Threat Effects and the Impact of Capital Mobility on Wages and Public Finances: Developing a Research Agenda

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Threat Effects and the Impact of Capital Mobility on Wages and Public Finances:

Developing a Research Agenda

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I. Introduction

The impact of increased openness to trade, financial flows and foreign direct investment on the distribution of costs and benefits from globalization remains a controversial and poorly understood subject, despite an enormous amount of research undertaken by economists and other social scientists in recent years.(See, Baker, Epstein, Pollin, 1998; Journal of Economic Perspectives, 1995 for recent discussions of many of these issues). Among the most important and most studied issues is the impact of globalization on inequality and the related issue of the impact of globalization on the roles governments choose to play and on their ability to achieve their goals.

Most of the literature on the impact of globalization on inequality has tried to explain the increased inequality among groups of workers, and has focused on the impacts of trade in goods and services on this intra-worker inequality. (See Cline, 1997 for a recent survey of this vast literature.)[1] This research has been developed by two groups of economists: labor economists, who have attempted to measure the impact of trade by looking at the size of trade flows (quantities) and trade economists who, using the Heckscher-Ohlin framework, have looked at the impact of price changes in traded goods on income distributions.(see Cline, 1997; and Collins, 1998). A "consenus" of sorts has emerged among mainstream economists concerning these issues: in the case of the U.S., and Europe, trade can explain at most about 10-20% of the increase in inequality between college educated and non-college educated workers. According to this assessment, the quantity flows and price changes are simply too small to explain more.[2]

What motivates our current work is the belief that this literature has looked at the connection between globalization and inequality in a narrow and therefore potentially misleading way. In particular, by focusing almost exclusively on trade it has virtually ignored a crucial aspect of globalization – capital flows; and by focusing on wage inequality, it has mostly ignored the increasing inequality between workers and capitalists. This is puzzling especially since the major trade theorems connected to inequality, the Stolper-Samuelson Theorem, concerns the impact of trade on the distribution of income between wages and profits.

Our work on threat effects is motivated by the belief that a focus on capital mobility and the distribution of income between labor and capital may help to bridge the gap between the widely-held perception that globalization is having a big impact on the distribution of income, wealth and power, on the one hand, and the results delivered by economics research, on the other.

While the impact of international portfolio flows on the macroeconomy is substantial, the focus of this paper is on the international operations of multinational corporations (MNC's). When economists discuss MNC's, they usually focus on foreign direct investment (FDI). But such a focus is misleading: MNC's operate in a variety of ways, only some of which involve FDI. They also engage in sub-contracting – hiring another firm to produce output, such as Nike

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[1] This literature has also studied the impact of immigration.

[2]There are, however, some significant dissensions from this view, to which I will return (Wood, 1994, 1995; Feenstra and Hanson, 1996; Leamer, 1998).

hiring a firm in Asia to produce its shoes; outsourcing – that is importing intermediate inputs from a foreign supplier, including but not restricted to its own affiliates abroad; engaging in joint-ventures where the arrangement does not involve an equity investment. A major difficulty in analyzing the impact of MNC's is the lack of good data on these non-equity arrangements.

The effect of MNC's on income distribution, while studied quite intensively in the 1960's and 1970's, (see, for example Bergsten, et. al., 1978) has not received the same attention more recently.[3] Superficially at least there may be good reason for the relative lack of research on multinational corporations and foreign direct investment as an explanation for rising inequality and /or unemployment. First, most discussions of multinational corporations focus on data of foreign direct investment, (FDI)since data on other aspects of their operations – outsourcing and sub-contracting – are more difficult to find[4]. And as these data show, most FDI is between the richer countries of the "north" rather than from north to south. Table 1 shows, for example, that in 1997, 61% of the inward stock of FDI was in developed countries, while 90% of the FDI was from developed economies. Furthermore, as implied by these data, there is a also a great deal of "two-way" flows between the developed countries. So the net flows of FDI in general, and from high wage and to low wage countries in particular appear, on the surface at least, to be much less important than manufacturing imports from low wage countries.

In this paper I argue that this sort of reasoning may be misleading. The ability of multinational corporations to shift production elsewhere – to a different country or even to a different state – may enhance the bargaining power of firms relative to workers, even if the costs the firms find when they get there are similar to those prevailing at home. This improvement in "exit options" may therefore, all else equal, reduce wage and/or employment outcomes for workers, even in the absence of substantial net capital flows, or even large gross flows (Crotty, Epstein, Kelly, 1998; Rodrik, 1999).

Another way to put this is that the mere *threat* of moving a factory to a different location may have a significant impact on wages or institutional variables such as unionization rates, even in the absence of any movement by companies. These threats may generate a *magnification effect* of the impact of flows on inequality and government behavior in the sense that the impact of openness may be larger than may be attributed to the flows of goods, services or capital themselves.

For example, in a survey taken in the U.S. covering the period 1993-1995, Bronfenbrenner (1996), showed that 50% of all firms in general and 65% of manufacturing firms in particular who were targets of union organizing campaigns threatened to close down and move if their workers unionized. Though only 12% of those firms that were unionized subsequently shut down, workers evidently found the threats credible: where threats were made, unions lost a larger percent of elections. (See below for more discussion of Bronfenbrenner's study).

That such threats can have a large impact on bargaining outcomes in theory is well known from the burgeoning field of game theory (see Dixit and Skeath, 1999; Rasmusen, 1994; and Gintis, 2000 for excellent surveys). Below I will discuss a framework building on this

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[3] See, however, the discussion of Lipsey (1999) and Slaughter (1998) below.

[4]For important exceptions see Feenstra and Hanson, 1996a,b, 1997 and Feenstra, 1998.

theory which we can use to understand such threat effects.

While the data on wage inequality has been widely discussed, data on the distribution between capital and labor are less well known. Table 2, taken from Poterba (1997) show the evolution of rates of return on business assets and labor shares in the G-7 countries between 1960 and 1996. In terms of rates of return, many countries exhibit a U-shaped pattern, with returns falling in the 70's, but going up again in the 80's and 90's, sometimes returning to the heights of the 60's. Important exceptions to this pattern are Canada, where returns have been higher since the 80's and Japan, where returns have fallen since the dizzying heights of the 60's and 70's.

The bottom rows of table 2 contain data on labor shares. For the most part, these are the inverse of the data on returns. Labor shares were higher in the 60's and/or 70's, and have fallen since that time.

For the United States manufacturing sector, where much of the FDI and outsourcing has occurred, the decline in labor share is much more dramatic. Table 3 shows the evolution of the U.S. labor share in manufacturing at selected business cycle peak years. (1997 was not a peak but it is the latest year for which we have data). Labor share peaked in the 70's, but has been falling since then. In fact, the share for 1997, 63.6%, is the lowest since the data were collected, starting in 1948.

To be clear, I am not arguing that globalization in general or threat effects in particular can single-handedly explain these trends. There are many domestic as well as international factors at work. I am only arguing that these trends should receive much more attention than they do, and their evolution is certainly consistent with the notion that there has been a shift in bargaining power between capital and labor. It is important to understand this shift and the contribution that capital mobility might be making to it. At this point, this research is under-developed.

Research on the impact of capital mobility on taxes and government spending, on the other hand, is much more advanced than that on capital mobility on income distribution (see Wilson, 1999 and Hines, 1999 for excellent surveys.) This work, which began at least as far back as the 1970's and has continued at an accelerating pace since that time, has developed a rich set of theoretical results which connect lower corporate taxes and altered government spending to capital mobility. However, strong empirical results even here are still relatively lacking.[5]

Moreover, most of this work looks at the impact of capital mobility on taxes and governments in the northern countries. However, bidding for firms has become a global game and there has been relatively little analysis of the impact of this bidding by poorer countries on their economies (World Investment Report, 1996, 1999; Crotty, Epstein, Kelly, 1998).

