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The Correlates of Rentier Returns in OECD Countries

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Abstract

This paper examines the correlates of rentier returns – returns to the ownership of financial assets -- in a sample of OECD countries between 1960 and 2000. We develop a simple bargaining model among three classes – industrial capitalists, rentiers and workers – and show that rentier income returns increase when domestic and foreign real interest rates costs of capital mobility fall, and the power of labor declines. Using an unbalanced panel dataset, the paper also econometrically investigates the impacts of proxies for these variables on rentier incomes. We find that interest rate liberalization, the reduction in the unionization rate of labor, and increased returns from foreign financial investments increase rentier returns. These results provide support both for the simple model and for common Post-Keynesian and Marxian stories of the impact of financialization and neo-liberal policy changes on income shares.

Keywords: Rentier, Functional Distribution, Neoliberalism, Financialization

JEL Codes: D33, B5, G10

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"Finance reasserted its power and interests in relation to workers, company managers, those responsible for economic and social policies in governments, and public and semipublic institutions, both national and international. Prioritizing the fight against inflation, the new course of events refocused economic activity on capital profitability and payments to creditors and stockholders"

Dumenil and Levy (2004)

Chairman Greenspan: "You realize that the labor unions would say that was awful: you say it's wonderful"

Mr. Syron: "That's right, but we are not in an AFL-CIO meeting. And they have a little different view than we do on what is considered wage inflation."

From the Federal Open Market Committee Transcript, February 1990

(Quoted in Mitchell and Erickson, 2002)

I. **Introduction**

In recent years, interest has grown in the increasingly important role that financial markets, actors and institutions have been playing in the operations of capitalist economies over the last two decades, and the implications this has had for the distribution of income and wealth within countries. The resurgence of interest has occurred as a result of a sequence of devastating financial crises in developing countries in the last several decades, the increased size of financial markets relative to the size of the real economy, and the extraordinary spread of financial liberalization and privatization of financial institutions in recent years. Perhaps somewhat surprisingly, the reassertion of finance has been treated by much of mainstream economics as deserving of no more attention than the rise of any other sub-sector of the economy. By contrast, researchers drawing from the alternative traditions of Keynes and Marx[1] have seen this as a fundamental change in the character of modern capitalism. As a consequence, the process of "financialization" has been the central concern of several political economy studies in the recent past. A far from exhaustive list would include Pauly 1997; Henwood 1998, Boyer, 2000, Yeldan, 2000; Brenner, 2002 Dumenil and Levy, 2004, 2005; Patnaik, 2003, Krippner, 2005; Epstein, 2005; Crotty, 2005).

A story emerges from much of this literature, a condensed version of which goes like this: historical and political changes have led to expanded role for financial markets and for an array of institutions and individuals that are actively involved in these markets and obtain returns from them. We use a somewhat old- fashioned term- the 'rentiers' to describe these actors[2].While we do not pretend that there is anything approaching a consensus on the constituent elements of this class, many definitions have some common elements. It is often argued that members of this class (variously defined) have benefited directly by virtue of the

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[1] This has been an important question within the Marxian literature since at least Hilferding (1981)

[2] See Epstein and Jayadev (2005) for more discussion of these issues.

expansion of the markets they operate in and the assets they hold. The conditions which have enhanced the returns to rentiers have been, it is argued, endogenously generated. As the rentier class has become more powerful, they have been able to more effectively promote policies which benefit them. Thus for example policies that prioritize low inflation, low budget deficits or the promotion of anti-union legislation (to reduce wage –push inflation) all received support from increasingly politically important rentier interests. Similarly financial deregulation, both domestically and internationally has expanded the scope and domestic financial liberalization to give them more profit making opportunities; and have been promoted by rentier interests as well[3].

Our paper seeks to formalize and empirically evaluate these claims. Specifically, we operationalize one definition of the income of the rentier class following from Kalecki (1990) and we investigate its correlates in a panel of 14 OECD countries. In order to do this, we present a formal bargaining model that captures some of the relationships that have been explored in the literature.

The rest of our paper is organized as follows. In the next section we outline a simple bargaining model of the rentier return which is elaborated in appendix B. In the following section we define our measure of rentier incomes and describe basic trends in that measure in a sample of OECD countries since the 1960's. In section III, we present a panel data analysis of the determinants of rentier incomes for a sub-sample of OECD countries, in an attempt to assess the impacts of a variety of policy and structural variables on rentier incomes. In the final, concluding, section, we draw out the implications of our work, and make some suggestions for future research.

II.   A simple bargaining model of the rentier return

Much of the existing political economy literature on the functional distribution of income implicitly or explicitly analyzes this in terms of the dynamics of an economy with three classes: workers, industrial capitalists and financial capitalists. The formulation dates from a classical economic viewpoint. However, perhaps for reasons of tractability and clarity, most studies restrict the analysis to the relationship between only two of the three classes[4]. Thus, for example, Harrison (2002), and Jayadev (2005) model the bargaining relationship between industrial capital and labor, while Stockhammer (2006) consider the conflicts between industrial and financial capital.

While these studies are useful, our macroeconomic analysis of the trends and correlates of the rentier return needs to be founded in a model which considers the interrelationships between all three of these classes, and, toward this end, we present here a simple model on the determinants of rentier return in a bargaining framework with the three groups. The model is meant to illustrate and motivate some of the key correlates of the rentier return as

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[3] See among others as examples, Epstein, 1981, Greider, 1984, Crotty and Epstein, 1996; Rodrik 1998; Helleiner, 1994; Stockhammer, 2006)

[4] Eckhard and Ochsen, (2003) remains a notable exception

discussed in many different accounts of the resurgence of the financial capitalist class. The model itself is presented in the appendix.

The central purpose of the model is to establish the implicit insight in many accounts that that if we consider rentiers to be a distinct class whose input into production (liquidity/finance) commands a return out of the operating surplus from production, then their returns depends on the political power of competing groups (industrial capitalists and labor) and on policies that increase their fallback options (such as international and national deregulation of finance).

