is intrinsically hard (and ex ante perhaps impossible) to fully measure. The motivation underlying the bee and architect analogy is akin to modern interpretations based on asymmetric information. The idea is that employers can purchase the labour time of their employees but not necessarily their effort. In order to maximise labour potential, inducements (both intrinsic and extrinsic) need to be offered by the firm.

Finally, real efficiency explicitly recognises that even if it were possible to disentangle individual effort and productivity, firms still would have to supervise workers more closely in order to measure individual output. Increased supervision, in turn, imposes direct costs for the firm (i.e. paying for more supervisors and surveillance cameras). The decision to supervise more closely may also cause morale problems, breed resentment, increase turnover and ultimately may lower firm level performance by limiting the ability for workers to form productive social relations that facilitate co-operation.

## **4. A Synthesis of the ER and Endogenous Growth Perspectives**

Earlier we noted the twin failures of median voter predictions to account for the case of countries that sustain high pre-tax inequality and low levels of redistribution and the failure of high performance workplace practices to diffuse. Below we offer explanations for these anomalies drawn from the IR and economic fields respectively.

### **4.1 Why Don't We Observe Greater Redistribution in Societies that are Unequal?**

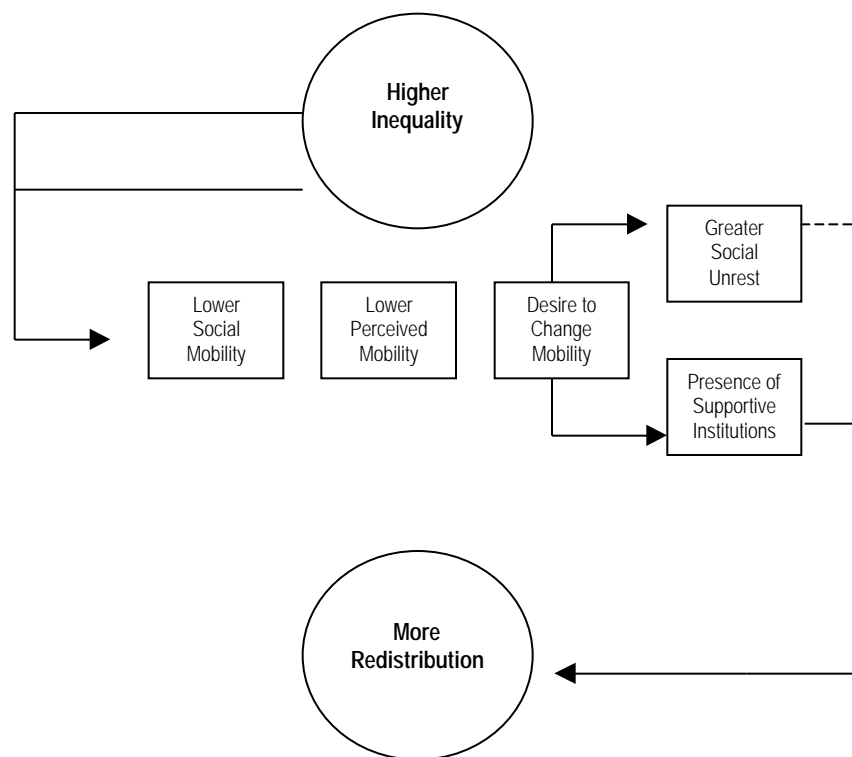
In this section we provide an explanation for the failure of median voter predictions as a function of three concepts borrowed from the IR perspective: (1) the presence of procedural justice, (2) the presence of institutional holes that fail to translate public desires into actions, and finally (3) perceptual differences that systematically over estimate the probability of social mobility and thus reduce the impetus for redistribution.

What does standard economic theory have to say about the effects of excessive pre-transfer income inequality on workers attitudes? The conventional explanation put forward is that in countries or regions with greater pre-transfer inequality, the income of the median (decisive) voter relative to the national average is lowered. This pre-transfer inequality sets in motion pressure, via the political franchise, to redistribute income either directly through the tax structure or by increasing shares of government expenditures as a percentage of GDP. As we demonstrated earlier, contrary to the predictions of the median voter theorem, countries with higher government transfers

as a percentage of GDP are associated with lower pre-transfer inequality. It is this fact – one which runs contrary to standard public choice theory – which has generated a number divergent explanations.

