Unequal Exchange and the Rentier Economy

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Abstract

Detailed analysis of BEA methodology and data strongly suggests that U.S. GDP is overvalued on the output side. The ability to generate income without producing real value-added output is a key characteristic of a "rentier economy." Broader indicators include a massive increase in financial activity and "finance, insurance, and real estate" (FIRE), declining manufacturing share, declining real investment in plant and equipment, increased outsourcing of production and rising trade deficits, declining employment and real wage growth, rising profits, growing inequality, and increasing aggregate demand dependency on private (household and business) and public sector debt. Based on these indicators, relative to other advanced countries like Germany, the U.S. has since the mid-1970's increasingly become a "rentier economy." Grafting a schematic "rentier economy" onto a simple "free trade unequal exchange" model from Baiman (2006) highlights the labor exchange, inequality, and efficiency characteristics of rentier United States, unequal exchange (German), and developing country (China), economies. Reviving the U.S. economy and restoring full employment will require a public policy induced reallocation of resources away from rentier activity back to productive high-value added "unequal exchange" production.

1. Introduction

Detailed analysis of BEA methodology and data strongly suggests that U.S. GDP is overvalued on the output side. The ability to generate income without producing real value-added output is

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a key characteristic of a "rentier[1] economy." Broader indicators include a massive increase in financial activity and FIRE, declining manufacturing share, declining real investment in plant and equipment, increased outsourcing of production and rising trade deficits, declining employment and real wage growth, rising profits, growing inequality, and increasing aggregate demand dependency on private (household and business) and public sector debt. Indirectly, rentier interests also support low taxes and low public spending which lead to poor public health and public education outcomes. Based on these indicators, relative to other advanced countries like Germany, the United States has since the mid-1970's increasingly become a "rentier economy." Grafting a schematic "rentier economy" onto a simple "free trade unequal exchange" model from Baiman (2006) highlights the labor exchange, inequality, and efficiency characteristics of rentier (U.S.), unequal exchange (German), and developing country (China), economies. Reviving the U.S. economy and rebalancing the world economy will require major public policy measures to gradually reduce rentier activity and rebuild a more traditional advanced unequal exchange economy. Possible options include: a) maintaining a large public deficit to fund existing public services and income support programs and support aggregate demand; b) greatly expanding the public sector by implementing a large scale federal jobs program funded through financial transactions tax to support living wage social service, infrastructure, and green technology jobs; c) reducing and eventually eliminating the "structural" trade deficit using industrial and managed trade policies to rebalance U.S. and world trade which would allow the economy to overcome its current long-term rentier dependency on public or private debt.

2. Fictitious Value-Added Output in U.S. GDP

Recent data strongly suggest that U.S. GDP is overvalued on the output side. Evidence for this comes from the BEA's "imputed" output methodology for calculating value added (Basu and Foley 2011; Foley, 2011), and from the total factor productivity methodology used by the BEA to estimate value-added in manufacturing (Houseman 2007). In both cases increased value-added on the income side is erroneously presumed to equal increased valued-added output.[2] The most suspect examples of these imputations or estimations are the "Finance, Insurance, and Real Estate" (FIRE) sector (NAICS 52) and the computers and electronics product manufacturing (C&E) sector (NAICS 334). BEA data show that the value added GDP share of FIRE increased from 14.7 percent of GDP in 1973 to 21.1 percent of GDP in 2010, a 44 percent increase in share (which tends to change very slowly over time) over 37 years.[3] Similarly, according to BEA data the C&E sector supposedly increased its valued added by 260.5 percent from 2000 to 2008, comprising 80 percent of all growth in U.S. manufacturing output despite comprising only 9 percent of level output (Ezell and Atkinson, 2011).

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[1]Rentiers" are persons who derive most of their income from "rents." "Rent" is income derived from ownership of land or financial investment that is *deducted* from "profit" that the land or physical capital produces. Classic examples include rental payments to landlords and interest payments to creditors. Classical and modern economists have often derided "rental" income as unproductive and undeserved. Keynes for example famously advocated the "euthanasia of the rentier." Keynes wrote in the *General Theory*: "Now, though this state of affairs would be quite compatible with some measure of individualism, yet it would mean the euthanasia of the rentier, and, consequently, the euthanasia of the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital. . . . But whilst there may be intrinsic reasons for the scarcity of land, there are no intrinsic reasons for the scarcity of capital. . . . I see, therefore, the rentier aspect of capitalism as a transitional phase which will disappear when it has done its work" (Keynes 1936; chap. 24).
[2](BEA 2007) provides a summary of the BEA "National Income and Product Accounts" (NIPA) methodology including the imputation of value-added for financial services.
[3]Author's calculations from BEA GDP value added by industry data, downloaded 7/12/2011.

2.1 Imputed Output in Financial Services

Basu and Foley (2011: 29) note that:

> The U.S. national income accounts, however, treat incomes generated in the financial sector as arising from the production of a fictitious imputed input, "financial services," the value of which is measured by the incomes generated in the sector. Thus when a computer manufacturer pays bonuses to its executives, the payments have no impact on measured value added in the sector; they shift income from residual profits to compensation of employees. On the other hand, when a financial institution pays bonuses to its employees, measured value added in the sector increases.

One can conclude that as far as the national income accounts go, financial services are able to add value- added by adding income. The added income, whether from broker's fees or direct traders income is financial gambling revenue that is related to increased trading and to rising asset price bubbles. Not surprisingly as it is unrelated to increases in real output, Basu and Foley also show that this income accrual is increasingly disconnected with employment increases over successive U.S business cycles.

Lest one assume that most trading revenue is zero sum, so that for every capital gain converted to fictitious income gain there will be a corresponding capital loss converted to income loss, two points are in order.