II. Rentier Incomes in OECD Countries: Definition, Data Source and Trends

Rentier Income

As noted before, there is no commonly accepted definition of rentier returns. Most authors use a definition to denote income that accrues from activity in the financial sector and the ownership of financial assets rather than activity in the "real" sector or the holding of "real" assets such as real estate or capital equipment used in the non-financial sector. For example, Keynes, in his *General Theory,* refers to the rentier as "the functionless investor," who generates income via his ownership of capital, thus exploiting its "scarcity-value"(Keynes 1936). Here, we are interested in a definition that reflects the class forces in modern capitalist economies, and have chosen a definition consistent with the work of Michal Kalecki. As Kalecki used the term, rentier income represents the income received by owners of financial firms, plus the return to holders of financial assets generally. (Kalecki, 1990). Defined this way, rentier income reflects returns to those who own financial assets, either directly or indirectly by owning the profits accruing to financial sector firms. This distinguishes rentier income from income earned from labor and income earned from owning non-financial firms.[5]

More specifically, rentier return, as calculated in this paper, consists of the profits earned by firms engaged primarily in financial intermediation plus interest income realized by all non-financial non-government resident units, i.e. the rest of the private economy. In principle, rentier return should include capital gains on financial assets realized by all non-financial non-government resident institutional units. However, in practice, these are virtually impossible to get reliable time series across countries for and hence we confine our analysis to returns to financial capital excluding capital gains.

We obtain our data for the rentier return from the annual United Nations Publication: *National Accounts Statistics: Main Aggregates and Detailed Tables.*The UN dataset is a regularly published and consistent series, based on the system of national accounts, 1968. It

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[5] Of course, a worker can receive some "rentier income" to the extent that she owns financial assets. The same goes for the CEO of an industrial firm. This allows us to include the returns that owners of industrial firms receive from their direct ownership of financial assets, but we are not able to separate out the amount of industrial firms' profit that come from financial market activities. (See Crotty, 2005, on the data difficulties involved). Krippner (2005) discusses this issue at length and has very interesting estimates of the share of non-finanical corporate profits that come from financial transactions. According to her figures, they have risen a great deal in the case of the U.S. over the last three decades.

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is estimated on the basis of surveys of enterprises or establishments and government accounts. We define the 'inflation adjusted rentier return' as the income flow to rentiers less the reduction in wealth coming from inflation. The specifics of our measure of the rentier return are provided in detail in appendices A and B. We then define the rentier fraction of GDP, or alternatively the rentier return normalized by GDP or the rentier share as this measure divided by real GDP[6].

Our analysis focuses on OECD countries for which all the elements required to construct this Kaleckian measure are available. This has the disadvantage of reducing the potential sample size but is necessary for ensuring the cross sectional comparability of the data. Our data is unevenly spread and runs from the 1970s for most countries (1960 for the US) to 1996. The data stops in that year since the United Nations revised their collection based on the *system of national accounts 1993* and therefore stopped collecting data on adequately disaggregated levels from 1996 onwards.

Table 2 summarizes for each country the trend of the inflation adjusted rentier fraction of GDP. For all countries for which we have data, the inflation adjusted rentier fraction was higher in the 1980's and 1990's than it was in the 1960's and 1970's. These data, then, are consistent with the notion that real rentier returns have gone up since the time the neo-liberal period was initiated in the early 1980's. Sometimes these changes have been nothing short of dramatic. In Portugal, for example, the increase in the inflation adjusted rentier return is nearly a fifth of GDP. There is substantial contrast between countries. Australia, Great Britain and the U.S have seen increases in the real rentier return fraction of nearly a tenth of GDP since the heyday of inflation in the 1970s. By contrast, continental economies such as Germany and Netherlands have seen smaller increases.

Since two price factors determine our measure of the normalized rentier return- nominal returns (positively) and inflation rates (negatively), we can see at least four likely factors that contributed to the trends we observe evident in the political economy literature . The first is the shift to hawkish monetary policies in the UK and US around 1979 or 1980. These policies ushered in an era of much lower inflation and high real interest rates, an era that, with some variation across time and space is still with us. Table 3 reports data on real interest rates in the OECD countries, showing the contrast between the 1960's and 1970's on the one hand, and the 1980's and 1990's on the other. It shows that in most countries, real interest rates rose significantly between the two periods, a trend consistent with the increase in rentier returns reported above. The profound change in monetary policy ushered in by the Thatcher government in the UK and Paul Volcker in the U.S spread throughout the OECD with greater pressures for central bank independence, inflation targeting and through the inter-linking of interest rates brought on by financial liberalization and international capital mobility.

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[6] Strictly speaking, this variable is not a share of income, for several reasons. The rentier return variable and GDP variable are calculated from different accounts: property income (i.e. interest and dividend income) is derived from the secondary distribution of income account in the UN SNA 1968, while GDP is a concept from the primary distribution of income. In other words, rentier income received is not necessarily from current productive activity. Another complication is that in calculating rentier income, we do not net out interest payments among private sector actors. As a result, this rentier measure is best thought of as a "gross", rather than a "net" measure of rentier income (see Epstein and Jayadev (2005) for more discussion of this point.)

This financial liberalization is the second important factor accounting for the increase in rentier returns. Widespread financial liberalization allowed for increases in real interest rates, and for the dramatic expansion of financial activities and profits. The elimination of capital controls in most of these countries also likely contributed to higher rates of returns on financial assets and increased opportunity for financial sector profit. In principle, opening the capital account ought to contribute to financial profit opportunities as detailed by our model.

A third structural and policy change – the move toward fiscal austerity - has, in principle, mixed effects on rentier returns. On the one hand reduced government deficits reduce the rate of increase of government debt and thereby, all else equal, reduce government interest payments to rentiers. On the other hand, to the extent that reductions in budget deficits reduce inflationary pressures, they might contribute to increases in real interest rates and to increases in rentier returns.

A fourth factor is the reorientation of political n political power away from other classes and toward the rentier class[7]. The post 1980 period has been shown to be associated with a decline in labor returns in many countries (Jayadev, 2003; Diwan, 2000; Harrison, 2002). With financial liberalization and tight monetary policy, the rentier class as well as industrial capitalists may benefit from the reduction in the strength of organized labor. While non-financial corporations are in accord with rentiers in this case, higher real interest rates and financial liberalization might mean a more difficult profit environment for non-financial corporations, unless of course, they become more like financial firms themselves. To this extent, rentiers and industrial capitalists diverge in their interests.

IV.   Correlates of Rentier Returns in the OECD: An Econometric Analysis

In this section we use rentier data described in the previous section to estimate the impact of policy and structural factors on rentier returns in a panel of OECD countries. The time period covered by the analysis differs by country, depending upon data availability, but usually covers the period 1960's-1990's. Our measure of the rentier return is the ratio of the inflation-adjusted rentier return to the real gross domestic product of the country (or what we have also described as the real rentier fraction of GDP).