The major difficulty in making progress on the empirical issues is that threats are hard to measure in a clear way, and as a result, it is difficult to estimate how much of a decline in wages, or corporate taxes, or changes in the nature of government expenditures and regulations is due to such threats and how much is due to some other economic phenomenon, such as technological change. In the absence of information on threats, indirect impacts must be estimated. Hence, it is thus a major research task to determine how to best measure empirically the impact of increased capital mobility and threat effects on bargaining relations

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[5]Moreover, there is far from a consensus in this literature, even on theoretical issues of tax competition and firm bidding (eg. Wilson, 1999; Davies, 2000; Griser, 2000).

The goal of this paper, then, is to discuss how we can analyze theoretically and empirically the ways in which increased mobility of MNC's affects bargaining outcomes between firms and workers, and between firms and governments in their attempts to tax and regulate firms. A specific focus will be to understand how threats by firms to move – or not to show up – affect wage rates and employment, unionization drives, tax rates and expenditures, both in the north and in the south. This paper does not present new empirical results, but rather attempts to clarify these and suggest a research agenda which can make progress on answering these questions. Moreover, it can only give a highly selective review of the literature and the issues in this vast area.

It is important to stress that we have two complementary objectives in trying to reach a better understanding threat effects: one is to better understand when they are effective and how big their impacts are; the second is to better understand when they should *not* be effective, that is when they are due to bluffs which would not be effective if the workers or governments had better information about the true likelihood that these threats will be carried out. For it may be the case, that the threat of capital mobility is having a much bigger negative impact on workers and governments than it needs to: that is, globalization could be having a big negative effect only because people mistakenly believe it should! Indeed, many heterodox economists are quite skeptical that the long long run impact of globalization on the fortunes of governments and workers is negative (Eg., Gordon, 1995; Glyn and Sutcliffe, 1999; Osterman, 1999)

I should make clear that I have no presumption that globalization in general or threat effects in particular account for a large portion of increases in inequality, however measured, or institutional changes such as the decline in unionization in the U.S. This is an empirical question to which we currently do not have the answer. Indeed, making progress on finding an answer is precisely the object of this research agenda. I suspect, though, that it may be quite important.

The rest of the paper is organized as follows. The next section presents a stylized story and facts to motivate the key issues I will address in the paper. Section III. will discuss some "canonical" models which have attempted to make more rigorous some of the key notions involved in a discussion of the impact of openness and threats on bargaining outcomes between workers and firms. Section IV discusses empirical issues. Section V discusses theoretical and empirical work on the impact of capital mobility on taxes, and government expenditures. Section VI briefly discusses a research agenda and section VII summarizes the main results and briefly discusses policy implications.

II. Capital Mobility, Income Distribution and Social Protection: Two Stylized Stories

There is little doubt that there has been a substantial increase in flows of foreign direct investment in the world economy. Table 4 shows a fairly dramatic increase in FDI as a share of capital formation in both developed and developing countries. Of course, these flows are highly skewed, especially with respect to developing economies, where 10 or so countries get about 70% of the FDI flowing to developing economies.

The reasons for these increased flows are myriad, but the literature stresses two: declines in transportation costs and the significant advances in communication technologies (see for example Krugman, 1996 and WIR, various issues.) The significance of a third factor is also increasingly being recognized: the political decisions by governments in many parts of the globe

to alter their laws in order to attract FDI and MNC's. These changes include lower taxes and increased subsidies, reductions in government restrictions on investors, and guarantees or insurance against confiscation of assets. The North American Free Trade Agreement (NAFTA), while one of the most significant multilateral treaties offering investment protections, is by no means the only such recent agreement. Over the period, 1991-1996, 95% of the 599 changes in countries' regulatory FDI regimes were in the direction of liberalization. "They mostly involved the opening of industries previously closed to FDI, the streamlining or abolition of approval procedures and the provision of incentives." (UNCTAD, (WIR) 1997, p. xviii) The enforcement structure has also been enhanced by bilateral investment treaties (BIT's) signed for the protection and promotion of investment. As of January 1, 1997, there were 1,330 such treaties which involved 162 countries, a threefold increase in five years. Approximately 180 such treaties were concluded in 1996 alone (ibid.). The investment protection treaties in the WTO are another important aspect of this new enforcement regime.

This change in the political regimes governing MNC's marks a significant decline in "enforcement" costs, along with declines in transactions and communications costs usually stressed by economists. (Epstein and Gintis, 1992). These declines in costs have, in principle at least, significantly increased the exit options of firms wishing to establish operations abroad, either through FDI, or sub-contracting or other means. What are the impacts of these increased openness?

There is a burgeoning literature which has tried to understand this increase in openness on the size and nature of governments. Dani Rodrik (1997) has argued that increased globalization brings about an increase demand for government protections, because increased openness to trade and capital flows increases instability in general and also creates an increased number of losers. Hence there is more need for insurance and redistribution, as well as a need, more generally, to manage structural change.

However, Rodrik also suggests that increased openness may make it difficult to satisfy the public's demands for more social protection. Increased capital mobility may undermine the ability of governments to collect tax revenue from firms and therefore to provide the public goods, investments and redistributions desired by the public.

These opposite pressures can be seen as both operating simultaneously: the demand for more social protection, a la Rodrik, and the race to the bottom, or the willingness of capital to supply less protection as openness increases. Figure 1 illustrates these in a simple diagram, the supply and demand for social protection.[6]The "demand for social protection" is upward sloping, reflecting the fact that as openness to the international economy increases, citizens and workers will need more social protections to protect them from the vagaries of the market and the creation of losers. The "supply of social protection", represents firms' willingness to pay taxes to support government social protections, as well as the willingness firms have to provide social protections at the firm level, including the toleration of unions, the payment of health benefits, and other firm level benefits. The line G represents the exogenously given level of globalization. This represents the exit options facing firms as well as the pressure on firms coming from trade competition.

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[6]This is taken from Braunstein and Epstein, 1999. Also see Pollin, 2000, for an interesting related discussion from which I have benefitted.

Assume that the economy has been in a stable regime where previous conflicts over the institutional structure associated with openness have been resolved. Think for example of the labor-capital accords worked out in the early post-war era –the regime of accumulation in Boyers' terms or the social structure of accumulation in Gordon's has been established. That is what is meant by an "equilibrium" in Figure 1 where the demand and supply curves intersect.

Now assume there is a shift out in G which represents an exogenous increase in the level of globalization, that is, an enhancement in the exit options available to firms. As G shifts out, a wedge develops between the social protection that citizens and workers need, and that which capital wants to provide. (Figure 1) This sets up a power struggle for institutional change which could take place at the level of the state or the level of the firm or both. Where the economy will end up will depend on the relative power of the two groups and the institutional structures in place and significantly, the level of globalization itself. By enhancing the exit options of firms, globalization might enhance the power of firms relative to citizens, workers and the state. This allows them to win a better deal in the struggle for social protection represented by the wedge between the supply and demand for social protection, moving the economy down in the south-eastern direction.

In principle, of course, it could go the other way. Rodrik (1997) shows that there is some expansion of government as globalization increases. Still, even if that is true, it may still not be expanding fast enough to keep in line with the possibly more rapid growth in the demand for protection.

One element of this story is the impact of increased openness on the willingness and ability of firms to provide (or allow) social protections to its workers, including wages, insurance, and other benefits. Hence this simple story represents various aspects of the "race to the bottom" scenario sometimes associated with globalization.

The "race to the bottom" potential problem associated with capital mobility may be important even if foreign direct investment is between countries or states of the same income level, and the problems may occur even if investment does not flow at a higher level than before. The kind of story I have in mind is the following:[7]

Imagine there are two countries and that in each country there are two "communities" at least one of which has an excess supply of labor (i.e., unemployment, measured or disguised). Now assume there are two multinational corporations, one located in each country, so that in each country there is one community without an MNC. Also, to stack the argument against us, assume that there is a substantial fixed cost to moving from one locale to another, but that if the MNC pays that fixed cost, it can close down its operation in one place and move to the other. Similarly, assume that wages and all other costs, including taxes, and productivity levels, are initially the same in all four communities. Assume that neither the MNC's nor the communities can collude, that the companies want to maximize expected profits and that, initially the communities want to maximize the sum of total wages accruing to them. For simplicity, the workers (working and unemployed) are represented by unions.