First, when overall trading volume, and value, rapidly increase, gains clearly exceed losses. In this regard, Taylor (2010:18), includes several graphs displaying the roughly 100 percent real increase in housing prices (above the GDP deflator) from 1983 to 2007 and an even greater increase in real household debt, and Crotty (2008) provides data on a vast array of key indicators documenting the "secular rise in the absolute and relative size of U.S. financial markets" from the 1980's through 2007:

> U.S. credit market debt was 168 percent of GDP in 1981 and over 350 percent in 2007. Financial assets were less than five times larger than U.S. GDP in 1980, but over ten times as large in 2007. The notional value of all derivative contracts rose from about three times global GDP in 1999 to over 11 times global GDP in 2007. The notional value of credit default swap derivatives rose from about $6 trillion in December 2004 to $62 trillion three years later. In the U.S. the share of corporate profits generated in the financial sector grew from 10 percent in the early 1940s to 40 percent in 2006, *Economist* 2008.

Second, one might ask, but what about the crash? Does this run-up in capital gains not reverse itself during the (inevitable) crash? Here again Crotty (2008) has compiled data showing that:

> World Bank research identified over 117 system banking crises between 1970 and the early 2000s (Capiro and Klingebiel 2003). And time and again they were rescued by Central Bank intervention through monetary policy and increasingly large lender of last resort bailouts….. Thus the large financial gains of the boom were private, but losses in the crisis were socialized.

Closer to home, on July 20, 2009, former special inspector general for the U.S. Treasury's TARP program, Neil Barofsky, estimated the cost of the Wall Street bailout, including aid offered by the Federal Reserve, to be $23.7 trillion, and this is before the Fed's recent program of "quantitative easing" (Kopecki and Dodge 2009).

The point is clear. Income from financial trading or gambling does not reflect currently produced output but rather increased and more volatile asset prices. During asset bubbles capital gains are converted to fictitious "income." When the bubble crashes much of the private "income" is ratified and preserved by socializing the losses. The rationale that financial markets "spread

risk" and produce more efficient resource allocation is belied by the empirical evidence that shows increased risk, concentration of risk, more volatile prices and (certainly since the 2007 recession) grossly inefficient misallocation of resources (Crotty 2008). Financial services in other words are able to book capital gains as current income which through current NIPA practice technically becomes "value-added output" but with no real value added to output.[4]

2.2 Fictitious Value-added Increases from Outsourcing

The other source of fictitious value-added is tied to increased mark-ups in production that result from outsourcing to low cost off-shore production platforms. The story here is a bit more complex. It goes back to a neoclassical assumption that the decomposition of "total factor productivity" growth into wage share times real wage growth plus profit share times profit rate growth provides a correct allocation of the real sources of "total factor productivity" growth. The assumption here is that factor incomes correctly reflect relative factor contributions to overall productivity increases.

In fact Anwar Shaikh long ago demonstrated that the fact that this kind specification *can* reflect a "marginal productivity" theory of income distribution from a "Cobb-Douglas" like production function does not mean that it *does* reflect marginal productivity income distribution (Shaikh 1974). Rather, Shaikh showed that the decomposition above can be derived from a basic accounting identity that reflects the necessary distribution of output growth to labor and capital income. Since the identity can be derived without making any assumptions regarding the relative contribution of labor and capital to total productivity growth, the decomposition using real wage and profit growth is meaningless with regard to measuring the relative contributions and proper shares of labor and capital to productivity growth.[5]

As this fact which directly shows that the methodology used by the BLS to estimate value-added is in error (see equation 5 below) appears to be generally unknown, or in any case ignored, by mainstream (neoclassical) economists, it is worth providing a clear and succinct proof based on a longer and more extensively annotated derivation produced by Taylor (2004: 52-61):

Let P be overall prices, X output, L labor, K capital, w nominal wage, ω real wage, r profit rate, and let "hats" symbolize growth rates so that:

$$\hat{x} = \frac{d(\ln x)}{dt} = \frac{\dot{x}}{x}$$

Then since output must equal income:

$$PX = wL + rPK$$

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[4]Needless to say we are talking about the broad array of mostly trading products that has characterized the financial explosion of the last few decades; see data below. There are still some financial products that provide real use-value for example by hedging and pooling risk (some options and insurance), though often even in these cases directly socializing the risk (for example through government price supports, and national health systems) is more efficient than commodifying the risk in private financial products – see for example Newman 2009. The problem in a rentier economy is captured in Keynes's famous quote that:

> Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. (Keynes 1936)

[5]Ultimately of course, as noted by Marx and Ricardo, the source of all production that has value for humans is human labor so that the "contribution" of capital is really just an indirect contribution of the labor that produced the capital. In the "direct" growth accounting exercise below I ignore this. However, this point becomes important in the unequal exchange model constructed below.

So that:

$$Ln\ P\ +\ Ln\ X\ =\ Ln\ (wL\ +\ rPK)$$

Or by taking a derivative and noting that: $\hat{w} = \hat{\omega} + \hat{P}$

$$\hat{P} + \hat{X} = \frac{wL}{PX}\left(\frac{\dot{w}}{w} + \frac{\dot{L}}{L}\right) + \frac{rPK}{PX}\left(\frac{\dot{r}}{r} + \frac{\dot{P}}{P} + \frac{\dot{K}}{K}\right) = \psi\left(\hat{w} + \hat{L}\right) + (1-\psi)\left(\hat{r} + \hat{P} + \hat{K}\right)$$
$$= \psi\left(\hat{\omega} + \hat{P} + \hat{L}\right) + (1-\psi)\left(\hat{r} + \hat{P} + \hat{K}\right)$$

So that after subtracting $\hat{P}$ from both sides and rearranging:

$$\hat{X} = \psi\hat{\omega} + (1-\psi)\hat{r} + \psi\hat{L} + (1-\psi)\hat{K} \tag{1}$$

But by definition:

$$\hat{X} = \psi(\hat{L} + (\hat{X} - \hat{L})) + (1-\psi)(\hat{K} + (\hat{X} - \hat{K})) \tag{2}$$

So that growth in "total factor productivity" growth or the "surplus" contribution to X after taking into account the growth in labor and capital (the LHS term in (3) below) will be equal to share weighted real wage and profit rate growth from (1) and (2) above:

$$\hat{X} - \psi\hat{L} - (1-\psi)\hat{K} = \psi\hat{\omega} + (1-\psi)\hat{r} = \psi\left(\hat{X} - \hat{L}\right) + (1-\psi)\left(\hat{X} - \hat{K}\right) \tag{3}$$

where: $(\hat{X} - \hat{L})$ and $(\hat{X} - \hat{K})$ are the growth rates of labor productivity $\frac{X}{L}$ and capital productivity $\frac{X}{K}$ respectively. The key point here is that there is no need to assume that relative real wage and profit rate growth have any relationship at all to the relative contributions of labor productivity and capital productivity to total factor productivity growth as the equalities in (3) can be derived without any assumptions that link labor productivity growth to real wage growth or capital productivity to profit rate growth.