The goal of this exercise is to provide empirical verification for the story we have outlined (as have others) as to the increase in rentier's returns. Thus we carry out panel data analysis on a sample of 14 OECD countries for which the data were available to assess the impact of changes in bargaining power, financial deregulation, financial structure and other plausible determinants on the evolution of rentier returns.

At the outset we require an indicator for the relative scarcity of capital. Ceteris paribus the return to capital (both physical and financial) should be higher where the relative

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[7] The Mitchell and Erickson quote at the start of this paper provides a stark example of this.

endowment of capital is lower. Our proxy for the capital labor ratio is the real GDP per worker obtained from the Penn world tables, version 6.1.

Our measure of the bargaining power of labor is a common one. We utilize the total trade union membership as a fraction of the labor force from the OECD labor market statistics. The same or similar measures have been used, for example by Harrison, 2002, Ortega and Rodriguez, 2001, Jayadev 2005. Trade union membership is expected to have a direct negative effect on rentier return by shifting productive rents toward workers (from our model) and an indirect effect by making the implementation of neo-liberal policies less likely. Figure 1 provides some evidence for this in four countries in our sample and the same pattern can be seen in many of the other countries as well.

Data on domestic interest rate liberalization is obtained from the work of Mehrez and Kaufmann (1999). It takes the form of a dummy in every year following domestic interest rate and lending rate liberalization. We should expect the rentier return to rise in the short term following such a policy shift, given that financial regulations have typically repressed real interest rates below market clearing levels. Figure 2 shows the average real rentier return before and after interest rate liberalization. In all countries, there is a definite increase in this measure following liberalization.

Most measures of international financial openness are constructed from the International Monetary Fund's annual publication of the IMF "Exchange arrangements and Exchange restrictions (for examples see Quinn 1997, Lee and Jayadev 2005, Mody and Murshid 2001). We use the Mody and Murshid index which extends the IMF analysis to 1998. The measure ranges from 1-4 with 1 being the least open and 4 being the most open as measured by existing restrictions on capital inflows and outflows in all international accounts.

The degree of government involvement in the economy is proxied using two variables: the budget deficit (from the Government Financial Statistics) and the Government Share of GDP (from the Penn World Tables 6.1). Our priors are not clear for either. For example, the general presumption has been that rentiers have opposed budget deficits as inflationary, although budget deficits also represent a risk free source of returns to them, especially if real interest rates are positive.

In order to capture changes in the general political structure, we use a measure of the political orientation of the government as developed by Beck et al (2001) which codes governments as left leaning, centrist or right-leaning. We code a variable *RIGHTWING* as having values 1, 2 and 3 is if it left leaning, centrist or right leaning respectively.

We utilize variables on the financial structure of the economy from Beck, Demirguc-Kunt and Levine (1999). We look specifically at two types of variables. The first measures banking activity in general and indicates the ratio of deposits to GDP. This has been a common measure of the depth of the financial system. We also use the ratio of central bank assets to GDP as an inverse measure of the degree of financial sophistication. The presumption in this case would be that the more financially developed an economy is, the larger is the proportion of assets held in the private financial system, and therefore, the

lower the ratio of central bank assets to GDP. These variables are designed to control for the commonsensical idea that as the economy becomes more "financialized", we would expect the rentier return to increase simply as a function of an increase in that sector's economic activity, independently of the other policy and power variations that we study.

Econometric Results

Our dataset is relatively limited, containing 292 observations across 14 countries for the period 1960-1996. This is a relatively small sample at the outset and given that the independent variables are unevenly distributed, adding independent reduces the sample size available and that raises the standard errors. We begin therefore by specifying a base equation in which we regress the rentier return on a trend variable and then sequentially add controls in the order that keeps the sample size as large as possible. The results are shown in table 4.

Some consistent results do emerge across specifications. First, the trend variable is positive and significant across all specifications suggesting some unexplained and persistent time effects on the rentier return.

Across all specifications, the coefficient on the proxy for relative capital endowments-proxied by real GDP per worker is negative. This suggests that one important factor determining rentier returns is changes in endowments: increases in the GDP per worker are associated with a fall in rentier returns.

Our measure of the bargaining power of labor-trade union membership- as expected, a strong negative correlate of the rentier return. A 1 percentage point increase in union membership is associated with a 1.5-2.5 percentage point decrease in the rentier return. The evidence supports the contention that the decline in the political power of organized labor across many OECD countries through the last two decades may be one of the causes of the resurgence of the rentier return, or indeed one of its consequences.

Equally, the variables which are associated with the fallback position of financial capital, (interest rate liberalization and the achievable rate of return abroad) enter the model with the expected signs. The effect of interest rate liberalization is, in particular, striking. All else constant, eliminating domestic controls on the interest rate yields a consistent positive effect on the rentier return in the order of 2-4 percentage points Increases in the fall back position of financial capital abroad increases the rentier returns of capital. More specifically, financial openness and financial openness interacted with the foreign interest rate both also impact the rentier return positively in most specifications, although these effects are very small. Since the fallback position of the rentier is the maximal alternative return to the rentier which could come from a domestic asset, a foreign asset or both, we perform a test of joint significance on the interest rate liberalization and the achievable foreign rate in all specifications which include both these variables. As we expected, the null that the coefficients on these variables are zero is decisively rejected.

We find intriguing, but not entirely robust evidence that political orientation matters. The coefficient on the variable *RIGHTWING* is positive in all specifications, and significant in most. Even controlling for trends, then, there is some evidence that rentiers do better when the political orientation of the government moves to the right.

Perhaps surprisingly, there is no impact of government intervention in the economy, either through the channel of budget deficits or through the general level of government intervention into the economy. In fact, various other measures of indebtedness, both of the public and the private sector were tried [8], with various lag structures, none of which provided a discernible impact on the rentier return. This finding runs counter to a common narrative that rentiers have benefited from the large expansion of public and private debt accumulated in response to the requirements of the welfare state[9]. Even if the story is true of some countries (perhaps the United States), it is certainly not detectable in a cross-country context.

Finally, our measures of the financial structure of the economy provide mixed evidence. While the depth of the banking system, as measured by the deposits to GDP ratio does not have a statistically significant impact on the rentier return, the degree of financial diversification, as measured negatively by the concentration of assets in the central bank has a significant effect on the rentier return of income. The size of the coefficient varies between a decrease in 0.3 to 0.7 percentage points in the rentier return for every percentage point increase in the central bank assets to GDP ratio. Note also that the financial openness variable loses significance once diversification within the financial system is controlled for, suggesting strong correlation between the two variables.