Now, let's say that due to a change in norms, or other aspects of the external environment, the two MNC's decide to open their location decisions for bidding and tell all four communities that they are willing to move to the location of the highest bidder. First assume that

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[7]This story is taken from Crotty, Epstein and Kelley, 1998.

the only issue on the table is wages. The communities without MNC's located in them will put in a bid low enough to attract the MNC's, that is, low enough to pay for the fixed costs involved in moving, as long as the lower wages are above the opportunity costs of the unemployed workers of taking the jobs (their fall back positions) . Whether it is above the fall-back position will depend on a host of factors, most notably the level of the fixed cost facing the MNC, the unemployment benefits and the family structure prevalent in the community (for example, whether unemployed workers are expected to perform child care within the family and are compensated for doing so, etc.) The lower the fixed cost, the worse the social safety net, and the lower the opportunity cost within the family of outside employment, the more likely a bid will be put in which is low enough to induce MNC movement.

Given that bid, the workers in the communities where the MNC's are currently located will have to decide whether to lose their jobs, or take a pay cut to reduce the differential between their pay and that of the other communities to a level which is less than the fixed cost. If the opportunity costs of employment are the same in all communities, then they will reduce their wage offers to close the gap to a level below the fixed costs. Note that their wages will not be driven all the way down to the offers of the workers in the other communities. They will be driven down to match the other offers only if there are no fixed costs of moving. In either case, the MNC's will not move. There will be no FDI. But there will be a decline in wages induced by the threat of moving: this is an example of what we have called the "magnification effect".

In the forgoing analysis, substitute the word "taxes" for "wages" and there will be a decline in tax rates resulting from the threat of moving, despite the fact that there will be no movement of capital whatsoever. Note that the existence of the other communities not only cause a shift down in the demand curve (actually, the bargained wage curve) for labor. They also increase the elasticity of the curve, making it more difficult to raise wages or taxes. (See Rodrik, 1997).

Now assume that there is an allotment of new investment that each MNC wants to make and that the cost of the new investment is independent of the locale in which it is placed. Each MNC will initiate a bidding war and, if the four communities are identical, then the bidding war will drive down the wages to the opportunity costs of employment in these communities (though one must take into account that some of the communities already have MNC's and therefore their opportunity costs might be different). Assume that the new allotment of investment flows randomly, since the MNC's are indifferent to where it goes and therefore it makes no difference to the outcome whether it goes to one country (net FDI), goes to both countries (no net FDI but gross FDI) or stays in the home country (neither net nor gross FDI). So, in this case there can be declines in wages (tax rates) even if there is no net investment but there is gross investment. If there are agglomeration effects so that it is more profitable to make the new investment where the old one has already existed, then the wages (or taxes) in the communities where the investment is currently existing will not be bid down to the same level as at the other countries, but they will be bid down nonetheless, unless the agglomeration effects are quite large.

Of course, the situation becomes worse for the workers in these two countries if now a third country opens itself up to investment with all the same characteristics as the first two, but with lower opportunity costs of employment. Then the FDI will flow away from the the first two countries to the newly opened country, call it China. But one needn't have this third country to get the changes in wages and taxes pointed to above. Note, that if there are risks associated with FDI and these risks increase with the amount of investment in one locale then even if the third

country does open up, not ALL investment will go there, even absent transaction costs.

Finally, look at the countries that have bid for the FDI but have not received any, because, for example, their productivity levels are too low. They have reduced their tax rates and wage rates. If this, in turn, lowers tax and wage rates already prevailing in these countries, then the existence of this bidding process has altered the distribution of income and reduced the level of public services that the community can afford. In short, bidding can have negative effects even if no investment comes.

In this story, three factors have contributed toward driving the: First, insufficient aggregate demand to provide full employment contributed to the outcome. Second, there is a change in the set of practices of multinational corporations which leads them to alter the way that they have done business in the past, and put up their location decisions for bidding, while at the same time being willing to lay off workers, close down plants and move elsewhere to increase profits. Third, there is an absence of domestic or international rules of the game which would prevent communities and workers from driving down their own wages and tax rates.

Thus, three factors – inadequate aggregate demand, coercive competition, and weak domestic and international rules of the game – contribute to these negative impacts in this story.

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III. Bargaining Models of Capital Mobility, Wages and Income Distribution

III. A. A Simple Nash Bargaining Model

A simple Nash-Bargaining model can offer quite a bit of insight into the impact of increased openness and exit options on wages, employment and income distribution. (Eg. Blanchflower, Oswald and Sanfey, 1996; Borjas and Ramey, 1994; Rodrik, 1999; these build on Svejnar, 1986). The simplest and and most directly relevant version is due to Rodrik, 1999, which I reproduce here.

Rodrik considers a small open economy with at least two sectors: one, a competitive sector with constant costs, where the wage is set at w*, and a second, a rent creating sector, where the wage(w) is determined in bargaining between workers and firms. The profits of firms is equal to π. If firms move production abroad, they receive π^*. Hence, w* and π^* are labors' and capital's outside options or "fall back" positions.

Rodrik adopts a Nash bargaining framework and assumes that the solution to the bargain arises from the maximization of the Nash product:

$$(1)\ \max\ \phi \log\left[(u(w) - u(w^*))n\right] + (1-\phi)\log(\pi - \pi^*)$$

where ϕ and 1-ϕ represent workers' and firms' bargaining power, and u(.) represent the utility workers receive. Assume u'>0 and u'' <0. n is the employment level in the rent sharing sector and output in that sector is represented by the production function f(n) with f'>0 and f ''<0.

In that case:

$$(1)'\ \pi = f(n) - wn$$

The first order conditions yield the following two equations.

$$(2)\ w: \frac{\phi u@w)}{U(w) - u(w^*)} - \frac{(1-\phi)n}{\pi - \pi^*} = 0$$

$$(3)\ n: \frac{\phi}{n} + (1-\phi)\frac{f@n) - w}{\pi - \pi^*} = 0$$

$$(4)\ w \cong w^* \frac{\phi}{1-\phi}\left(\frac{\pi - \pi^*}{n}\right)$$

$$(5)\ \frac{dw}{d\pi^*} < 0$$

One can also show that employment goes down (n) and firm profits go up with an increase in the availability of firms' profits abroad.

$$(6)\ n = \frac{\phi}{1-\phi}\left(\frac{\pi - \pi^*}{w - f@n)}\right)$$

$$(7)\ \frac{dn}{d\pi^*} < 0$$

$$(8)\ \frac{d\pi}{d\pi^*} = -n\frac{dw}{d\pi^*} + \left[f@n) - w\right]\frac{dn}{d\pi^*} > 0$$

Rodrik also shows that if there is a downward sloping demand for workers in the competitive sector than the release of workers from the rent sharing sector can also lower w*, the wages prevailing elsewhere in the economy.

If there are K rent sharing sectors and if m stands for the number of workers in the competitive sector than national income Y is given by equation (9). If one assumes full employment and that workers shed from the rent sector find jobs in the competitive sector, than equation (10) shows the change in the number of workers in the competitive sector. Equation (11) then shows how national income changes with an increase in firms' outside options.

(9) $Y = wnK + w^* m + \pi K$

(10) $dm = -Kdn$

(11) $\frac{dY}{d\pi^*} = K[f'(n) - w^*]\frac{dn}{d\pi^*}$

Since $dn/d\pi < 0$, national income falls if $f'(n) > w^*$, that is, the value marginal product of labor is greater than the social opportunity cost of labor. Hence if $w > f'(n) > w^*$ then "globalization" will lead to a deterioration in both income distribution and aggregate income.

In this simple framework, an increase in firms' outside options, brought on, for example, by a decline in transportation, communication and/or enforcement costs reduces labors' share of rents, the alternative wage, employment, and, possibly, national income. All of this can occur in this model without an increase in investment abroad.[8]

The limitations of the Nash bargaining framework are well known: among other things, in many situations, there may be more than one Nash equilibrium; and the simple framework does not really describe a plausible process by which any particular equilibrium is reached. If there is asymmetric information, the difficulties multiply.(See for example Gintis, (2000) for a discussion). In the Rodrik model, for example, how do workers know that if they do not give wage concessions that the firm will shut down and move abroad? How do workers tell which firms are bluffing and which are telling the truth about an improvement in outside options? Note that this model is most applicable to a situation where there are one way investment flows, say between a Northern country and a Southern one. But what about the case of two-way flows between Northern countries, a situation more appropriate to the stylized story discussed above?