How does this relate to fictitious value-added rentier income?

Houseman (2007) investigates this "measurement" issue in detail. She notes that the BLS uses a KLEMS – capital (K), labor (L), energy (E), materials (M), and services (S) – method to measure multi-factor productivity in manufacturing. KLEMS is computed as (Houseman 2007: equation (3), p. 66):

$$\ln\left(\frac{A_t}{A_{t-1}}\right) = \ln\left(\frac{Q_t}{Q_{t-1}}\right) - \left[w_k\left(\ln\left(\frac{K_t}{K_{t-1}}\right)\right) + w_l\left(\ln\left(\frac{L_t}{L_{t-1}}\right)\right) + w_{ip}\left(\ln\left(\frac{IP_t}{IP_{t-1}}\right)\right)\right] \tag{4}$$

where in $\left(\frac{A_t}{A_{t-1}}\right)$ is percent change in multifactor productivity from time t-1 to time t, and similarly the terms from left to right represent percent changes in output (Q), capital (K), labor (L), and intermediate purchases (IP), weighted by their average share in production costs in adjoining periods t and t-1: w_k, w_l, and w_{IP}. After rearrangement (4) becomes:

$$\ln\left(\frac{Q_t}{Q_{t-1}}\right) - \left[w_k\left(\ln\left(\frac{K_t}{K_{t-1}}\right)\right) + w_l\left(\ln\left(\frac{L_t}{L_{t-1}}\right)\right)\right] = \ln\left(\frac{A_t}{A_{t-1}}\right) + w_{ip}\left(ln\left(\frac{IP_t}{IP_{t-1}}\right)\right)$$

(5)

The reader will recognize that equation (5) is the same as the first equality (from the left) in (3) with $w_{ip}\left(ln\left(\frac{IP_t}{IP_{t-1}}\right)\right)$ representing the additional contribution of intermediate purchases to *total* multifactor productivity growth (including the contribution of the intermediate purchases) on the LHS of the equality, embedding the neoclassical assumption that growth (or decline) in factor *incomes or costs* (real wages, profits, or IP costs) provide an accurate method of allocating the relative contribution of different factors to overall productivity (and value-added) *output* growth.[6]

The problem here is that if an increasing share of production is outsourced to lower-cost producers so that the intermediate purchases no longer contribute to *domestic* multifactor productivity growth and w_{IP} declines due to lower cost production of these intermediate goods, the value-added contribution of the outsourced IP in (5) to *total* multifactor productivity growth is presumed to decline. This means that value-added growth of the remaining production, assuming the finished product is sold at the same price or at a reduced price that does not fully pass-through cost savings, is automatically assumed to increase *even if the remaining labor and capital costs for producing the remaining parts of the product remain exactly as they were before.* $ln\left(\frac{A_t}{A_{t-1}}\right)$, or *domestic* multifactor productivity growth, must increase if the LHS remains the same, or does not decline by the same amount as $w_{ip}\left(ln\left(\frac{IP_t}{IP_{t-1}}\right)\right)$. Outsourcing is thus assumed to increase U.S. produced value-added when in actuality there is no increase in value-added from U.S. production (after subtracting the lost U.S. value-added from additional non-U.S. intermediate materials production) at all.[7]

Presto! as with booking fictitious value-added output from financial trading, here we a booking fictitious value-added from low-cost outsourcing. Again some might argue that over time perfect competition will force a full price pass-through of cost savings from outsourcing, thus eliminating the fictitious value-added. But the 260.5 percent increase in computers and electronics (NAICS 334) value-added output accounting for 80 percent of U.S. manufacturing output growth from 2000 to 2008 in spite of comprising only a 9 percent level share of manufacturing output, when according to the BEA computer and electronic parts grew by just 20 percent in current dollars and employment in the sector declined from 1.78 million to 1.09 million, and 90 percent of all electronics R&D now takes place in Asia, suggests otherwise (Ezell and Atkinson; 18).

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[6]Note that the expression $ln\left(\frac{X_t}{X_{t-1}}\right)$ for any variable X is an approximation of: $\frac{d(\ln x)}{dt} = \hat{x}$.

[7]Other factors cited in the literature as also causing an artificial inflation of manufacturing value-added are: a) since 1997 very large presumed "quality improvements" especially in computers and electronics that reflect rapid increases in "quality" rather than increased output, and b) since 1980 increased use of "temporary help services" in U.S. manufacturing which artificially inflates manufacturing labor productivity as these workers do not count as manufacturing workers (Helper et al. 2012). Both may serve to "mask" or offset increases in rentier income in the national accounts with fictitious "qualitative productivity" increases on the output side, though the latter would be a transfer of income to rentiers from domestic workers rather than from foreign workers and suppliers.

3. The Rentier Economic Model

Finally note that rentierism through outsourcing and financialization are tied together. From 2000 to 2009, U.S. multinationals that collectively employ roughly a fifth of all American workers, cut their work forces in the U.S. by 2.9 million while increasing employment overseas by 2.4 million, according to U.S. Commerce Department data (Wessel 2011). Except for a brief period in the late 1990s outside of residential construction, U.S. investment has been stagnant or declining since the late 1960s (Beitel 2009). At the same time government data show that the wage share of value added (that is supposedly produced in the U.S.) has persistently trended downward since1980 falling by over 10 percent since 1983, even as the consumption share of value added rose from about 95 percent in 1983 to about 105 percent in 2007, while the household- debt to income ratio rose from about 25% in 1972 (the year of peak U.S. real hourly earnings for non-supervisory workers - $9.27 in 1972 compared to $8.91 in 2010 in 1982-4 dollars[8]) to about 170 percent by 2007 and profit rates (net of interest and taxes) increased or held steady at rates well above 1954 to 1980 rates (Taylor 2010; Figure 5.14 p. 209; 2.2, p. 58). As Ivanova (2011) notes, "credit financing surpassed labor income as the key sustainer of consumer demand in the U.S. during the bubble years" (19).