Tables 5a and 5 b repeat the full regression model using generalized least squares to control for within panel heteroskedasticity and a generalized method of moments estimator (the Arellano-Bond estimator) to control for omitted variables. As is evident, the main results remain unchanged with these estimations as well.

The reader will note that we do not test for the effect of changes in the bargaining power of industrial capital and its role on the rentier return. The primary reason for this was our inability to find a measure which could accurately capture the bargaining power of industrial capital rather than capital in general in a consistent manner across countries. We did use measures such as value added in manufacturing as an indirect indicator of the bargaining power of industrial firms (the logic being that with a larger bargaining power of industrial capital, the ratio of value added in manufacturing to total output should be higher) and found significant negative effects for this variable on the rentier return. However this, like other indicators we considered is an outcome variable and not directly a measure of bargaining power. As a result, we have not reported these regressions here.

In addition to the variables reported above, we tried several other variables to test for other determinants, or other measures of these same determinants. For example, we tested various

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[8] These were obtained from Government Financial Statistics and the financial structure database due to Beck et al 2000(b).
[9] This, for example is an explanation provided by Ferguson (2001) for the return of the rentier.

measures of the age structure of the population which were insignificant. We also estimated the relationship between the rentier return and the labor share of income. We generally found a consistent negative relationship as might be expected. We also tested a measure of central bank independence, but given the lack of variation in these measures over time, we were not surprised to see insignificant results. Finally, we also used various other measures of globalization, especially with respect to trade and found generally economically and statistically insignificant results.

In general, the variables we reported in the table above are robust determinants of rentier income, and, more importantly, reflect many of the structural and political economy variables we described at the outset of the paper.

V. Summary and Conclusion

We believe that these econometric results provide support for the increasingly popular story that neo-liberalism has shifted the distribution of political power, income and wealth toward rentiers. Consistent with this story, we show that the rentier fraction of income goes up when real interest rates increase, when there is greater financial liberalization and economic openness; and rentiers when labor is less politically unified.

We wish here to be somewhat cautious however about the interpretations. We do not make any strong claims that our empirical exercise proves causality. Our purpose here has not been to offer a series of completely identified regressions (which would be close to impossible given our limited data and the cross-country context), but rather to provide some empirical support for the substantial political economy literature on the subject. The substantial and careful evidence gathered by political scientists, historians of finance and some economists suggests that rentiers act precisely in this manner (eg., Helleiner, 1994; Babb 2001). These rich accounts provide important evidence that rentier groups abhor inflation, try to influence monetary policy to fight inflation, push for financial liberalization and economic openness. In conjunction with this historical evidence, the econometric evidence here provides support for the view that rentiers benefit from neo-liberal policies, and are likely to be among their strongest supporters.

Of course, much future work remains to be done. A first order of business is to construct rentier data series for more countries, and especially for developing countries. Secondly, more work needs to be done on the impact of increases in rentier incomes on economic outcomes. What impact do increases in rentier incomes have on real investment and productivity growth? What are the channels through which rentier incomes might affect economic outcomes? A second area of important research is to expand the notion of rentier incomes to include those profits of non-financial corporations that come from financial activities. Such an extension would help us expand our notion of the rentier class in ways that might better capture its true significance in contemporary capitalist economies.

References

Babb, Sarah. 2001. *Managing Mexico: Economists from Nationalism to Neoliberalism.* Princeton, NJ: Princeton University Press.

Beck, Thorsten, Asli Demirguc-Kunt and Ross Levine, 1999, A New Database on Financial Development and Structure, *World Bank Working Paper*.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick P.Walsh. 2001. New Tools in Comparative Political Economy: the Database of Political Institutions. *World Bank Economic Review* 15 (1): 165–76.

Boyer, Robert. 2000. Is a Finance-led growth regime a viable alternative to Fordism? A preliminary analysis**,** *Economy and Society* pp. 111-145(35)

Brenner, Robert. 2002. *The Boom and the Bubble*: *The U.S. in the World Economy.* London: Verso Press, 2002.

Crotty, James and Gerald Epstein, 1996. In Defense of Capital Controls. <u>*Socialist Register*</u>. pp. 118-149.

Crotty, James. 2005. The Neo-liberal Paradox: The Impact of Destructive Product Market Competition and "Modern" Financial Markets on Nonfinancial Corporation Performance in the Neoliberal Era, in Gerald Epstein, ed.,*Financialization and the World Economy*. Northampton, MA: Edward Elgar Press pp.77-110.

Diwan, Ishac. 2001. Labor shares and globalization. *Mimeo, World Bank*

Dumenil, Gerard and Dominique Levy, 2005. Costs and Benefits of Neo-liberalism: A Class Analysis. In Gerald Epstein, ed., *Financialization and the World Economy*. Northampton, MA: Edward Elgar Press. pp. 17-45.

Dumenil, Gerard and Dominique Levy, 2004. *Capital Resurgent: Roots of the Neo-Liberal Revolution*. Cambridge: Harvard University Press.

Epstein, Gerald. 1981. Monetary Policy in the Hidden Election, in Thomas Ferguson and Joel Rogers (editors), *The Hidden Election*. New York: Pantheon Press.

Epstein, Gerald, ed. 2005.*Financialization and the World Economy*. Northampton, MA: Edward Elgar Press.

Epstein, Gerald and Arjun Jayadev. 2005. The Rise of Rentier Incomes in OECD Countries: Financialization, Central Bank Policy and Labor Solidarity, in Gerald Epstein, ed.,*Financialization and the World Economy*. Northampton, MA: Edward Elgar Press pp. 46-74.

Ferguson, Niall.2001. *The Cash Nexus: Money and Power in the Modern World, 1700-2000*, London: Allen Lane/Penguin Press

Harrison, Ann E. 2002. Has Globalization Eroded Labor's Share? Some Cross Country Evidence. mimeo. University of California, Berkeley.

Helleiner. Eric. 1994. *States and the Resurgence of Global Finance: From Bretton Woods to the 1990's.* Cornell University Press.

Hein, Eckhard and Carston Ochsen, 2003. Regimes of Interest Rates, Income Shares, Savings and Investment: A Kaleckian Model and Empirical Estimations for some Advanced OECD Economies, *Metroeconomica* (November) pp 404 -433

Henwood, Doug. 1998. *Wall Street: How it Works and For Whom*. London: Verso.