B. A Model of 2-way FDI

Several papers have developed bargaining models of two-way FDI (Zhao, 1995; 1998; Bughin and Vannini, 1994; Naylor and Santoni, 1999.) Building on work by Dowrick (1989) and others, these models embed firm worker bargaining into an explicit model of oligopoly and therefore explicitly look at the interaction of rent generation in the product market and bargaining between workers and capitalists to divide the rents.

Zhao (1995) develops a partial equilibrium bargaining model in which there are two

[8]An interesting development of this type of model is presented in the excellent paper by Reddy and Dube (2000). They develop a model where changes in product market competition is the driving force but the results are quite similar to Rodrik's.

countries, two MNC's, and two unions. Zhao first shows, using the Nash bargaining framework, that the introduction of a union raises wages and lowers profits. In this environment, firms have an incentive to carry out FDI, once bariers to FDI are reduced. Zhao assumes a structure in which each country has one union and the FDI takes place in the same industry in both countries. (Intra-indusry FDI). The model assumes 2 stages. In the first, MNC(US) invests in Europe and MNC(E) invests in the U.S. They are both in the same industry. In the second stage, they each bargain with the union in both countries (the home and the host country).

At the outset one might think the impact on wages and profits are indeterminate. Firms now have an additional degree of freedom. But now workers have an additional opportunity for employment. Do these two cancel out and leave wages, employment and profit the same as is often implied in facile discussion of two way investment? Or do these two-way flows reduce wages, as implied in the story I told in section II above? (Note that there is an assumption of full employment, with a union sector and a non-unionized sector in the background). Bargaining takes place between each national union and the two MNC's.

Now if there is a strike in one of the countries, the MNC can continue producing in the other. Moreover, if there is a strike, then world output of the product will decline and the price and profit accruing to the firm from it plant that is not on strike will go up. Clearly, the firms outside options have gone up from a situation where if there is a strong, it has no profits.

Zhao(1995) shows that in this situation, workers wages are lower at every level of employment relative to the situation with no FDI. Employment rises if the union values both wages and employment, and falls if unions only value employment.

If only one MNC invests, then negotiated wages fall *in both* countries. The reason is that the MNC has stronger bargaining power vis a vis both the foreign firm and both unions. Note that in this case, inward FDI is harmful for the host country union.[9]

Zhao(1998) develops the model further, taking into account the impact of two-way FDI on the competitive (non-union) wage. He shows that FDI always reduces the negotiated (union) wage and it reduces the non-union wage and union employment if the union cares more about employment than wages or if it is equally concerned about employment and wages.

So far the results support the story told in section II: two-way FDI, by increasing firms' outside options relative to before (and leaving workers' outside options the same) reduces workers' wages, both in the unionized and, under some conditions, in the non-unionized sector.

Zhao shows that these results must be modified where the union, rather than the firm, is allowed to "divide and conquer". In that set-up, firms bargain with each plant separately, but in each country, there is a country-wide union over-seeing the bargaining. Now the union's outside options improve as well: the reason is that if there is a strike, the union workers can get employed by the other firm in the same country. But the union's wage is still lower than without FDI. If there is only plant level unionization and bargaining, then the result is indeterminate. In principle, unions options could improve by more than firms. But – and this is an important point not analyzed – if there is unemployment, then even in this case, the unions outside options are

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[9]Zhao shows that the Nash equilibrium is unique. Furthermore, he shows that, if welfare is defined as the sum of profits, consumer surplus and union rents, cross FDI increases "world welfare" if the union is wage oriented, because in that case employment and output goes up, and reduces 'welfare' if unions are employment oriented.

less likely to improve because rather than getting a job in the other (unionized MNC) they may be unemployed.

Several other papers present variants of the Zhao models (Naylor and Santoni, 1999; Bughin and Vannini, 1994). [10] They focus on the FDI decision and show, like Zhao, that outward FDI can be a response to increased union power in the home country.[11] These are important because they show that firms may use "capital flight" in response to unionization, thereby altering the incentives workers face when they are considering joining a union. Making the rate of unionization endogenous to the process of threat effects is developed further in Reddy and Dube (2000).

These latter models also imply, importantly, that increases in outside options can lead to an increase in the elasticity of demand for labor (eg. Rodrik, 1997, 1999; Rauch and Trindale, 2000). This may have important empirical implications. (See below).

C. What about threat Effects?

Conspicuously absent from the discussion so far is the term "threat". This might seem strange in a paper purportedly about so-called "threat effects". The reason for its absence, however, lies in the nature of the bargaining models and solutions present in the papers discussed so far. The equilibria of these models reflect the impact of changes in outside options on the character of agreements. There is no discussion of the processes by which these agreements are reached. Hence, we have no description of the nature of threats, or the absence of them, as mechanisms for reaching these agreements.

However, the notion of threat is implicit in these models. Indeed, what we have been describing as outside options are normally described as "threat points" (or sometimes fallback postiions). For by definition, these bargaining models are structured in such a way that players can see what their opponent *would do* if they took certain actions. So, these commonly known hypothetical actions operate as threats, implicit as they are. Hence, in the cases studied above, if a group of workers were planning to form a union and bargain for higher wages, and they were playing the game according to the Nash rules, they would know that if they were to do so, the firm would invest abroad. Hence, operating under this threat, they would "choose" lower wages than otherwise. In that sense, the simple models discussed so far do embody "threat effects".

In more realistic settings –dynamic settings and setting with uncertainty or imperfect information – "threats" take on more subtle and sometimes more explicit forms. The literature

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[10] Whereas Zhou uses the Nash cooperative bargaining framework (like Rodrik), Naylor and Santoni derive the sub-game perfect equilibrium in a non-cooperative framework. Whereas Zhou's mnc's produce for export on the world market, Naylor and Santoni's MNC's produce for the domestic markets.

[11] They are also attracted to countries where there are rents to capture in the product market.

on dynamic games with asymmetric information, is huge and complicated. A full discussion of these issues is way beyond what I can do here, but I will draw on a few of the most relevant insights in the next section.

D. Threat Effects in Dynamic Models of Imperfect Information

In the situation which I mostly consider here, namely of a multinational corporation and a set of workers – either unionized or not — or of a firm and a state or local government, the scenario is likely to be primarily one of asymmetric information with the information stacked on the side of the firm. The firm knows what its true outside options are much better than do the workers or the governments. This is partly due to the fact that firms are able to keep a great deal of information private, whereas firms have a great deal of information on their employees and governments.

If a firm threatens to move abroad unless it gets wage concessions, how are workers supposed to evaluate that claim. The literature on game theory stresses the "credibility" of such claims. Credibility, in turn, is a somewhat slippery concept, and can be difficult to establish: how will the workers know the firm is not bluffing?

Various strategies for signaling intentions are offered by game theorists. Among these are establishing reputations for carrying out threats, and undertaking actions which would make it clearly profitable for the firm to carry out its threat.

In the case of MNC's, there are clear mechanisms which firms can use to establish credibility. Having shut down plants and moved operations to another jurisdiction in the past would certainly satisfy these criteria for establishing credibility. Owning plants abroad or in another domestic jurisdiction, and making sure the workers knew about it, would also enhance credibility of threats. The evidence discussed by Bronfenbrenner and presented below show that firms routinely used these two mechanisms to try to establish the credibility of their threats.

Of course, governments and workers needn't be totally passive in this process. Game theorists discuss screening devices which agents can use to try to detect truth tellers from liars This mechanisms are many and complicated and would need to be included in a full description of how bargaining takes place in this environment.

As one can see from the complex nature of this issue, one of the major research challenges is to get more information on how threats operate: when they are credible, when not. Experiments are one way to sort some of these issues out. More ethnographic studies of actual bargaining situations between firms and workers and firms and governments will also certainly be necessary.[12]

E. The Empirical Implications of the Bargaining Models

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[12]Expanding ethnographic and experimental work is especially important because threats have complex and different social meanings in different contexts. In some cultures, explicit threats might not be used. And there is some evidence that in certain contexts, threats actually have the opposite of the intended effects: they make the desired behavior less likely. I thank Don Katzner and Sam Bowles for these points.