The explanation we offer is represented in Figure 3. The logic is the following: actual increases in redistributive policies result only if the following conditions are met: (1) socio-economic mobility has to be low; (2) it has to be perceived as being low by agents; (3) there has to be a desire to change the mobility patterns; (4) and supportive institutions (e.g., political parties, or unions with power at either a national level or strong at a workplace level) have to exist, in order to translate latent desires for more redistribution into actual outcomes. In the absence of supportive institutions such as labour unions or viable third parties the discontent brought about by high inequality and lower mobility is channelled into social unrest which may or may not lead to a response by authorities to redistribute. It could very well spawn a harsher crackdown and more suppression which is why we leave a dotted line connecting social unrest to increased redistribution to denote the uncertainty of this channel and its anticipated effect on redistribution.

Figure 3: IR Channels Linking Inequality to Social Unrest and Redistribution



### Social Mobility Patterns: Why Do Perceptions Matter?

In terms of mobility rates, economists have recently begun to model their effect on political outcomes. In one of the earliest papers, Piketty (1995) provides a model where individuals, in otherwise identical jurisdictions, differ only in their perception of whether the economic system is fair. The fairness of the economic system is quite an open ended concept. Perceptions of fairness in his model are linked to the ability of lower income individuals to move up the distributional ladder. The idea that this kind of social mobility plays a pivotal role in determining political preferences

(especially towards income inequality and redistribution) has a long history in the social sciences.<sup>26</sup> However, comparative empirical studies demonstrate that among countries with similar levels of economic development, actual social mobility rates are essentially the same; yet perceptions of social mobility differ markedly (Erikson and Goldthorpe, 1992).

In this regard, Lipset (1992) has suggested that long lasting differences among European and North American attitudes regarding redistributive politics may be the result of persistent differences in popular beliefs about social mobility, and not actual mobility rates. According to Lipset (1992:xx-xx1) "What explains the contrast in the political values and allegiances of American workers with those of other democratic nations?...the belief system concerning class rigidities stemming from varying historical experience...seems much more important than slight variations in rates of mobility." Lipset's remark coincides with Benabou's (1996) observation that "...citizens of otherwise identical countries may end up with different distributions of beliefs concerning social mobility, which translate into different perceived tradeoffs between the insurance and incentive effects of redistribution."

How, then, do perceptions such as these affect real outcomes? According to one variant of this general approach, the closer workers perceive their wages as being tied to productivity the less likely they are to feel that existing distributions of income are unfair and hence inequitable (Rottemberg, 1996). In such a case, workers feeling that they can do little to remove wages out of competition, tolerate greater inequality, forgo demands for greater union representation or higher remuneration from employers and instead demand lower taxes from governments. Given the growth of performance related pay, the simultaneous fall in union density, higher inequality and the popularity of political parties whose aim is to lower taxes, suggests that this mechanism may be at work in a number of countries. Ultimately, perceptions such as these have the potential to be self reinforcing and can therefore serve to maintain higher levels of pre and post transfer inequality. One way of demonstrating the empirical validity of the model would be to show that holding all else constant, actual pre-transfer inequality is higher the greater the perception among workers that income inequality is not excessive.

In this regard, Lipset and Meltz (1996) present cross-sectional evidence comparing American and Canadian regional opinions about the excessive nature of income differentials. Combining individual responses from states and provinces to the question "Do you believe that the gap between the rich and the poor is too wide?", a cross-sectional sample of 14 state regions and provinces was generated and used to test this hypothesis.<sup>27</sup> Examining table 2 reveals that regions where perceptions of income inequality are lowest (in Ontario and B.C. for example) are associated with higher levels of actual pre-transfer inequality. The correlation between these figures is -.35. It should be noted that these are also states and regions with lower union density.

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<sup>26</sup> According to Piketty (1995:552-553), "De Tocqueville first stressed the idea that differences in attitudes toward redistribution between Europe and the United States could be explained by presumed differences in mobility rates."

<sup>27</sup> Of course, one has to be careful regarding causality in these cross sectional models since we cannot know for how long people have held these perceptions. Furthermore, most economic analysis is silent on the sources of opinions. Opinions and tastes are taken as given and nothing is usually said on how perceptions or tastes may change over time.