Hilferding, Rudolf. [1910] 1981. *Finance Capital: A Study in the Latest Phase of Capitalist Development*. London: Routledge and Kegan Paul.

Jayadev, Arjun. 2005. The impact of capital account openness on the labor share of income Forthcoming- *Cambridge Journal of Economics*

Kalecki, Michal. 1990. Political Aspects of Full Employment. in J. Osiantynski, ed., *Collected Works of Michal Kalecki.* Vol. 1. Oxford: Oxford University Press.

Keynes, J.M. 1936. *The General Theory of Employment, Interest and Money*. New York: Harcourt, Brace, Jovanitch.

Krippner, Greta. 2005. "What is Financialization", mimeo, *Department of Sociology, University of Wisconsin.*

Lee, Kang-kook and Arjun Jayadev. 2005 . The Effects of Capital Account Liberalization on Growth and the Labor Share of Income: Reviewing and Extending the Cross-Country Evidence, in Epstein, Gerald (ed.), *Capital Flight and Controls in Developing Countries*. Edward Elgar.

Mehrez, Gil and Kaufmann, Daniel 1999. Transparency, Liberalization and Financial Crises. Mimeo, *World Bank*

Mitchell, Daniel J.B. and Christoper Erickson. 2002. Employer Ascendancy and Macro Performance: Analysis and Alternatives*, mimeo, *University of California, Berkeley*

Mody, Ashoka and Antu Panini Murshid, "Growing Up with Capital Flows" (April 2002). IMF Working Paper No. 02/75 Available at SSRN: http://ssrn.com/abstract=879587

Ortega, Daniel, and Francisco Rodriguez. 2001. Openness and factor shares. Mimeo. *University of Maryland,*

Patnaik, Prabhat. 2003. Money, Finance and Contradictions of Capitalism. in Jayati Ghosh and CP Chandrasekhar (editors), *Work and Well-Being in the Age of Global Finance*. New Delhi: Tulika Books.

Pauly, Louis W. 1997. *Who Elected the Bankers?* Ithaca: Cornell University Press.

Quinn, Dennis, 1997. "The correlates of change in international financial regulation." *American Political Science Review*., 91, (3), 531 - 551.

Rodrik, Dani. 1998. *Has Globalization Gone Too Far?* London: Overseas Development Institute.

Stockhammer, Engelbert. 2004. Financialization and the Slowdown of Accumulation. *Cambridge Journal of Economics* . 28(5):719-741

Yeldan, A. Erinc, 2000. The Impact of Financial Liberalization and The Rise of Financial Rents on Income Inequality; The Case of Turkey, *WIDER working paper*.

Figure 1: Trade Unionization and Rentier Return in selected OECD Countries
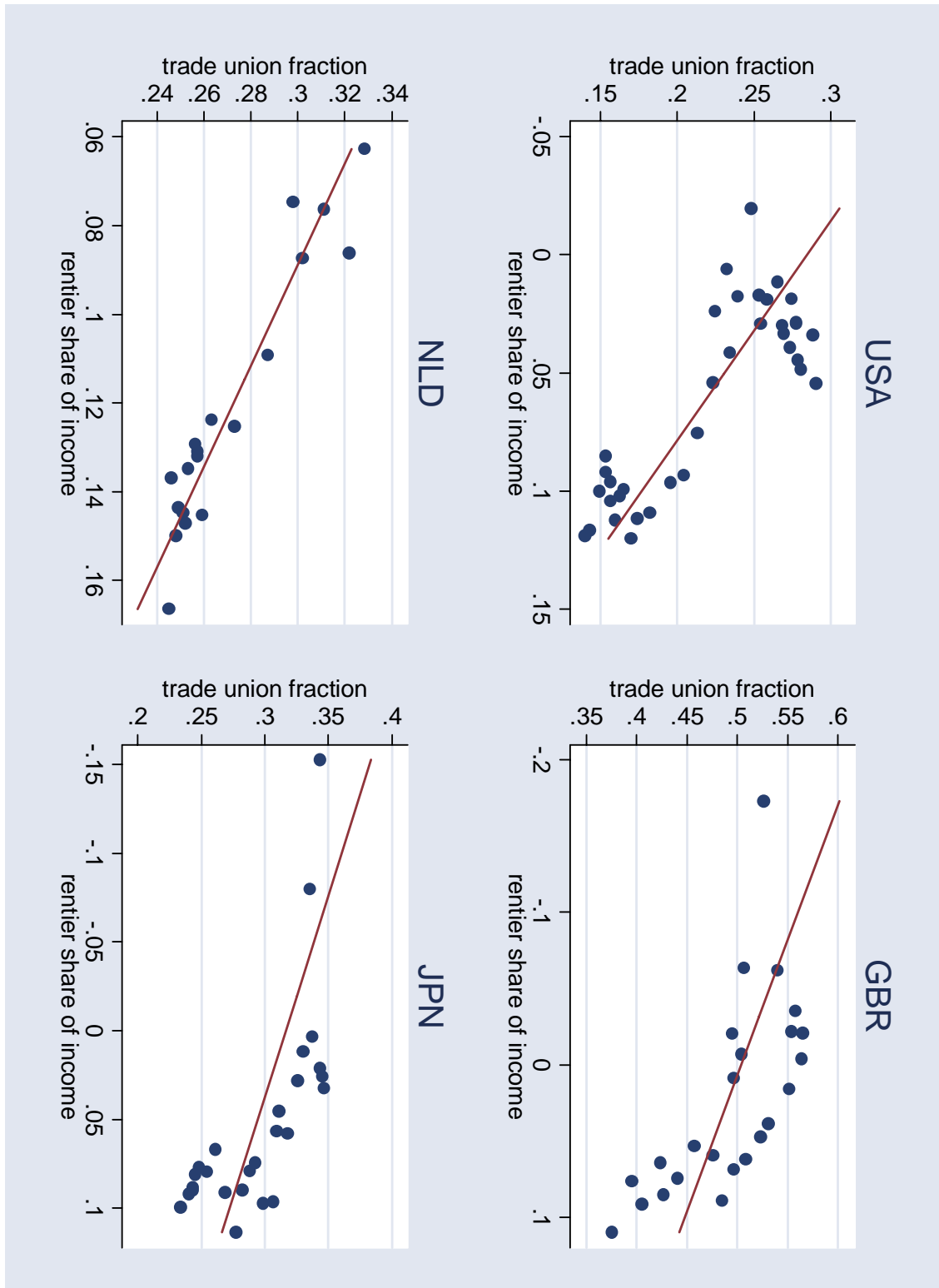
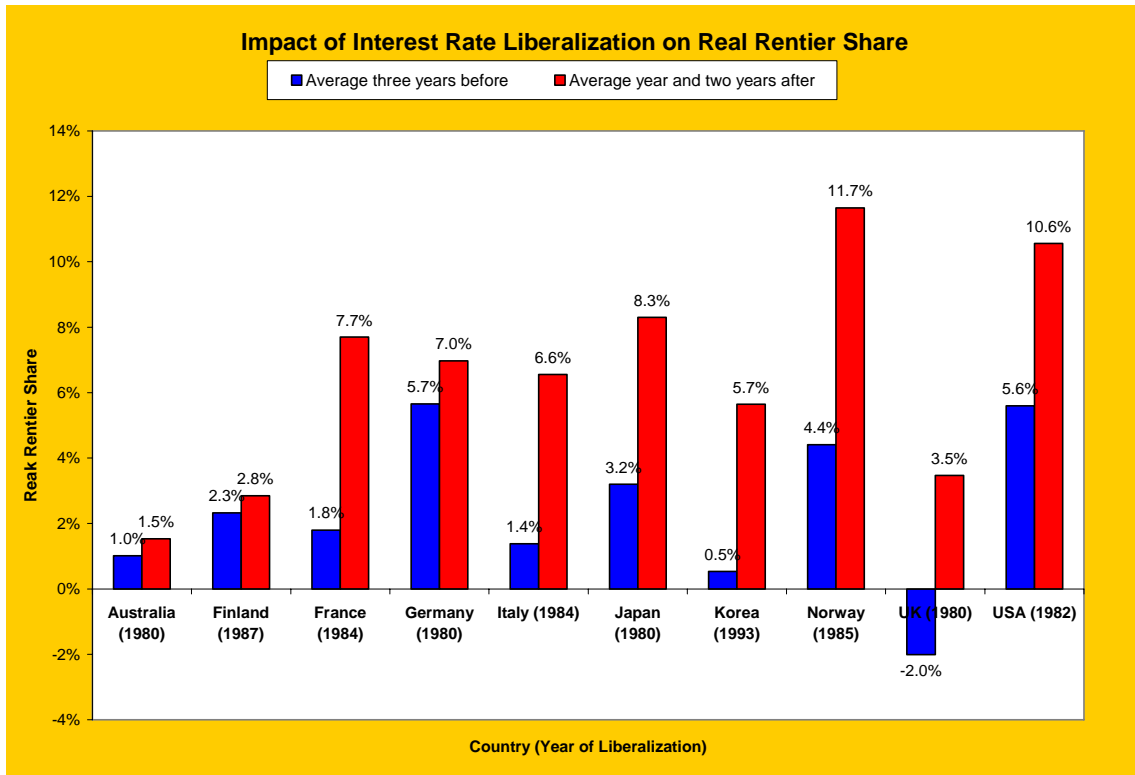**Figure 2: Interest Rate Liberalization and Real Rentier Return**