The simple model taken from Rodrik (1999) and presented above implies that wages should be a function of the wage in the "competitive sector" plus a share of the rents which the firm gets over and above what it could get by investing abroad. The workers' wage in turn depends on its relative bargaining power ϕ.

$$(4)\ w \cong w^* + \frac{\phi}{1-\phi}\left(\frac{\pi - \pi^*}{n}\right)$$

Rodrik's model also implies that w* should fall in an economy with flexible wages, or where there are barriers to labor adjustment, unemployment should rise. Zhao's models imply that the effect on w* or unemployment should depend on the degree to which workers bargain for both wages and employment.

Whereas Rodrik's model literally implies that no investment need take place, the models of Zhao implies that firms' bargaining power will be enhanced when firms have invested abroad; the discussion of credible threats also implies that owning (or sub-contracting with) factories abroad will enhance the credibility of threats in more complicated games.[13]

These models also imply that demand for labor should become more wage elastic as capital mobility increases: as outside options abroad improve. Econometric work would need to estimate π^*, the outside option, w*, the workers' alternative wages, conditioned on firms or industries that have stocks of investment in other jurisdictions, their contracting relations and outsourcing possibilities.. Ideally, one would want to use firm level data to control for workers' and firm level characteristics. However, firm level data for the U.S. with worker characteristics are very difficult to come by for the U.S.

In addition to econometric work, much can be learned from surveys and ethnographic research. Unfortunately, the only study along these lines of which I am aware is by Bronfenbrenner, which is quite informative. I discuss her study at length, below.

IV. Empirical Evidence on the Impact of Capital Mobility on Wages and Employment

A. Some Stylized Facts on U.S. MNC's

To place the following discussion in context, Table 5 presents some basic facts about the operations of U.S. based MNC's derived from Burke, 1999. First, in general, U.S. MNC operations have grown modestly between 1977 and 1994, as measured by sales and employment. By 1994, affiliate net income reached more than 35% of MNC income and affiliate employment reached 31% of total affiliate employment. The shares in developing countries also rose, with affiliate employment in developing countries reaching 34% of affiliate employment by 1994. The share of affiliate income attributed to developing countries grew quite dramatically between

[13]This discussion does not take into account the subtleties associated with sub-contracting which does not necessarily involve FDI, but which can nonetheless have similar effects on wage bargaining. Empirically, it is very important to take into account such sub-contracting arrangements.

1977 and 1994 from 14 percent overall to 27%. This of course may be at least partly due to tax avoidance strategies (see below). Wages in developing countries are only a fraction of those the MNC pays in the U.S. Overall, productivity levels in foreign affiliates have grown to 88% of that of parents, though we don't have separate data on productivity levels in the developing country affiliates. Finally, the developing country share of affiliate sales to the U.S. market have grown quite dramatically from 8.6% in 1977 to 21.7% in 1994.

Hence, the relative importance of foreign operations for U.S. mnc's has grown, and in particular the importance of affiliates in developing countries. The data indicate a big increase in the share of income coming from foreign affiliates, which perhaps proxies for an increase in π^*, the outside option in the Rodrik model.

B. Direct Evidence on Threat Effects

The only direct study of threat effects on wages that I am aware of is the important and fascinating study by Bronfenbrenner (1996) and related work by Bronfenbrenner and Juravich.

Bronfenbrenner undertook a study of union certification campaigns and first contract negotiations, between 1993-1995. The study involved surveys and follow up telephone interviews with lead union organizers and negotiators.[14] Through this process, Bronfenbrenner was able to gather a great deal of information about the nature of threats: how they were delivered, whether they were carried out, and which firms tended to make them.

In the United States, it is illegal to explicitly and unambiguously threaten to shut down a plant to thwart a unionization drive. As Bronfenbrenner's data show, however, this did not stop firms from making threats – both quite explicit and even written – and often verbal and implicit. Bronfenbrenner shows that "plant closing threats are an extremely pervasive and effective component of employer anti-union strategies". According to her findings, employers threatened

[14]Her study was based on a random sample of 600 union certification elections and 400 cases where the petition to hold an election were withdrawn. The samples were drawn from the entire National Labor Relations Board universe of cases with 50 or more employees which took place between 1993-1995. Lead organizers in the campaigns were mailed surveys asking them a series of questions about worker and firm characteristics, employer tactics during the campaign, including questions about plant closings the threat of plant closings. For all of the elections in the sample where the union won the election, a follow-up questionnaire was sent to the union representative responsible for the first contract campaign to collect addtional data on employer behavior during the first contract process. Follow-up phone interviews were conducted where plant closings or the threat of plant closings were reported by organizers and/or union representatives to have played a role in the withdrawal, election or first contract process. In these interviews orgnizers were asked detailed questions about the nature of the plant closing threats, how the threats were carried out, the frequency of the threats and the availability of any documentary evidence. In addition, data base searches were conducted to collect company ownership and revenue data for all firms where threats were made or plants were closed.(Bronfenbrenner, pp. 6-7)

to close the plant in 50 per cent of all elections and 52 percent of all withdrawls. In another 18 percent of the campaigns, the employer threatened to close the plant during the first contract campaign after the election was won. The employer went on to close the plant in 12 percent of the units where the union won the election.(p. 9) (See table 6, below)

These overall percentages mask some substantial variation across industries. There is some evidence that a higher percentage of threats are made in industries where the plants are actually more likely to be mobile. For example, threats occured in only 25 percent of health care industy units and 27 percent of retail industry campaigns; but they ocurred in 65% of manufacturing units and 50 percent of transportation units. Bronfenbrenner makes a rough break down of "mobile" industries vs. "immobile" ones and find that threats to shut down the plant were made in 62% of the mobile units, compared with 36% of the immobile units.[15](p. 9)

Bronfenrenner notes that: "Thus, where employers can credibly threaten to shut down and/or move their operations in response to union activity, they do so in large numbers." (P. 10)

Since making direct, unambiguous threats during an organizing drive is strictly illegal, most threats were somewhat indirect, or veiled, made orally, often in one to one meetings. Reports Bronfenbrenner, "In our follow-up interviews...we learned that specific unambigous threats ranged from attaching shipping labels to equipment throughout the plant with a Mexican address, to posting maps of North America with an arrow pointing from the current plant site to Mexico, to a letter directly stating the company will have to shut down if the union wins the election."[16]

Firms making threats used many subtle and not-so subtle tactics to try to make their threats credible. One company provided statistics in a captive audience meeting on the average wage of a Mexican auto worker, the average wage of their U.S. counterparts and how much the company stood to gain from moving to Mexico. (P. 12)

Ambiguous verbal and written threats tended to focus on examples of union facilities that had closed down. For example, some companies showed footage of closed plants to their employees in captive meetings; others provided data on the number of union plants that had closed in the past. Firms with plants elsewhere made sure that the workers knew about their existence.

These threats seemed to make a difference to the outcome.The union election win rate was lower in units where plant closing threats occurred (33%) compared to an overall win rate of

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[15]Mobile industries include manufacturing, sites, storage and warehouse facilities as well as some transportation and service units. Immobile industries include heath care, construction, hotel and restaurant and entertainment facilities and most communication and service units.

[16] Bronfenbrenner reports that more than 10% of the organizers said the employer directly threatened to move to Mexico....the most blatant example was an automotive company where the company parked thirteen flat-bed tractor trailers... in front of the plant for the duration of the whole campaign, with signs which read "Mexico Transfer Job". They were loaded with equipment that came from a production line they had closed down over the weekend without warning. The same company also flew employees from their Mexican facility to videotape the workers on a production line which the supervisor claimed they were "considering moving to Mexico". (p. 11).