Data for six quarters after official recession end dates for the five most recent post war recessions from 1975 to 2011 show a large trend decline in aggregate wage and salary share of national income growth (from 38 percent to 1 percent) and trend increase in profit share of National Income growth (from 32 percent to 88 percent) (Sum et al. 2011).[9] Much of this profit of U.S. based multinationals is from foreign affiliates: 48.6 percent in 2006, compared to just 17 percent in 1977 and 27 percent in 1994 – (Business Roundtable and United States Council Foundation data cited in Meyerson 2011; 3. And this cash is not going into real investment but rather as Ivanova notes: "the nation's biggest companies deriving a significant share of their income abroad, are awash in cash, but either hoarding it, distributing it to shareholders, or investing it in financial assets (such as their own stock); they are not using it to expand or improve their domestic capital base" Ivanova 2011; 23).

The rentier economic model is clear. Income is generated without producing corresponding output through capital gains from financial bubbles and outsourcing of production, while holding wages down and using profits to generate more output-less income by further inflating domestic financial assets and through consumer and home equity lending to maintain domestic demand and mark-ups on domestic sales. The BEA has not been making a "mistake." The national accounts need to equate income to value added output so that when there is no output to match the income, fictitious services and manufacturing value-added needs to be "imputed" to get the accounts to match.

But, though it generates enormous amounts of income for rentiers at the very top of the income scale (78.2 percent of all increased family income in the United States from 1973 to 2008 went to the top 1 percent of families and *negative* 20.6 percent to the bottom 90 percent - (Baiman 2011a)), a rentier economy ultimately causes overall economic decline as is clear from the trend real wage decline since 1972. This can be seen in broader perspective by comparing "rentier economies" to more traditional advanced "unequal exchange" economies with larger manufacturing shares, more competitive exports, higher wages, more social spending and better quality of life indicators in key areas of health care and education.

World economic progress does not occur in a uniform fashion. Traditionally the richest countries are those with the most productive, advanced, and diversified manufacturing (or high value added traded good) capacities (Reinert, 2007).[10] These countries are able to trade less labor for more labor from less productive countries through a process of "unequal exchange" that is especially pronounced under "free trade" (Baiman, 2006). But this implicit "exploitation" is how the

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[8]BLS data downloaded July 25, 2011.

[9]The recession of 1991Q1 to 1992Q2 when profit share of national income growth declined by 1 percent and wage and salary share rose by 50 percent is the only outlier to this trend in Sum's data.

[10]Reinert (2007) shows how support of diverse centers of manufacturing activity has been recognized as key to economic development for over seven centuries through the numerous works of economic thinkers in the "Other Cannon" completely ignored by the current neoclassical economic orthodoxy.

world economy evolves. Overall productivity improves though most of the benefit initially accrues to leading economies.

Rentier economies on the other hand are able to "create" income without producing advanced manufacturing output in exchange. This does not advance world economic progress, but simply extracts labor from other countries without exchanging anything in return. In a more just world, economic development would be balanced so that all countries would have sectors of expertise and unequal exchange that would allow them to expend equal labor and advance world productivity at roughly similar rates. Policy measures can and should be employed to reduce the extremes of poverty and wealth produced by unequal exchange across nations (Baiman 2006). But "rentier economics" is worse than global inequality from traditional "unequal exchange." Like capitalists who make no real investments, rentier economies do not advance world productive capacity and thus have no justification.

Moreover rentier economics inevitably generates a persistent trade deficit as some of the income that does not correspond to output (especially the part that is lent to households for home equity and consumer credit) leads to disproportionate demand for goods that are no longer produced domestically and to the inevitable private "bubble" or public "deficit" macroeconomics that has characterized the US since the 1980s. These result from the macroeconomic accounting identity:

$$\text{public deficit} + \text{private deficit} = \text{trade deficit}$$

The current push to reduce the public deficit ignores this identity and the fact that if the structural U.S. trade position is unchanged, unless a new (unsustainable) private deficit "bubble" emerges (as occurred in the late 90's - the last time the federal deficit was eliminated) to replace the spending injection that will be lost if the public deficit is cut, *cutting the public deficit will cause the economy to shrink* (thereby reducing the trade deficit through "non-structural" economic contraction) (Baiman 2010b) (Godly et al. 2008).

Thus the rentier economy lies at the heart of the increasing inequality, lack of real investment and job and wage growth, and increasing foreign trade deficit that characterize recent U.S. macroeconomic trends. The fact that such economies ultimately immiserate themselves may be a form of "ultimate" justice. In any case, for both reasons of "Hegelian justice" and our own self-interest, the US needs to radically transform itself away from a rentier paradigm and towards a more a traditional unequal exchange advanced economy.

4. Stylized Characteristics of "Rentier" versus "Unequal Exchange" Advanced Economies

The following figures document some of the stylized characteristics of "Rentier" versus "unequal-exchange" advanced economies. The most democratic of these unequal exchange economies are advanced social democracies with generous public sector spending that in some cases approaches 50 percent of GDP (See Figure 6 below). High progressive taxes and generous public spending ensures high levels of employment (these "workfare" societies have the highest labor force participation rates in the world[11]) and that the benefits of unequal exchange are broadly distributed. Other policies such as "co-determination" requiring all large companies to have significant shares of representatives of labor on their boards to ensure that national corporations are not run for exclusive rentier benefit (short-term returns for investors and upper management) but rather in the long-term interests of local and national economy, and financial sectors that support "high road" investment in long-term development and high-value added production (in Germany these

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[11]OECD Fact Book, 2009, 2007 data on "Share of persons of working age 16 to 64 in employment." BLS data indicate that U.S. labor force participation dropped by more than 4 percent during the recession and (as of this writing, July 2011) has stayed at this depressed level since the official end of the recession in June 2009.

Table 1. Gross Hourly Wages.