Table 2: Perceived vs. Actual Inequality in the United States and Canada

Province/State	Perceived Inequality*	Actual Inequality* Gini ratio
<b>Canada</b>	<b>58.3</b>	<b>0.373</b>
B.C.	49.2	0.373
Alberta	54.3	0.366
Sask.	60.4	0.357
Manitoba	62.3	0.356
Ontario	52.0	0.374
Quebec	68.0	0.367
N.B.	61.9	0.358
N.S.	82.5	0.355
PEI	66.7	0.331
Newfoundland	76.7	0.374
<b>US</b>	<b>61.2</b>	<b>0.466</b>
Northeast	60.5	0.467
Midwest	63.9	0.451
South	62.7	0.464
West	59.7	0.477

\*Note: Perceived Inequality is measured using the percentage of respondents who 'agreed strongly' with the following statement: "The gap between rich and poor (Canadians/Americans) is too wide." Source: Lipset and Meltz (1996) Angus Reid Survey. Gini ratio for Canada in 1995 is taken from Perspectives on Labour and Income, Winter 1998; for U.S. it is taken from Canadian Economic Observer, August 2000.

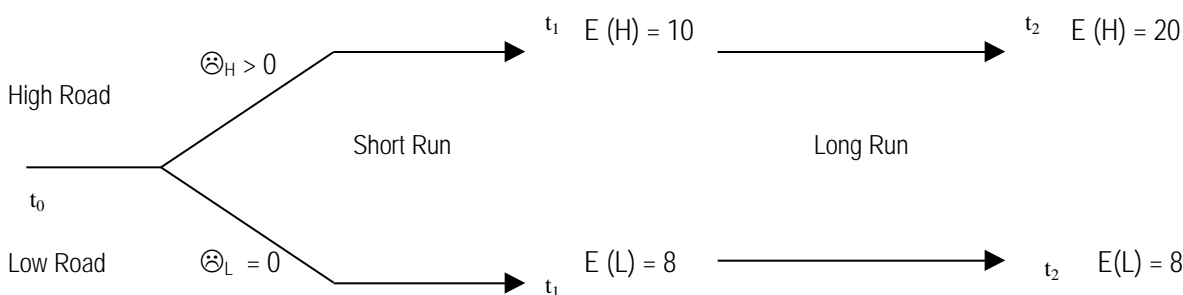
## 4.2 Why Don't High Performance Human Resource Practices Diffuse?

Here we show how the diffusion of high performance work place practices can be hampered by a combination of start up-costs, imperfect capital markets and a lack of insurance to absorb the risk arising from the adoption of innovative work arrangements. We also show how the adoption of high road practices is not uniform and despite the long run benefits, societies if they are not able to remove credit constraints and shield individuals and institutions from the risks that they may incur, will fail to adopt the high road.

First we begin by combining fairness theory with the models of economic growth and income distribution discussed earlier in section 2. Consider the following stylised model of an economy populated by many firms and workers. Initially each firm and worker has a different level of accumulated capital or wealth and each has access to two different productive opportunities or projects, **H** or **L**. One of the projects is more attractive than the other. In particular the output of the first project grows faster than that of the second,  $E(H) > E(L)$ . Undertaking the more productive high growth project requires an up front set up cost,  $\Theta_H > 0$  while the less productive one entails no such cost  $\Theta_L = 0$ . For firms, the choice in projects is analogous to the low-road (low cost) vs. high-road (high-commitment) analogy (Verma, 1995). In the low-road option, firms focus on cost reductions via downsizing and wage rollbacks in an attempt to gain a cost advantage over their competitors. The high road option is more costly, initially, because firms either invest in workers and in innovation to create new products and services or they try to achieve higher quality from existing products or services. In this way firms gain temporary monopoly power and they increase their sales either at the expense of their competitors or by expanding the market. For individuals the opportunity sets are similar. The low road for workers entails a path of little education and training; hence low initial costs. Ultimately, however, this choice results in low pay and less productive

employment. The high road, or the more costly option, forgoes present income streams in favour of advanced education and training and may therefore entail negative early returns. This model is graphically illustrated in figure 4.

Figure 4: The Choice Between High Road versus Low Road Human Resource Practices\*



\*If the short term time horizon dominates, managers only undertake the High Road project if in period  $t_1$  the expected payoff is higher  $E(H) - \ominus_H > E(L)$ . If Start up costs are too high in period 1 ( e.g.,  $\ominus_H > [E(H) - E(L)]$  ) then the low road project is selected because start-up costs are zero in the first period. Only in the long run is the pay off to the high road project sufficiently large to outweigh initial start-up cost.