40%; putting threats in writing seemed to make them more effective. The win rate where they were put in writing was only 25% compared to 37% with veiled threats.[17]

Bronfenbrenner also investigated the characteristics of the firms to identify which types of firms were more likely to make threats. She asked whether they were profit or non-profit, whether they were U.S. based multinationals, whether they were foreign based multinationals, whether they had factories in other countries, and whether they had suppliers from other countries.

Some 39% of the companies in the sample had other sites or locations in Mexico, Canada or other countries, and 49% had a trading relationship either as suppliers or as customers with companies operating in foreign countries.

Interestingly, election win rates were much lower in companies with Mexican (31 percent) or Asian, African and Australian locations (26%)or in those which have trading relationships with other countries (30-33%) than the overall win rate of 40%.(p. 17) The threat rates by U.S. companies with foreign sites were equal to the overall threat rates. Bronfenbrenner hypothesizes that, "This may be because simply the existence of other sites...or a trading relatoinship...serves as an unspoken threat of plant closing for many workers." (P. 18).

Threat rates themselves were highest for foreign owned multinational companies, especially with those based in Asia, Africa and Australia where threat rates for withdrawals was 100%, and 75% for elections. U.S. based multinational plants had threat rates that were only 43% for withdrawals and 52% for elections, slightly higher than the overall rate for elections,(50%) and slightly lower than the overall rate for withdrawals (52%). Theses rates for U.S. based multinationals are lower than those for overall manufacturing firms (at least 60%).

Table 6, derived from Bronfenbrenner,(1996) summarizes some key results: Threats were made more often in mobile industries such as manufacturing, than in immobile industries, such as health. Where threats were made with higher frequency, it appears that elections were less likely to win than when threats were made less frequently. In short, mobility seems to matter for threats; and threats seem to matter for elections and other outcomes.. Also note that mobility seems to matter for outcomes, even not taking into account threats: the win rate was much lower in mobile industries than in immobile ones. The implicit threats associated with mobility seems to have an impact as well.

Contrary Evidence

There is contrary evidence to that implied in Bronfenbrenner's work. Golden (1999), using a new data set on labor relations in the OECD, reports empirical evidence that union power is still alive and well in many countries in the OECD. There is no evidence in her data set that "globalization" has undermined workers' institutions, brought about a general convergence in labor institutions. It will be crucial to sort out the reasons for the differences in Golden's findings, and Bronfenbrenner's.

[17]Bronfenbrenner does not report standard errors so one doesn't know if these differences are statistically significant.

C. Econometric Work

The most direct econometric estimate of the impact of threats on bargaining power comes from Svejnar (Svejnar, 1986). The key result from Svejnar is that exogenous changes in the environment be shown empirically to have an impact on bargaining power of firms and workers. Wage and price controls, for example, are seen in Svejnar's study to have a negative impact on workers' bargaining power and wages. But he does not explicitly test any globalization variables. His work could easily be extended in this direction if plant level data were available.

MNC Behavior and Shifts in Labor Demand

A fair amount of research has tried to assess whether increased FDI has led to less employment in the home country. The results of this research are quite mixed with the clearest evidence coming from firm level data. For the United States, Lipsey(1999) finds that there has been almost no aggregate shift of employment or production to foreign countries, since continuing shifts to foreign locations by U.S. manufacturing firms have ben largely offset by shifts into the United States by foreign multinationals.

But, significantly, Lipsey does find that higher levels of production in developing counries by a firm are associated with lower employment at home for a given level of production. The reasons is that U.S. multinationals tend to allocate their more labor-intensive production to developing country affiliates and retain more capital and skill intensive operations in the U.S.

Other studies using disaggregated – usually firm level – data find similar results. For example, Fors and Kokko (1999) find that Swedish MNC's also seem to be substituting foreign for domestic labor, with home operations probably becoming less labor intensive. These findings contradict earlier studies of Sweden that used more aggregative data (eg. Lipsey, Ramstatter, Blomstrom, 1999).

D. Outsourcing and Bargaining Power

Part of the problem with studies of capital mobility by MNC's is that it has focused on FDI. But as discussed previously, MNC's operate in many ways, not just through FDI: they use sub-contracting, joint ventures, and outsourcing.

Among the most interesting work in this area has been initiated by the efforts of Feenstra and Hanson, who have created measures of outsourcing and have looked at outsourcing's impact on wage inequality and the distribution of income between profits and wages in the U.S. (See Feenstra and Hanson, 1996, 1997; Feenstra, 1997). Feenstra and Hanson define outsourcing as the importation of intermediate products, from foreign affiliates, sub-contractors, or other firms.

Table 7, derived from Feenstra 1998, present estimates of outsourcing in Canada, Japan, the UK and the US, from 1974 to 1993. The data exhibit a general and quite large increase in outsourcing for these countries over this period.

Focusing on the U.S., Feensra and Hanson (1997) note that oursourcing has increased substantially within the U.S. manufacturing sector, at an annual rate of .2% over the period, 1979-1990. At the same time, while the production wage share declined substantially during the

1979-1990 period (at an annual rate of .15%) , and the non-production wage share has only slightly increased, the capital share increased by an average rate of .25% a year over the period (Feenstra and Hanson, 1997, Table 2). They argue that these changes are the result of an imprecisely measured combination of outsourcing and technological change.

There is some evidence that outsourcing is having similar impacts in the U.K. Anderton and Brenton (1999) looked at the impact of outsourcing in two industries where low skill workers are prevalent: textiles and non-electrical machinery production. They find that outsourcing to low wage countries seems to have had a significant negative impact on low skilled workers in these industries.

Slaughter's work on Wage Elasticities

Perhaps the most suggestive empirical work on these issues is in Slaughter (1998). Slaughter exploits the idea that increased potential capital mobility and threat effects can lead to an increased wage elasticity of demand for labor.

Slaughter estimated the changes in wage elasticities in U.S. manufacturing from 1960 to 1990. He combined data into eight clusters of industries.[18] Slaughter finds that the wage elasticity of demand for production labor falls over time in five out of the eight industries as the globalization theory would predict[19] . Slaughter then tried to determine the causes of the decline in elasticities in these industries. He included many of the globalization variables which we have discussed: these include outsourcing, foreign affiliate share of US MNC assets, and affiliate share of U.S. MNC employment.

Slaughter found that outsourcing had a large impact on the decline in labor demand elasticities facing these industries. This seems like strong evidence consistent with the threat effects story. However, the statistical significance of these variables mostly disappear when Slaughter put in time as a variable in his regression equation.

Slaughter discusses his mixed results: "One major problem with the trade measures might be that it is not actual trade that matters but *potential* trade. That is what might matter for labor demand is just the ability to transact internationally regardless of whether such transactions actually occur". Speaking about the effect the time variable had on the globalization variables, Slaughter notes: "..perhaps trade's true effect s to increase its "threat" over time – both in terms of product market competitiveness and factor substitutability – independent of actual changes in econometric observables. This might be a reason to attribute time's explanatory power to trade. On the other hand, perhaps computerization's true effect is a similar "threat" independent of whether computers are actually used. In this case perhaps time should be attributed to technology. It is not obvious how to distinguish these alternatives."

Hence, while Slaughter's results are highly suggestive, they still do not provide the

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[18]The industries are: food and tobacco; Textiles, Apparel and Footwear; lumber furniture, paper and printing; chemicals, petroleum, and rubber; stone, clay glass and transportation products; primary metals and fabricated metals; nonelectrical machinery and electrical machinery; instruments and miscellaneous products.

[19]In only chemicals, machinery and lumber do elasticities not fall.

"smoking gun" of threat effects one might be looking for. And they point out the diffiulties of assessing threat effects without more direct information on the nature and existence of these threats.

V. The Impact of Capital Mobility, Threats and Bidding on Capital Taxation

Research on the relationship between capital mobility, inter-jurisdictional tax competition and public policy is much more advanced than that on wages and labor-capital relations.[20] Starting in the 1970's, Oates (1972) began the development of a canonical model of inter-jursidictional tax competition. As Oates put it: "The result of tax competition may well be a tendency toward less than efficient levels of output of local services. In an attempt to keep taxes low to attract business investment, local officials may hold spending below those levels for which marginal benefits equal marginal costs, particularly for those programs that do not offer direct benefits to local business" (Oates, 1972, p. 143, as quoted in Wilson (1999). While Oates focused on federalism, the same argument can be readily applied to issues of international taxation (Avi-Yonah, 1996; Wilson, 1999). This view departed from the Tiebout model which argued that taxes and spending would efficiently reflect tax and spending preferences of individuals, allowing them to sort themselves into communities with the optimal level of taxation and spending for each community. The new literature which built on Oates' insights noted various externatlities which tax competition would impose, thereby making bidding for tax bases to be inefficient, and lead to the under provision of crucial public goods.