Impact of Interest Rate Liberalization on Real Rentier Share

■ Average three years before   ■ Average year and two years after

Country (Year of Liberalization)

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Real Rentier Share	292	0.06	0.05	-0.23	0.17
Real GDP Per Worker in 100000's	280	0.37	0.09	0.13	0.57
Trade Union Membership Fraction	285	0.36	0.18	0.08	0.79
Interest Rate Liberalization	272	0.66	0.48	0	1
Financial Openness	286	3.05	1.13	0	4
Right Wing Government	264	2.16	0.99	0	3
Budget Deficit	272	-0.04	0.04	-0.15	0.03
Government Share	275	0.12	0.05	0.03	0.23
Deposit to GDP ratio	233	0.76	0.26	0.32	1.42
Central Bank Assets to GDP	233	0.04	0.03	0.00	0.13

Note : Real Rentier Share refers to inflation adjusted rentier income normalized by real gross domestic product

Table 2: Real Rentier Fraction of Income 1960s-1990s

Country	Years	1960s	1970s	1980s	1990s	Difference 90's-70s	Difference 90's-80's
Australia	1975-1996		0.1%	5.6%	10.2%	10.1%	4.6%
Belgium	1985-1997			7.8%	9.0%		1.2%
Finland	1977-1996		-0.2%	1.4%	6.2%	6.4%	4.8%
France	1971-1996		-0.4%	5.6%	14.3%	14.7%	8.7%
Germany	1978-1993		3.1%	6.6%	6.9%	3.8%	0.3%
Great Britain	1971-1997		-4.2%	4.9%	8.6%	12.7%	3.7%
Italy	1978-1996		0.4%	4.2%	9.6%	9.2%	5.4%
Japan	1971-1996		-0.6%	8.1%	8.7%	9.2%	0.6%
Netherlands	1978-1996		7.5%	11.9%	13.8%	6.3%	1.8%
Norway	1979-1997		5.4%	6.3%	8.1%	2.8%	1.8%
Portugal	1977-1995		-11.4%	3.5%	10.6%	22.0%	7.1%
Spain	1981-1996			3.3%	9.3%		5.9%
United States	1961-1996	3.6%	1.8%	9.7%	10.2%	8.4%	0.5%

Note : Real Rentier Fraction refers to inflation adjusted rentier income normalized by real gross domestic product

TABLE 3: INFLATION RATES AND REAL INTEREST RATES IN SOME OECD COUNTRIES

Country	Years Reported		Decade Average Rate 1970s		Decade Average Rate 1980s		Decade Average Rate 1990s		Change from 70's to 90's	
	Inflation Rate	*Real Interest Rate*	*Inflation Rate*	*Real Interest Rate*	*Inflation Rate*	*Real Interest Rate*	*Inflation Rate*	*Real Interest Rate*	*Inflation Rate*	*Real Interest Rate*
AUSTRALIA	1970-1999	1975-1999	9.83	-.01	8.4	6.43	2.50	9.06	-7.33	9.07
BELGIUM	1970-1999	1981-1999	7.13	--	4.9	7.59	2.14	7.16	-4.98	N/A
FINLAND	1970-1999	1977-1999	10.4	-.62	7.32	2.13	2.13	5.94	-8.27	6.56
GERMANY	1970-1999	1977-1999	4.81	--	2.90		2.35	8.31	-2.56	N/A
ITALY	1970-1999	1971-1999	12.32	.39	4.70	6.83	4.12	2.28	-8.20	1.89
JAPAN	1960-1999	1970-1999	9.09	-.16	2.53	4.22	1.20	3.63	- 7.88	3.79
KOREA	1970-1999	1974-1999	15.21	--	8.41	3.17	5.72	3.96	- 9.49	N/A
NETHERLANDS	1970-1999	1970-1999	4.32	9.71	2.87	7.58	2.44	6.12	-4.60	-3.59
NORWAY	1970-1999	1972-1999	8.37	6.25	8.34	6.96	2.44	7.80	- 5.92	1.55
UK	1970-1999	1960-1999	12.6	1.83	7.43	4.08	3.07	4.26	-8.91	2.43
US	1970-1999	1960-1999	5.5	1.08	5.55	6.25	3.00	5.73	-4.09	4.65