In the absence of any initial set up costs, every (profit maximising) firm would choose the high growth project and every (utility maximising) worker would undertake the more productive opportunity. The same would be true if borrowing and lending markets were perfectly competitive. In such a case, an initially poor worker or cash strapped firm would be able to obtain a loan to pay for the set up costs of the high-road option. Suppose, however, that workers and firms cannot borrow. Under these conditions, initial levels of accumulated capital or retained earnings (in the case of a firm) and wealth (in the case of an individual) limit the project that any given firm or worker undertakes. Certain firms and individuals may be unable to pay the up front costs associated with the high-road option and this situation may persist if workers become locked into low wage jobs or firms focus on strategies of cost minimisation and high profit margins.

Empirically, we know that there is a consistent payoff from education for individuals. For the United States, and most countries, the rates of joblessness are inversely related to the level of educational achievement (Pryor and Schaffer 1999, pp. 9 and 134).<sup>28</sup> But higher education is increasingly becoming less affordable and reliant more on private financing across many industrialised economies (OECD, 1998). Similarly, organisations that undertake a high commitment approach, as Betcherman, et. al. (1994 p. 96) observe, incur "... higher costs in the short run – placing greater emphasis on attaching a priority to human resource initiatives requires investment". These same authors delineate other costs as well, such as sharing information and decision-making with employees.<sup>29</sup>

<sup>28</sup> A major exception is Israel where until 1997, the least educated had lower levels of unemployment than those with a high school education (Weisberg and Meltz, 1999).

<sup>29</sup> But the benefits are: efficiency gains, lower turnover, better employee-employer relations, and potential for a better

The initial distribution of income and the extent of competition among firms, therefore, become crucial for determining an economy's adoption of high road practices, and hence its overall growth rate. If a disproportionate amount of income accrues to only the top quintile of individuals, then only a few undertake the high-growth opportunity, while most other workers will be stuck in relatively unproductive endeavours, making the average growth rate of the economy lower than it would otherwise be. Similarly, if only a few firms have access to loanable funds, many firms may be forced into the low road option. Equitable distributions of income and competitive capital market structures enable more workers and firms to undertake the high-growth project, increasing overall growth.

This illustrative explanation is consistent with both the tenets of equity-efficiency theory in ER and with the message of the modern economics of information. Credit constraints have been shown to explain fluctuations in investment in small and medium-sized enterprises; and these fluctuations in turn play a role in economic downturns. Stiglitz (1994, 1998) has shown how imperfections in equity “markets which limit the ability of firms to spread their risks, and more generally information imperfections lead to ‘risk-averse’ behaviour on the part of firms.” The risk averse behaviours cited by Stiglitz (1998) are the pro-cyclical nature of inventories (which perfectly competitive models act as stabilizers) and the cyclical pattern of hours and employment, but we would add the adoption of high performance work and human resource practices to this list as well.

In summary, the above stylised model rests on three basic assumptions which are compatible with both the IR conception of equity-efficiency and the modern theories of growth and inequality.

1. The first assumption is that the high-road approach requires some up front set-up cost even though the project's payoff is obtained in the future. This is consistent with the long-run complementarity of equity and efficiency emphasised by employment relations (Meltz, 1989). Indeed, in the short run, because of the ease of cost cutting or pursuing little or no training the low-road approach can clearly exhibit a trade-off between efficiency and equity.
2. The second assumption is that markets are imperfect (especially those of capital). This implies that workers or firms without enough funds to cover the set up costs of the high road approach cannot undertake the desired project because of financial constraints. Consequently, the assumption that markets operate far from the perfectly competitive ideal and that actors wishing to act in the most efficient manner but are prohibited by X-inefficiencies, is compatible with the ER approach.
3. Finally, even if credit markets were perfect, the absence of proper ‘insurance markets’ in which individuals and firms can divest themselves of risk would mean that even if individuals could borrow for their education and training and firms could borrow to in order to pay for the cost of progressive HR innovations, the returns on these investments would still be risky even though the expected return is high. Thus poorer individuals and smaller firms are less willing to bear these risks and hence will keep pursuing the low road.