Gross wage in national currency 2004	Exchange rate to dollar 6/30/2004	Dollar wage	% US wage	
327.192	6.103	$53.61	153.5%	Denmark
317.101	6.938	$45.70	130.8%	Norway
34.088	0.821085	$41.52	118.8%	Germany
4205.596	109.43	$38.43	110.0%	Japan
29.449	0.821085	$35.87	102.7%	Finland
		$34.93	100.00%	United States
251.282	7.525	$33.39	95.60%	Sweden

Source: OECD data.
Historic exchange rates: http://www.x-rates.com/cgi-bin/hlookup.cgi.

are the "Landesbanken," or German public banks that play a central role in the Mittelstand, the small and medium size enterprizes that constitute the backbone of the German economy[12]) (Hill 2010). As productivity in goods production increases, a larger share of employment must shift to the production of services. As the most important of these services are inherently "public goods" that cannot be privatized or efficiently commodified on a for-profit basis, a larger and larger share of GDP must be withdrawn from the market and provided on the basis of need rather than income (Baiman 2010a).

Table 1 and Figures 1-6 show that the US has, in this OECD sample of countries, relative to other advanced countries, among the: lowest real wages (Table 1), smallest value-added in industry (even with fictitious manufacturing value-added included) (Figure 1), highest FIRE value-added (Figure 2), lowest levels of investment in plant and equipment (Figure 3), and not coincidentally the largest trade deficit (Figure 4). They also show that the US has (relative to other advanced countries) among the: smallest tax revenue shares (Figure 5), and lowest level of public social expenditure (Figure 6). The later is an indirect result of the rentier interest in low taxes and the privatization of public services to expand the scope of profitable private financialization of the economy.

Finally, in this context, the following graph (Figure 7) from Xing and Detert 2010 is instructive. It estimates the production cost of an iPhone in 2009 at $178.96 and notes that most of it is actually produced in Japan, Germany, and S. Korea, with assembly in China, and some contribution by "others" including the U.S. This graph shows that much of the U.S. trade deficit on an iconic high-technology product ostensibly produced by a "U.S." company is actually with Germany, our paradigmatic "unequal exchange" high wage, and high social spending, socialdemocratic economy.

These "stylized" facts will inform the simplified "unequal exchange," "rentier," and "developing country" world economic model below.

5. A Simple Rentier, Unequal Exchange, and Developing Country World Trade Model

Baiman (2006) uses a simple didactic model proposed by Hahnel (1999) that is an expanded version of a model first proposed by Roemer (1988), to show the impact of north/south "autarky," "free trade," "fair trade," "global Marshall plan," and "developmental trade," on static and

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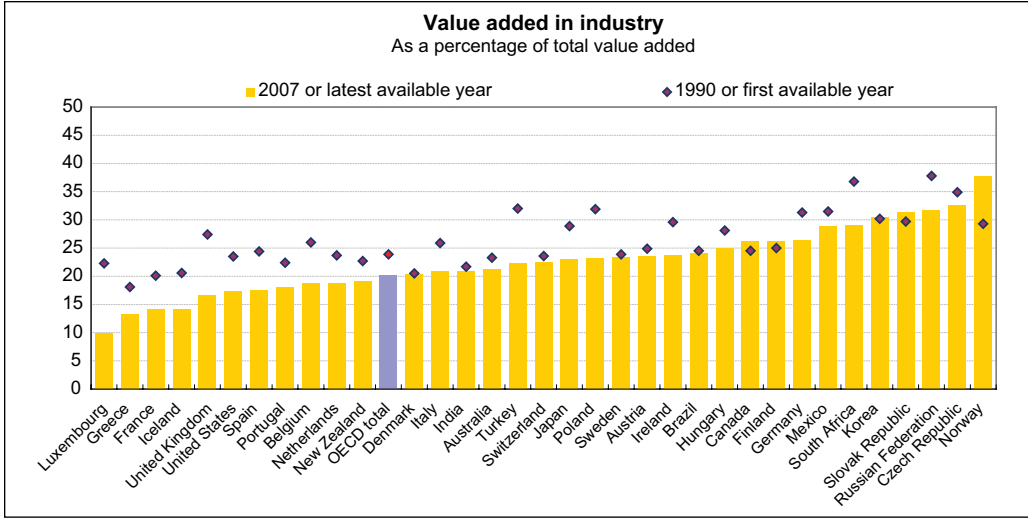[12]I thank Peter Dorman for this information.

Value added in industry
As a percentage of total value added

Figure 1.
Source: OECD Factbook 2006.

Value added in banks, insurance, real estate and other business services
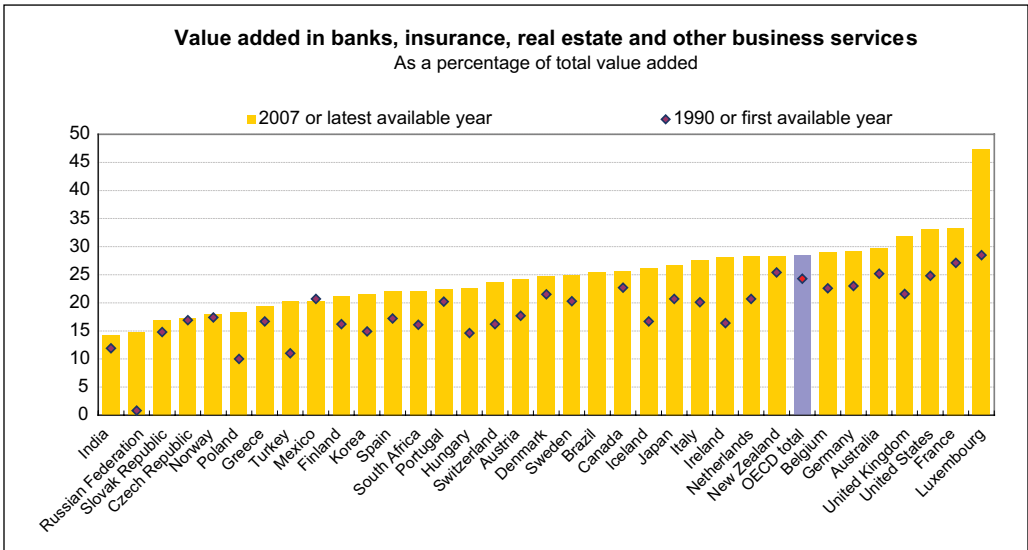As a percentage of total value added