Source:
Inflation rates – Global Development Finance & World Development Indicators
Real interest rate – Global Development Finance & World Development Indicators. Missing data filled in
from Easterly, Rodriguez, and Schmidt-Hebbel "Public Sector Deficits and Macroeconomic Performance."
(Statistical appendix) 1994

Table 4: OLS Estimation of effect on inflation adjusted rentier fraction of income (with country fixed effects)

	(I)	**(II)**	**(III)**	**(IV)**	**(V)**
Trend	.005***	.008***	.007***	.005***	.006***
	(0.0002)	*(0.0008)*	*(0.0008)*	*(0.0008)*	*(0.0007)*
Real GDP per worker (in 100000s)		-.48 ***	-.48 ***	-.36 ***	-.45 ***
		(0.11)	*(0.11)*	*(0.11)*	*(0.087)*
Trade Union Membership			-.20 ***	-.17 ***	-.16 ***
			(0.04)	*(0.05)*	*(0.05)*
Interest Liberalization				.030***	.024***
				(0.006)	*(0.005)*
Financial Openness				.007**	.006**
				(0.002)	*(0.002)*
Right Wing Government					.003 *
					(0.002)
Budget Deficit					
Government Share of GDP					
Deposits to GDP					
Central Bank Assets to GDP					
Cross Sections	14	14	14	14	13
Observations	292	280	273	253	225
R squared (within)	0.52	0.55	0.59	0.64	0.69
F-test of Intlib=Finopen=0				$F(2, 230) = 17.6$ P=0.00	$F(2, 206) = 16.3$ P=0.00

Note: All estimations have country fixed effects. Standard errors are in parentheses. *= significant at the 10% level, **=significant at the 5% level , *=significant at the 1% level.**

Table 4: OLS Estimation of effect of inflation adjusted rentier fraction of income (with country fixed effects) continued

	(VI)	(VII)	(VIII)	(IX)	(X)
Trend	.006***	.007***	.006***	.006***	.004***
	(0.0007)	(0.0008)	(0.0009)	(0.0009)	(0.0008)
Real GDP per worker (in 100000s)	-.44***	-.47 ***	-.59 ***	-.56 ***	-.47 ***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.1)
Trade Union Membership	-.16***	-.18***	-.17 ***	-.25 ***	-.19 ***
	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)
Interest Liberalization	.024***	.023***	.027***	.03***	.04***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Financial Openness	.006**	.006**	.006*	.001	
	(0.002)	(0.002)	(0.003)	(0.006)	
Right Wing Government	.003 *	0.003	.004*	0.002	
	(0.002)	(0.002)	(0.002)	(0.002)	
Budget Deficit	0.02	0.06	0.1	-0.01	
	(.07)	(.07)	(.08)	(.08)	
Government Share of GDP		0.1	0.04	0.02	
		(.07)	(.07)	(.07)	
Deposits to GDP			0.012	0.011	
			(.014)	(.013)	
Central Bank Assets to GDP				-.72***	-.28**
				(.15)	(.12)
Cross Sections	13	12	11	11	12
Observations	220	218	187	187	216
R squared (within)	0.7	0.7	0.69	0.72	0.62
F-test of Intlib=Finopen=0	$F_{(2, 200)} = 13.42$ P=0.00	$F_{(2, 198)} = 12.18$ P=0.00	$F_{(2, 167)} = 16.31$ P=0.00	$F_{(2, 230)} = 17.60$ P=0.00	

Note: All estimations have country fixed effects. Standard errors are in parentheses. *= significant at the 10% level, **=significant at the 5% level , ***=significant at the 1% level.

Table 5a: GLS estimation of full model

Trend	0.0003
	(.0005)
Real GDP per worker (in 100000s)	0.181***
	(.045)
Trade Union Membership	-0.059***
	(.013)
Interest Liberalization	0.038***
	(.006)
Financial Openness	-0.0003
	(.0003)
Right Wing Government	0.0006
	(.0026)
Budget Deficit	-0.12
	(0.08)
Government Share of GDP	-0.024
	(0.06)
Deposits to GDP	0.04***
	(.0104)
Central Bank Assets to GDP	-0.524***
	(.108)
Groups	11
Observations	187
Wald Chi2	394.84
Prob>chi2	0

Table 5b: GMM estimation of full model

	I
Real Rental Share	.266***
	(.0592)
Trend	.0039***
	(.0009)
Real GDP per worker (in 100000s)	.43***
	(.08)
Trade Union Membership	-.194
	(.053)
Interest Liberalization	.0216***
	(.0059)
Financial Openness	-.001
	(.002)
Right Wing Government	.0025
	(.0022)
Budget Deficit	.00013
	(.0007)
Government Share of GDP	.00048
	(.0006)
Deposits to GDP	.0072
	(.012)
Central Bank Assets to GDP	-.71***
	(.14)
Groups	11
Observations	171
Wald chi2	578.37

Note : Real Rentier Share refers to inflation adjusted rentier income normalized by real gross domestic product

The data on rentier incomes were constructed from the OECD *National Accounts Vol. II* CD ROM. Rentier income is the sum of financial sector profits, interest (and in some cases, dividends) receivable by all non-financial non-government resident institutional units.