There seems to be considerable evidence that international capital mobility is driving down taxes on a global basis. Rodrik (1997), for example, using data for 18 OECD countries, finds that capital tax rates fall and labor tax rates go up as trade openness increases (P 63-64). This of course is not an ideal test since we are concerned with mobility of capital and not trade. A visual inspection of turning points, though, indicate that capital tax rates begin falling in many of these countries in the 1980's and tax rates on labor begin to rise at around the same time; this is clearly the time when capital mobility increased as well. Without further study it is, of course, impossible to tell how much of this may be due to capital mobility, though Tanzi (1993, 1999) suggests that capital mobility is an important culprit. (See also (Avi-Yonah, 1998).

For the United States, for example, there has been a dramatic decline in the corporate tax burden in recent years, from an average of 64% in the 1970's to 42% in the 1990-1996 period (Poterba, 1997, Table 2).

Hines reports that multinational corporate production gives enormous opportunities to reduce tax burdens through such mechanisms as income shifting and transfer pricing (Hines, 1996; 1999). Says Hines, "One clear implication of the quantitative evidence is that the investment, financing and other activities of multinational corporations are quite sensitive to their tax treatment. This sensitivity carries numerous implications for tax policy, including the standard for governments to compete with each other to offer firms ever-lower tax rates to attract activities that are believed to be beneficial to their economies. An alternative to tax competition is to form supranational agreements to harmonize tax rates and tax bases; but such attempts are

[20]For an excellent recent survey of this literature, see Wilson (1999)

notoriously innefective and quickly abandoned."[21] Other studies have shown that for U.S. MNC's, that reported rates of return and profit margins are higher in low-tax countries than in high tax countries, which is what one would predict if companies were to shift reported income to reduce their tax liabilities. Studies have has also shown that U.S. companies that had subsidiaries in low-tax countries had lower overall U.S. tax ratios than U.S. companies with subsidiaries in high-tax countries (Grubert and Slemrod, 1994; Tanzi, 1993, p. 103).

The "War Between the States", as the competition among US states for investment and jobs has come to be called, may well be a microcosm of what is emerging in the global arena. Subsidies cost local governments tens of billions of dollars in lost tax revenue, yet as the willingness to offer such concessions becomes universal, they have less and less effect on plant location decisions. The Federal Reserve Bank of Minneapolis called for a federal law prohibiting state and local tax incentives for particular companies as an attempt to reduce this destructive war. (See Federal Reserve Bank of Minneapolis, 1996; Holmes, 1995)

Perhaps the most interesting piece of evidence along these lines comes from an interesting study by Figlio and Blongen (1999). They show that inward FDI in South Carolina lead to higher wages and employment there, but it also led to a shift in county expenditures away from education spending toward infrastructure. This a clear indication of bidding effects for foreign direct investment. More studies like this are clearly needed.

This competition is spreading more widely to the South as well. Though many countries make large and costly changes in their economies and government policies to attract FDI, few actually attract much. In addition to removing barriers to inward capital flows, governments attempt to entice FDI with a variety of investment incentives. However, the empirical literature suggests that investment incentives have not been effective in attracting direct investment flows. Instead, this literature has identified market size as the dominant influence on direct investment inflows (WIR, 1999). Despite and perhaps due to their pervasiveness, tax holidays do not seem to lure direct investment. Moreover, even if flows arrive they may not benefit the domestic economy especially if, because of liberalization agreements themselves which lock governments' hands, they cannot regulate the MNC's in the community's interest (WIR, 1999)

As Wilson and Davies (2000) point out, however, these studies beg the question of what is the optimal rate of taxation. In recent years, economists have begun to question the canonical models of inefficient tax competition. Many have argued that, in the absence of tax competition, taxation might be too high. So tax competition actually brings taxes down to their efficient levels. These arguments, like those for destructive competition, rest on claims about externalities, or rent seeking governments. These issues clearly remain to be sorted out.

I am skeptical, however, that the tax competition revisionists will win the day. The evidence developed by Hines (1999) and others indicates a clear and substantial ability of capital to avoid taxes in the new era of capital mobility. This implies a dramatic shifting of the tax burden on to fixed factors, such as labor. The efficiency arguments for this are based on models which assume that inequality has no harmful effects. New research indicates this is unlikely to be true in general. And it fails to adequately consider important equity issues. The standard response of redistributing income or wealth to restore equitable distributions are much more difficult to

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[21]Note that not all aspects of globalization reduce tax rates on capital. Hines (1996) reports examples where transfer pricing can increase tax revenue for the United States.

accomplish in economies with mobile capital. Hence, the standard compensation principles of welfare economics on which these models rely are becoming virtually irrelevant in the face of high levels of capital mobility.

There is important counter evidence to these trends. (See Golden, 1999 for a summary of some of this). Some authors have found that mobility has not undermined the welfare state. Hence, while in theory, perfect capital mobility might do so, capital maystill not sufficiently mobile to have "accomplished" this. (Epstein and Gintis, 1992). These issues surely remain to be sorted out.

VI. Toward a Research Agenda on Threat Effects

Identifying and measuring the impacts of international integration through the threat channel will require a great deal more work and ingenuity. The limitations of current data sets are severe. Among the biggest problems is the lack of good data on the myriad activities of MNC's and the ways in which governments and unions interact with them, not only in the United States, but also abroad. If the "outside option" is a central variable of any threat model, then having much better data on the value of this option is crucial. To do so we need much better data on:sub-contracting relationships, including wages and productivity levels, government tax breaks and subsidies, and better information on out-sourcing relationships. Second, we need better data on services. The service industry is growing rapidly, but much of our data are for manufacturing, a shrinking sector in most rich countries.

In addition to data improvements, we need much more information on how threats work in a context of imperfect information: for example, how are bluffs distinguished from credible threats? How do workers and governments try to improve their information when faced with a threat? Can threats actually be counterproductive? Experiments may help sort out some of these issues.

Perhaps more importantly, we need more intense survey and interview work of the type conducted by Kate Bronfenbrenner and her collaborator Tom Juravich. More work along these lines will be crucial to creating an understanding of how threats operate, how effective they are, and how big an impact can they have.

In short, better data, more survey and ethnographic research, and better overall information on the activities of multinational corporations, especially their sub-contracting and outsourcing behavior, are essential to making significant progress on these issues.