Figure 2.
Source: OECD Factbook 2006.

dynamic global inequality, efficiency, and economic development, using tools of "Roemerian" or "analytical Marxist" ("labor theory of value without a labor theory of prices") analysis. The following includes: a) a concise review of the Baiman (2006) unequal exchange North/South free trade model, and b) an update of this model to a three country model with the addition of a "rentier economy" (RE), and with the "north" relabeled as an "unequal exchange" (UE) economy and the "south" relabeled as a "developing country" (DC).
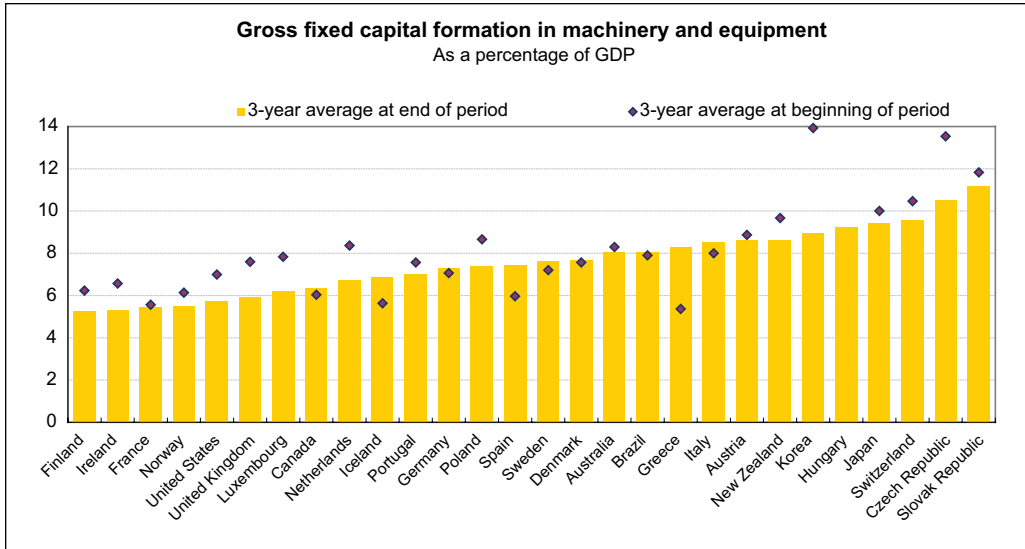
Gross fixed capital formation in machinery and equipment
As a percentage of GDP

■ 3-year average at end of period   ◆ 3-year average at beginning of period

Figure 3.
Source: OECD Factbook 2006.

Current account balance of payments
As a percentage of GDP, average

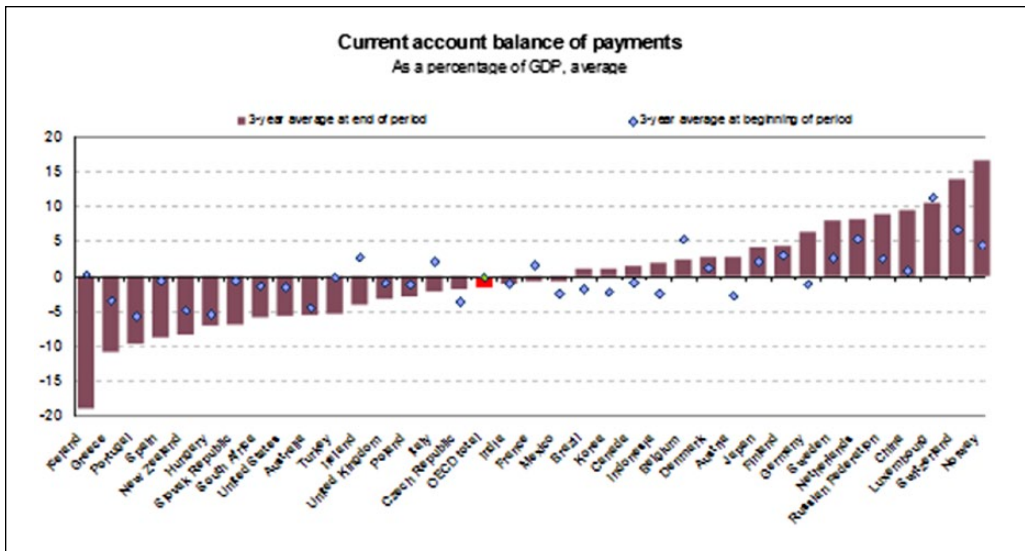■ 3-year average at end of period   ◆ 3-year average at beginning of period

Figure 4.
Source: OECD Factbook 2006.