More specifically, using the United Nations accounting definitions from the 1993 system of national accounts, our definition of rentier income is as follows:

(1) Rentier Income =   (Entrepreneurial Income of the financial sector) + (interest receivable by households) + (interest receivable by not-for-profit organizations)

   Entrepreneurial income of the financial sector, in turn, is defined as follows:

(2) Entrepreneurial income of the financial sector =   Operating Surplus + property income – interest payable - rent payable

Property income of the financial sector is defined as:

(3) Property income of the financial sector = dividends + reinvested earnings + insurance income received + rent received + interest received

Thus, rentier income, as defined in this paper, as the profits of the financial sector, plus the interest received by households and not-for profit organizations. In turn, the *rentier return* is the rentier income as defined above divided by gross national product (net of government expenditures since we have excluded the government income from rentier income, the numerator).

Appendix B

A simple bargaining model of rentier income

Consider an economy in which firms produce according to a generic production function.

$$Y = F(L, K) \qquad (1)$$

Where L is the argument in Labor, K is the argument in physical capital. $F_L > 0$, $F_K > 0$. Where F_i is the partial derivative of F with respect to i.

The profit function of a representative firm is as follows

$$\pi = F(L, K) - wL - rK - Z \qquad (2)$$

Where w is the wage rate, r is the rental rate on physical capital.

Firms absorb W, a stock of debt that can be used in future periods to invest and make interest payments on this debt equal to iW from operating surplus where i is the real interest rate on financial capital. Note that W -the stock of debt of the firm- is also the stock of wealth of lenders, or the rentier class.

We define

$$Z = iW \qquad (2a)$$

as the rentier return which refers to the payment to the financial capitalist or rentier at the end of the production period.

Consider now the problem of bargaining over wage and employment between a representative labor union, the firm and the financial capitalist. The bargaining game is assumed to follow Nash's cooperative solution and is hence efficient in the sense that all equilibria occur on the contract plane. In the event of a breakdown in negotiations, the firm is assumed to be able to obtain a return from an alternative activity equal to π^*.

Unions care both about employment and wages. The representative union maximizes the rents accruing to the workers in the respective firm (wL). Thus the objective function can be represented as:

$$U(w, L) = G(L; w; w^*) \qquad (3)$$

where w_* is the fallback wage.

The rentier's objective function is to maximize their returns, Z which can be written as the residual from total output minus the firm's industrial profits.

The rentier is able to invest his capital in an alternative either domestically at an interest rate of τ_d or abroad at an interest rate of τ_f. The former is constrained by the degree of domestic financial repression (and thus increases with interest rate liberalization, ϕ) while the latter is constrained by the obstacles to international capital mobility (and thus increases with capital account openness, μ). As such, the rentiers fallback position can be written as $Z^* = \max[\tau_d(\phi); \mu(\tau_f)]$. We assume that Z^* is increasing in ϕ, μ and τ_f.

Assuming that the exogenously given bargaining power of the union is α and that the corresponding power of the firm is β (and that the resulting bargaining power of rentiers is $(1-\alpha-\beta)$ with $\alpha, \beta \in [0,1]$) we obtain the generalized Nash product as follows:

$$\Psi = \left(G(L, w; w^*)\right)^{\alpha} \left(\pi - \pi^*\right)^{\beta} \left(Z - Z^*\right)^{1-\alpha-\beta} \tag{4}$$

taking logs this becomes

$$\Omega = \alpha \log\left(G(L, w; w^*)\right) + \beta \log\left(\pi - \pi^*\right) + (1-\alpha-\beta) \log\left(Z - Z^*\right) \tag{5}$$

We have six first order conditions: $\Omega_w=0$, $\Omega_L=0$, $\Omega_r=0$, $\Omega_K=0$, $\Omega_z=0$

Focusing on the last of these we have

$$\Omega_z = 0 \Leftrightarrow \frac{\beta}{\left(\pi - \pi^*\right)} = \frac{(1-\alpha-\beta)}{\left(Z - Z^*\right)} \tag{6}$$

which can be rearranged to give

$$Z = \frac{(1-\alpha-\beta)\left(\pi - \pi^*\right)}{(\beta)} + Z^* \tag{7}$$

from which we can obtain the following comparative statics:

$$Z_{\alpha} = -\frac{\left(\pi - \pi^*\right)}{(\beta)} < 0 \tag{8a}$$

$$Z_{\beta} = \frac{\left(\pi - \pi^*\right)(\alpha - 1)}{\beta^2} < 0 \tag{8b}$$

$$Z_{\phi} = Z^*_{\phi} \geq 0 \tag{8c}$$

$$Z_{\mu} = Z^*_{\mu} \geq 0 \tag{8d}$$

$$Z_{\tau} = Z^*_{\tau} \geq 0 \tag{8e}$$

Equations (8a-8e) show that, as is to be expected, rentier income rises unambiguously with a fall in the bargaining power of labor and a fall in the bargaining power of industrial capitalists. Rentier income weakly increases with internal interest rate liberalization and with a rise in the achievable rate of return from abroad (the product of the rate of return on financial assets abroad and the openness to international capital flows).

For our empirical estimations, we wish to take into account a problem that arises when we consider inflation. Specifically, inflation erodes the value of net financial wealth. Some portion of the rentier income that is received by rentiers is eroded when there is inflation. We define the 'inflation adjusted rentier return' as the nominal returns accruing to the rentier minus the loss of wealth due to increases in inflation. Since our data does not have the nominal stock of wealth, we perform an adjustment as below for our empirical measure of rentier returns.

Let:

Z_r=inflation adjusted rentier income
p^*= the inflation rate
W=nominal debt = nominal stock of wealth
R= nominal rentier income
i=nominal interest rate
ρ=real interest rate

By definition
(1) Z_r=inflation adjusted rentier income = $i^*W - p^*W$

That is, inflation adjusted rentier income is nominal rentier income (i^*W) minus the loss of wealth due to inflation (p^*W).

 Equivalently

(2) $Z_r = \rho W$

Now the problem is that for all the countries we are interested in, our data does not have the nominal stock of wealth. We do, however have W, the nominal rentier income. We use this to approximate the stock of wealth by assuming that nominal rentier income is like a consol payment from the stock of wealth. Thus

(3) $W = R/i$

Then substituting (3) into (2) we get:

(4) $Z_r = R\,(\rho/i)$

Our inflation adjusted rentier return takes the nominal rentier income and then multiplies it by the ratio of the real interest rate to the nominal interest rate. It should be noted that Z_r will therefore be negative if the real interest rate is negative. In such a scenario, the rentier is actually providing an implicit subsidy to the industrial capitalist, and thus his real return in that period is negative (his wealth decreases).

In our estimates, we divide this figure by real GDP to obtain a measure of the size of this return.