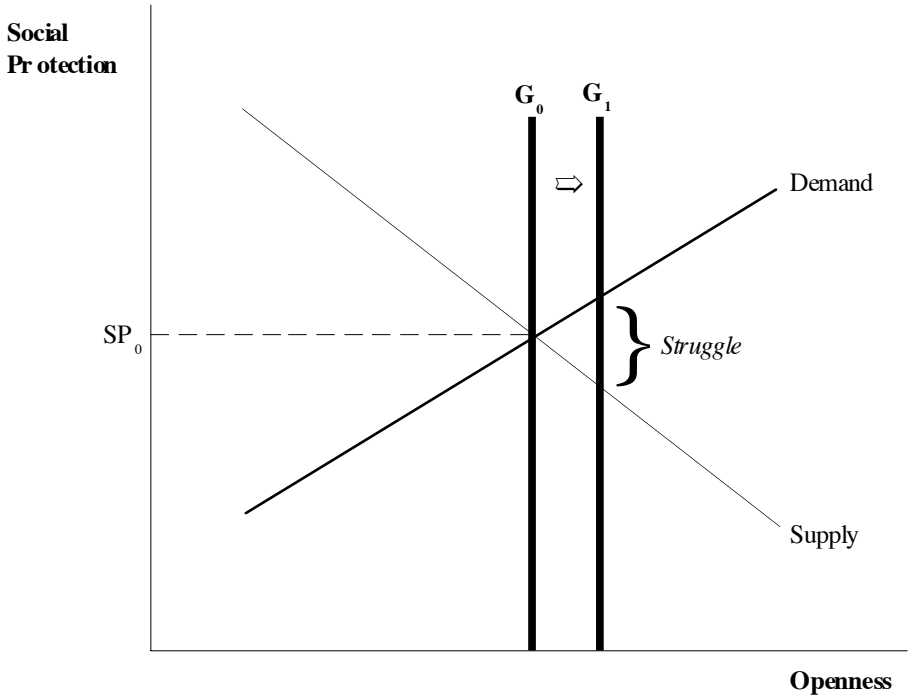
VII. Conclusion

Globalization is a complex and contradictory process which is surely having myriad impacts, some undoubtedly for good, some surely for ill. No one process – including capital mobility and threat effects – can fully explain any aspect of globalization, for example the increase in inequality. But capital mobility has surely been under-studied, especially relative to trade, and I believe it is crucial that this imbalance be corrected if we are to better understand the impact of currently existing globalization. Threat effects are certainly one, but only one, channel by which capital mobility can effect the economy. While I believe it potentially has a large effect, we currently have very little idea of how big it is.

Even though we need to do much more work on identifying the impact of capital mobility

and threats, it is still worthwhile to briefly explore the policy implications if it were to turn out that capital mobility does have significant deleterious effects. As we argued in Crotty, Epstein and Kelly (1998) and Braunstein and Epstein (1999) policies at the domestic, regional and international levels would all be necessary to correct the imbalance caused by high capital mobility between capitalists, on the one hand, and communities and labor, on the other. Among the policies we advocated are: full employment macroeconomic policy, to enhance the bargaining power of both workers and communities; international tax treaties to limit international tax competition; enhancement enforcement of labor rights so that threats cannot so easily be applied; change in IMF/World Bank policies that require countries to open up to FDI in order to quality for loans. These are just a few of the many important policy changes that would be required to deal with the possible negative impacts of capital mobility.

Figure 1
Demand for and Supply of Social Protection



Demand: workers and citizens from firms and the state
Supply: capital supplies at firm level and to the state

Source: Braunstein and Epstein (1999)

Table 1
Regional Distribution of Inward and Outward FDI Stock, 1985 and 1997
(Percentage)

Region/Country	Inward FDI Stock		Outward FDI Stock	
	1985	1997	1985	1997
Developed Countries	72.3	68.0	95.7	90.2
Developing Countries	27.7	30.2	4.3	9.7
Africa	3.1	1.9	.9	.5
Latin America and the Caribbean	10.1	10.9	1.1	1.0
Developing Europe	.1	.1	-	-
Asia	14.3	17.2	2.3	8.2
West Asia	-	.2	.3	.3
Central Asia	-	.2	-	-
South, East and South-East Asia	8.6	15.3	2.0	7.9
The Pacific	.2	.1	-	-
Central and Eastern Europe	-	1.8	-	.2
World	100.0	100.0	100.0	100.0

Source: World Investment Report, 1998. Table 1.3

Table 2
Rates of Return and Labor Shares in G-7 Countries, 1960-1996

Date	U.S.	Germany	France	Italy	Canada	U.K.	Japan	G-7 Average
Comparative Rates of Return on Business Assets, G-7 Nations, 1966-1996								
1960-69	14.2	15.8	12.5	15.6	12.7	11.9	25.3	15.4
1970-79	14.2	13.7	12.8	12.8	15.6	10.2	17.8	13.9
1980-89	15.3	12.2	11.9	13.1	19.0	9.6	14.1	13.6
1990-96	17.9	13.8	14.8	15.0	18.5	10.9	14.7	15.1
S.D.	.7	.7	.7	.9	.1.1	.7	1.3	
Labor Shares of Business Sector Output, G-7 Nations, 1966-1995								
1960-69	67.3	62.5	69.2	62	70.3	69.5	57.5	65.5
1970-79	67.7	66.1	69.0	65.4	64.5	69.9	66.3	67
1980-89	66.7	65.9	67.8	63.5	62.4	69.2	68.3	66.3
1990-95	66.2	63.5	61.6	61.0	65.6	70.9	65.3	64.9
S.D.	.9	1.1	1.3	1.4	1.5	1.5	1.4	

Source: Poterba, 1997.

Table 3
Labor Share in U.S. Manufacturing
Selected Business Cycle Peak Years
1953-1997

Business Cycle Peak Year	Labor Share of Manufacturing Gross Product
1953	67.9
1960	69.8
1973	71.3
1980	74.6
1990	66.8
1997*	63.6

Source: BEA, Gross Product By Industry, www.bea.doc.gov

Table 4
The ratio of foreign-direct-investment inflows and outflows to gross fixed capital formation

	1981-1985	1986-1990	1991-1995	Memo:1997
All Economies	4.4	8.8	8.7	15.7
Developed Economies	4.9	11.3	9.0	16.2
Western Europe	6.9	14.6	13.6	25.0
Developing Economies	4.7	4.4	9.2	14.2
Latin America	4.3	5.1	10.0	18.6
Asia	3.4	4.1	9.2	12.9
S.E. Asia	2.2	5.0	10.7	14.0
Developing Economies minus China	5.2	4.8	9.2	14.0

Source: UNCTAD, 1995,1997, 1999 World Investment Report, Annex table B5.

Table 5
U.S. MNC Operations, 1997 and 1994

U.S. MNC Operations (all industries)	1977	1994
Affiliate Sales as Share of MNC sales	21.2	29
Affiliate Employment as Share of MNC employment	26.6	31.6
Affiliate Net Income as Share of MNC income	21.4	35.3
Affiliate Sales in Dev. Countries as Share of MNC Sales	15.3	17.8
Aff. Employment in Dev. Countries as Share of Aff. Empl	28	34
Dev Country Share of total For Aff net income	14	27.2
Machinery	7.3	31.9
Electrical Equipment	20.7	33.2
Transport	4.7	32.5
Ratio of average compensation in for. Affiliate to average compensation in parent operations		
Developed Countries	.71	.90
Developing Countries	.26	.29
Ratio of Foreign Affiliate Labor Productivity to parent labor productivity	.74	.88
Foreign Affiliate Sales to U.S. Market as a share of Total Affiliate Sales		
All Industries	9.1	14
Developed Countries	9.2	12.1
Developing Countries	8.6	21.7

Source: James Burke, 1999.

Table 6
Industrial Sector Threats and Election Outcomes

	All Campaigns	Elections		
Industrial Sector	**Percent Threat Rate**	**Win Rate for Elections**	**Win Rate for Elections with Threats**	**Threat Rate**
Manufacturing	.65	.27	.24	.64
Transportation	.50	.52	.48	.52
Health	.25	.61	.54	.27
Mobile	.62	.28	.23	.60
Immobile	.36	.55	.51	.39

Source: Bronfenbrenner, 1996, Table 4, p. 39.

Table 7
Outsourcing in Selected Countries, 1974, 1984 and 1993

Country	1974	1984	1993
All Manufacturing			
Canada	15.9	14.4	20.2
Japan	8.2	7.3	4.1
UK	13.4	19.0	21.6
US	4.1	6.2	8.2
Chemical and Allied Products			
Canada	9.0	8.8	15.1
Japan	5.2	4.8	2.6
UK	13.1	20.6	22.5
US	3.0	4.5	6.3
Industrial Machinery (Non-electrical)			
Canada	17.7	21.9	26.6
Japan	2.1	1.9	1.8
UK	16.1	24.9	31.3
US	4.1	7.2	11.0
Electrical Equipment and Machinery			
Canada	13.2	17.1	30.9
Japan	3.1	3.4	2.9
UK	14.9	23.6	34.6
US	4.5	6.7	11.6
Transportation Equipment			
Canada	29.1	37.0	49.7
Japan	1.8	2.4	2.8
UK	14.3	25.0	32.2
US	6.4	10.7	15.7

Source: Feenstra (1997); Note: U.S. Estimates are for 1975, 1985, and 1995.

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