5.1 A North/South Unequal Exchange "Free Trade" Model

Baiman (2006), following Hahnel (1999; Appendix B) and Roemer (1988), postulates a world divided between north (the center) and south (the periphery) in which there are three technologies of production, two goods, one form of "labor" (L), and a subsistence utility function for both northern and southern populations. The two goods are a consumption good called "corn" (C), and a capital good called "machines" (M). The three linear fixed-coefficient technologies with single periods of production include: a labor-intensive consumption goods sector, a capital intensive
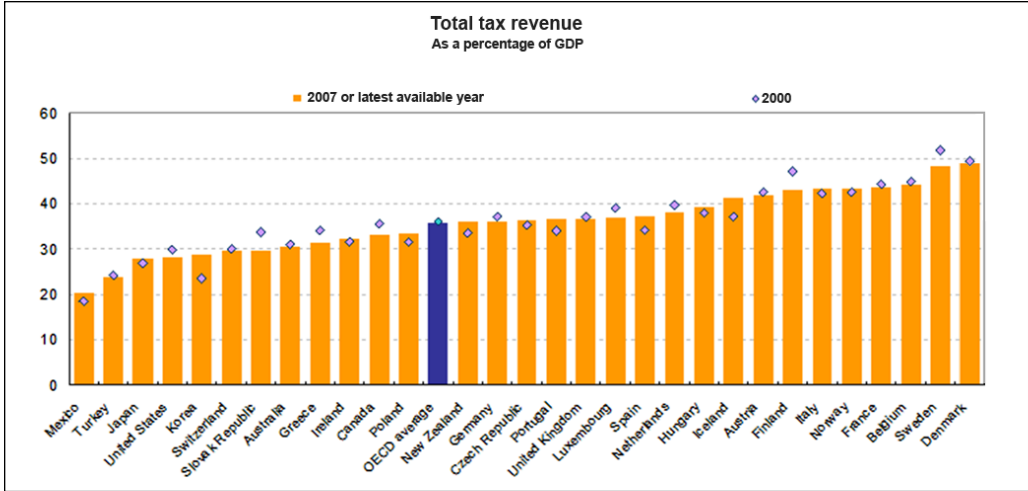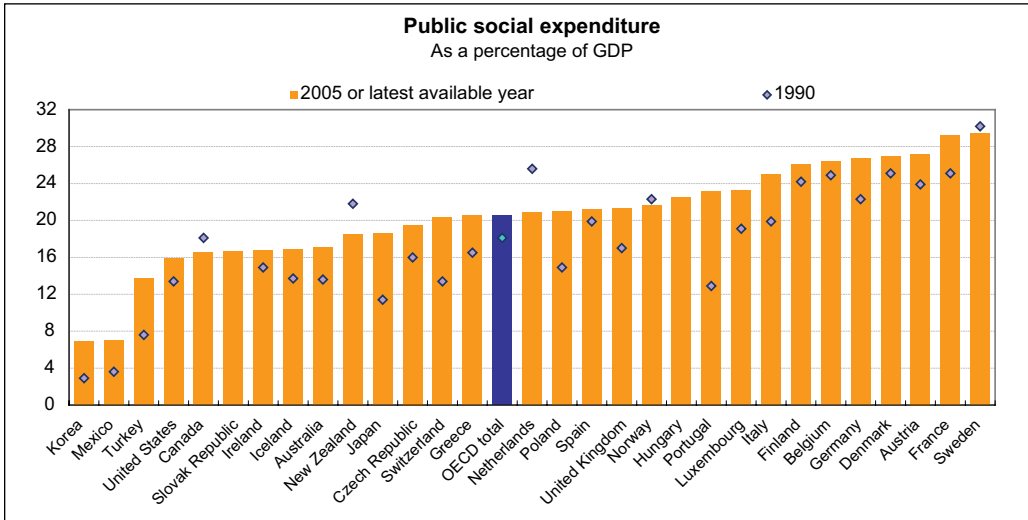
Figure 5.
Source: OECD Factbook 2006.

Figure 6.
Source: OECD Factbook 2006.

consumption goods sector, and an even more capital-intensive capital goods sector, defined as follows:

1) 5 units of labor + 0 machines yields 10 units of corn
2) 2 units of labor + 1 machine yields 10 units of corn
3) 1 unit of labor + 2 machines yields 10 machines

The model further postulates that:

a) Each northern and southern country has 1,000 workers who need 1,000 units of C per period. With its 1,000 workers each country can provide up to 1,000 units of "labor" per production cycle.
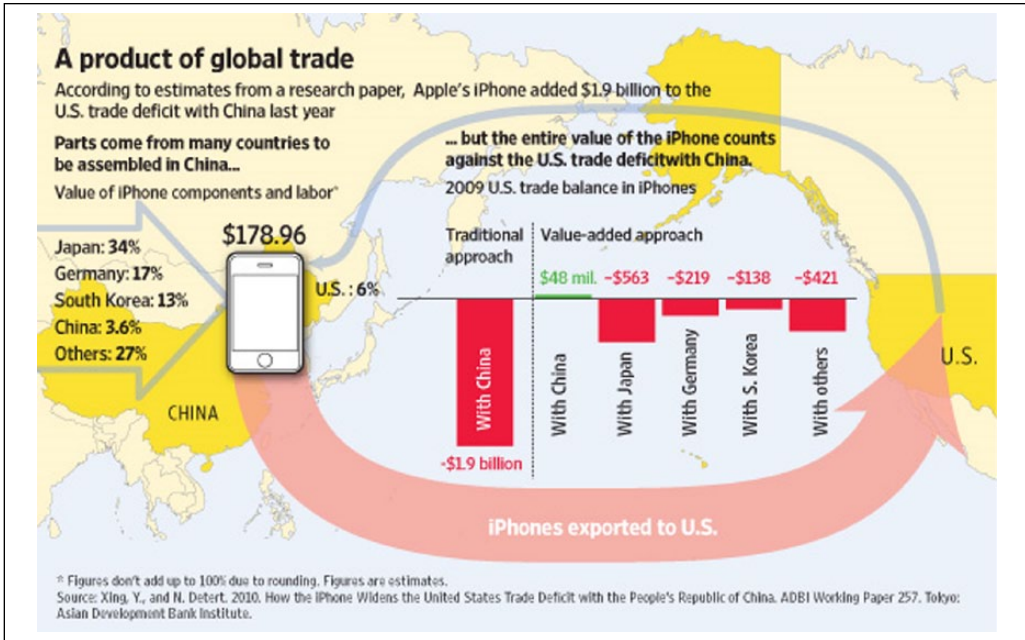
Figure 7.
Source: Xing and Detert, 2010.

   b) The workers of all countries desire to work as little as possible, or utilize as few units of
      labor as possible, to produce this subsistence consumption.
   c) Northern countries have an initial capital stock of two hundred machines.
   d) Southern countries have a capital stock of only fifty machines.
   e) There are more southern (capital-poor) countries than northern (capital-rich) countries.

In the absence of trade, under "autarky," northern and southern countries produce their 1,000
units of corn using these technologies at minimal cost with their own available machines and
labor. Northern countries have plenty of machines and can therefore produce all of their corn
using the more efficient technology 2. They will use 200L and 100M to produce 1,000C and with
technology 3, 12.5L and 25M to produce 125M, thus replacing the 100M plus 25M machines
used up in every production cycle, leaving 75M unused. The "efficiency" or L/C ration for north-
ern countries under autarky will therefore be 200L plus 12.5L equaling 212.5L divided by 1,000C
or 0.2125.