## **5. Conclusion and Policy Implications**

This paper had three main objectives. First it surveyed modern theoretical and empirical evidence on the relation between income distribution and economic growth and found it to be in accordance with the tenets of equity-efficiency theory in IR. Next the paper sought to integrate and flesh out the common assumptions underlying both equity-efficiency theory in industrial relations and modern endogenous economic growth models. It was suggested that both are premised on a similar model of the economy; that of imperfect competitive market structures. Both approaches also acknowledged the critical importance of fairness and co-operation in the employment relationship (more so in the IR framework) as a remedy for the potentially destabilising effects of excessive inequality on an economy. The paper then presented a model of how the long run complementarity of equity and efficiency can be thwarted by either employer preferences for short term gains, or by capital market constraints which prevent organisations from pursuing high road practices or engaging in high human capital investment in their workers. The paper finally demonstrated how the persistence of inequality is only sustainable so long as social mobility is not comprised or, more importantly, so long as the perceived fairness of the economic system is not compromised because this is the only way to sustain long-term inequalities without having to deal with socio-economic instability. Models of political disruption from the endogenous growth literature do not address this issue fully (they assume that inequality has a positive effect on unrest) whereas equity as defined by Industrial Relationists is contingent on remuneration but also on the procedures by which that distribution has emerged.

In terms of policy conclusions, the first step in removing capital market constraints is a recognition by monetary and banking authorities, governments, and human resources departments, that such constraints exist. The next step is an agreement among the parties to remove the constraints. These are difficult, but not insurmountable barriers. What may be most difficult is to change the preferences of many small and medium sized employers for the low road. It may not be that these employers deliberately want to disadvantage their employees. Competition, business pressures, lack of sufficient time, lack of an understanding of constructive human resource practices, all work against a more enlightened long-term approach to developing employees to their fullest potential in accordance with high performance human resources practices. At the same time surveys have shown that employees are very anxious to upgrade their skills and do invest sizeable amounts of time and resources.

The key to change then is the employer, but should the pursuit of the high road be left to individual employer initiative or should the state provide a carrot and/or a stick approach? Countries and analysts are divided on which approach to pursue. Some countries such as the United Kingdom and Singapore have introduced compulsory training taxes. The UK subsequently abandoned this approach after negative reviews of the scheme. Canada, Sweden and others have provided government financial assistance for training. Again there have been mixed reviews about the success of these programs.

We believe that a balanced approach to economic growth and income distribution is the most desirable path for economies to follow. For industrial relationists this path leads employers and employees beyond the zero sum illusion. How to get on, and stay on, this new path requires further analysis.

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Figure 1: Political Economic Channels Linking Inequality to Lower Growth

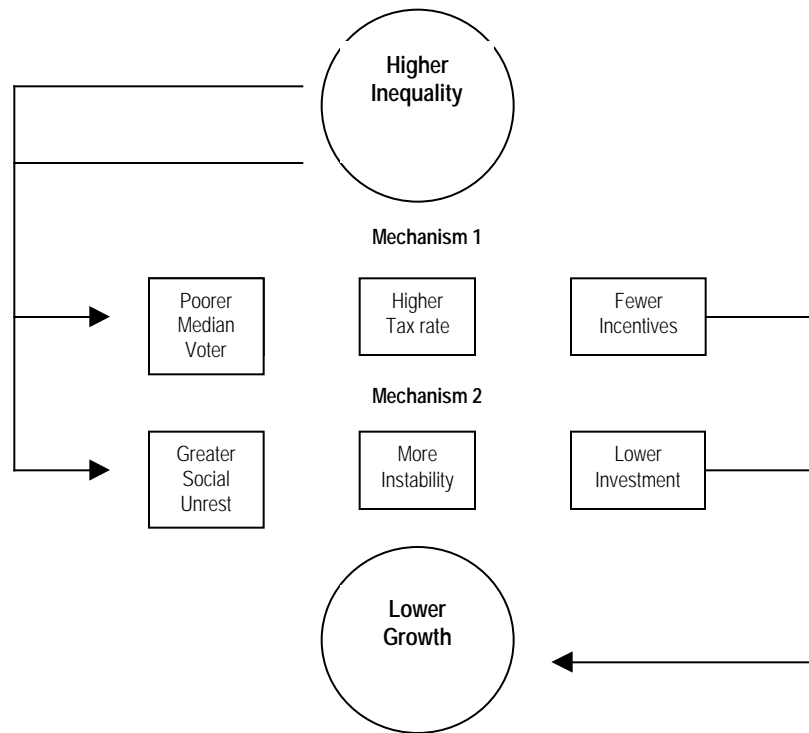
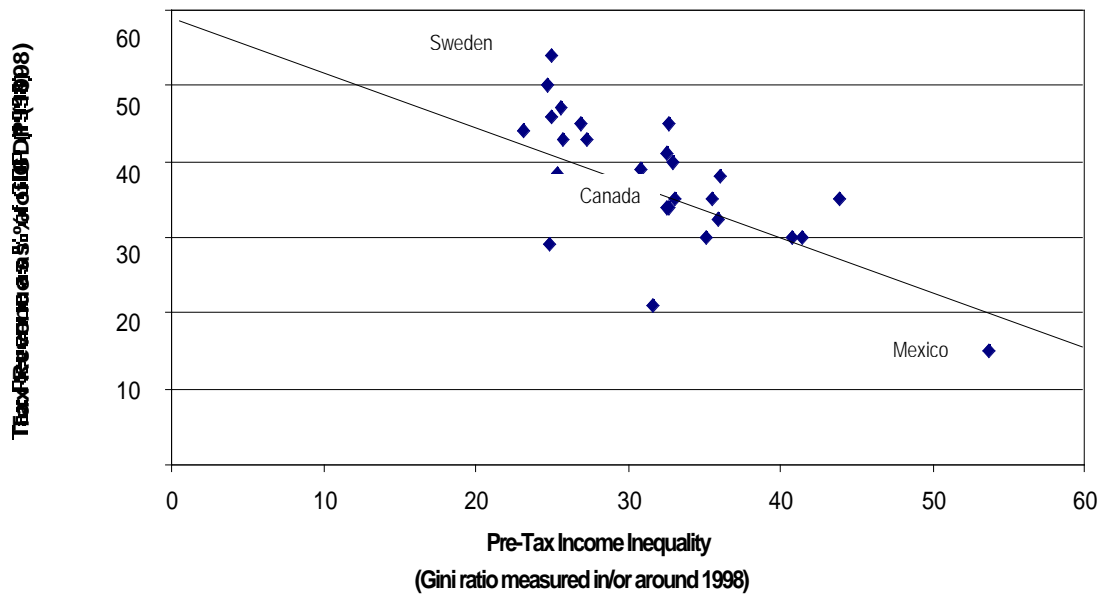


Figure 2: Pre-Tax Inequality and Tax Revenue, 1998 (29 OECD Countries)



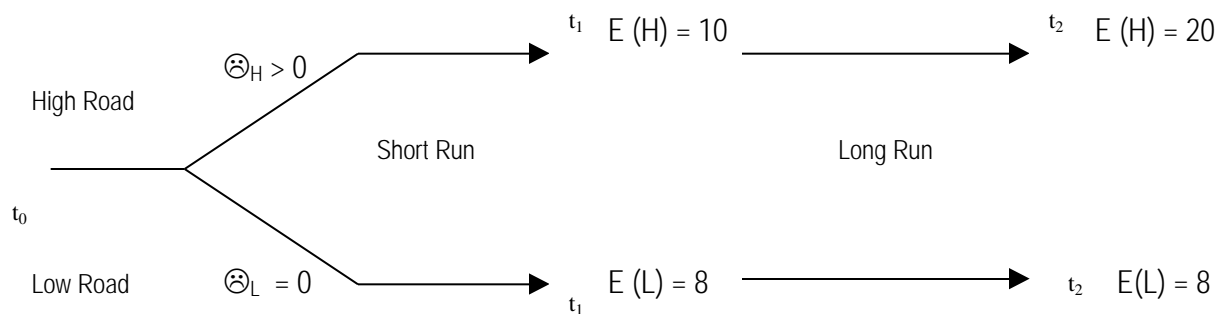
Sources: Tax revenue data: [OECD Revenue Statistics](#) (2000); Income Inequality Data: World Bank updated Deininger and Squire (1996) data set. [World Development Indicators 2000](#).

Table 1 – Inequality and Economic Growth Regressions: 23 OECD Countries

Estimation Method	Dependent Variable: 20 year growth rate			
	Mean	OLS (1)	Random Effects (2)	Fixed Effects (3)
Initial GDP per capita	8,436	-2.52 (-6.25)	-2.94 (-13.56)	
Initial Gini Ratio of Inequality	0.325	-0.027 (-1.397)	-0.029 (-2.28)	
R <sup>2</sup>	--	0.469		
Period	1960-1990	1960-1990	1960-1990	1960-1990
Countries	23	23	23	23
Observations	46	46	46	46

Note: The dependent variable is real per capital GDP growth between 1960-80 and between 1970-90. The t-statistics in parentheses. R<sup>2</sup> is within-R<sup>2</sup> for fixed effects and the overall-R<sup>2</sup> for random effects.

Figure 4: The Choice Between High Road versus Low Road Human Resource Practices



If short term time horizon dominates, only undertake High Road project if in period  $t_1$  the expected payoff is higher  $E(H) - \oplus_H > E(L)$ . If Start up costs too high ( $\oplus_H$ ) then low road project is selected because start-up costs are zero in first period. Only in the long run is the pay off to the high road project sufficiently large to outweigh initial start-up cost.

Figure 3: IR Channels Linking Inequality to Social Unrest and Redistribution

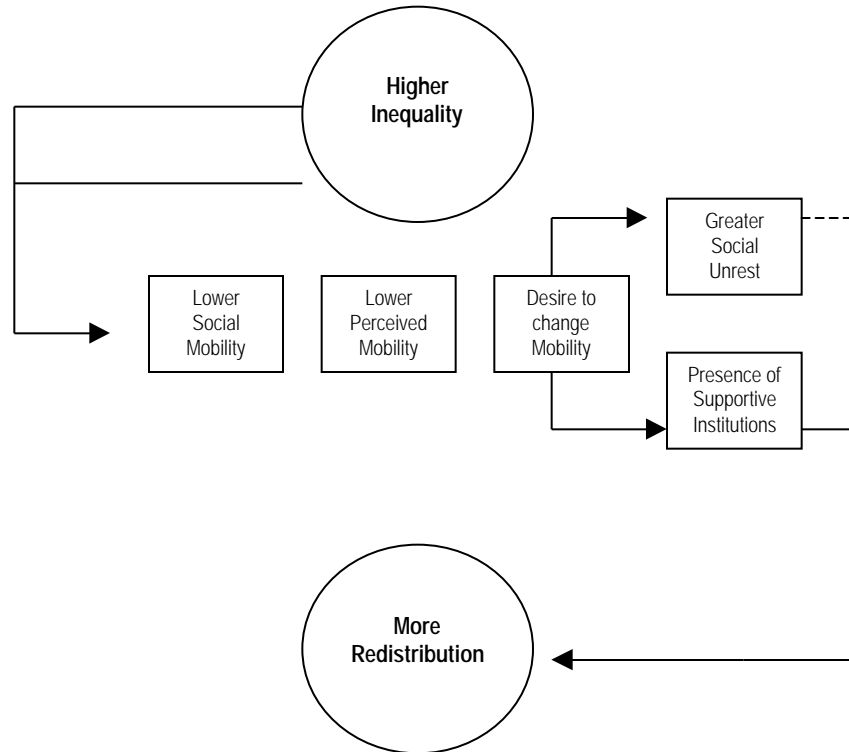


Table 2: Perceived versus Actual Inequality in the United States and Canada

Province/State	Perceived Inequality*	Actual Inequality* Gini ratio
<b>Canada</b>	<b>58.3</b>	<b>0.373</b>
B.C.	49.2	0.373
Alberta	54.3	0.366
Sask.	60.4	0.357
Manitoba	62.3	0.356
Ontario	52.0	0.374
Quebec	68.0	0.367
N.B.	61.9	0.358
N.S.	82.5	0.355
PEI	66.7	0.331
Newfoundland	76.7	0.374
<b>US</b>	<b>61.2</b>	<b>0.466</b>
Northeast	60.5	0.467
Midwest	63.9	0.451
South	62.7	0.464
West	59.7	0.477

\*Note: Perceived Inequality is measured using the percentage of respondents who 'agreed strongly' with the following statement: "The gap between rich and poor (Canadians/Americans) is too wide." Source: Lipset and Meltz (1996) Angus Reid Survey. Gini ratio for Canada is taken from Perspectives on Labour and Income, Winter 1998; for U.S. it is taken from Canadian Economic Observer, August 2000.