Southern countries on the other hand, will, under "autarky" through technology 2 use 80L and
40M to produce 400C, and through technology 3 use 5L and 10M to produce 50M, replacing the
40M and 10M used up in each cycle of production. Because southern countries have only 50M, they
will have to use the inefficient technology 1 through which 300L will produce 600C, to produce the
rest of their needed corn. The efficiency ratio for southern countries under autarky will therefore be
80L plus 5L plus 300L, or 385L divided by 1,000C, or 0.385. The "inequality" ratio of northern to
southern countries under autarky will thus be 0.385/0.2125=1.81 indicating that southern countries
have to expend 1.81 times more labor to produce their 1,000C than northern countries.

Without loss of generality (to make the system balance and highlight the most important fea-
tures of these models) we can assume single "representative" northern and southern countries. In
this case total labor for representative northern and southern countries under autarky to produce
2,000C for necessary consumption will therefore be 212.5L plus 385L or 597.5L for an overall
L/C or efficiency ratio of 0.29875 (597.5/2,000).

Table 2. Traditional "Unequal Exchange" Based on "Free Trade" Between the North and South.

	Technology	L	M (input)	C	M (output)
North	2	20	10	100	
	3	20	40		200
Exports			150		
Total Production			200	100	
Imports				900	
Total Use		40	50	1000	Price=6
South	2	380	190	1900	
	3	5	10		50
Exports				900	
Total Production			50	1900	
Imports			150		
Total Use		385	200	1000	Price=6

In a free trade regime all countries will attempt to maximize their gain, or save as much labor time as possible, by producing and trading corn and machines. Northern countries have excess machines to sell. They will clearly gain from selling them for any amount of corn that will cover their opportunity cost (in corn) of replacing them. From technology 3: $0.1L + 0.2M = M$. Solving this for M shows that countries that have 0.2 spare machines can produce an additional M, including replacement of the existing stock of machines used up, by expending 0.125L. On the other hand from technology 2: $0.2L + 0.1M = C$. Substituting in $M = 0.125L$ and solving for L gives $L = (1/0.2125)C$, so that every unit of labor used in producing replacement machines instead of corn could have been used to produce $1/0.2125$ units of corn, again including replacement of machines used up, this time with a smaller 0.02M stock of initial available machines. This implies that for northern countries each M has an opportunity cost of 0.125 x (1/0.2125), or about 0.5882C. In other words, as long as they retain sufficient machines to reproduce their capital stock of machines and additional needed corn, northern countries will benefit from trading their extra machines for any amount of corn greater than about 0.5882C.

As is noted above, under autarky southern countries would have used up all of their machines to produce corn and replacement machines and would thus be forced under autarky to produce six hundred units of corn using the inefficient labor intensive technology. On the other hand if they could import more machines from the north they could produce corn more efficiently (with less labor). From technology 3 we have: $2L + 0M = 4C$. But with an imported machine that does not need replacement, using technology 2 we have: $2L + 1M = 10C$, indicating that it would be worth it for southern countries to pay up to 6C per imported machine. This therefore becomes the price that southern countries will have to pay for machines imported from northern countries. Given condition (f), southern countries will bid up the price of the scarce machines from the north to a level that is insignificantly (for the purposes of our description of the model) below 6C. Given that their opportunity cost for reproducing machines is only about 0.5882C, under "free trade" northern countries will thus be happy to trade their excess machines for 6C. Labor time minimization and subsistence production therefore lead to the trading and production pattern described in Table 2 above.[13]

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[13]The "maximal" number of machines that any northern country can produce for export while still retaining enough machines to replace its stock of 200M is 160M. Given this constraint there are actually two minimum labor 40L solutions for northern countries. Northern countries may also export all 160M at 6C each and produce their remaining 40C needs using technology 1 with 20L. Since both solutions give the same northern country efficiency results and the former (the solution described in Table 1) allows for a one-to-one southern country trading match, I have, without loss of generality, selected it. Even so, as there are more southern than northern countries, some southern countries will be importing fewer than 150 machines.

By allowing for full utilization of machines, or capital, free trade increases the efficiency of the global economy relative to autarky. Using the same two-country normalization, only 40 + 385 = 425 labor units are necessary to produce 2,000 units for an efficiency ratio of 0.2125 L/C for both countries combined. The free-trade regime is thus over 28 percent more efficient in terms of labor time saved than autarky (1 –0.2125/0.29875 = 0.288). However, this increased efficiency comes at a price. Under free trade, northern countries need only forty units of labor to produce 1000C for an efficiency rate of only 0.04 L/C and a savings of 172.5 units of labor from the 212.5L that they would have to use under autarky. In contrast, *southern countries save no labor at all* as they continue to use 385 units of labor to produce their 1,000C at the same L/C rate of 0.385. "Free trade" in an international capitalist system with a "class monopoly" by the northern countries over the means of production allocates *all* of the efficiency trading gains to the North, just as "free markets" under domestic capitalism with a class monopoly by capitalists over the means of production allocates all efficiency gains to capital (with surplus labor and in the absence of countervailing power by unions and the state) (Roemer 1981). This, of course, results in a dramatic increase in inequality (of work effort) to 0.385/0.04 = 9.625 indicating that southern countries have to work 9.625 times more than northern countries for their 1,000C rather than only 1.81 times more under autarky.[14] Moreover, as Hahnel (1999) points out, to the extent that the efficiency of the capital using technologies 2 and 3 improves relative to the labor-intensive technology 1—a likely occurrence under the normal process of technological change—free trade will *increase* global inequality even as global efficiency improves, and this is true regardless of whether the technological improvement is output-increasing, labor-saving, or machine-saving. This is even clearer in the modified Hahnel model of Table 2, as this model implies that any efficiency improvements in technologies 2 and 3 relative to technology 1 will be completely captured by the northern countries through an increase in the international price of corn relative to machines even as the labor cost of machines may go down.

Of course, in the real world "northern" countries do not have an absolute monopoly on capital and advanced production techniques and eventually technologies "trickle down" and world production capacity increases with the "unequal exchange" northern countries leading the way. Baiman (2006) outlines policy options including "a global Marshall Plan" and "developmental (or "solidarity") trade," rather than "free trade," that can and should be used to reduce global inequality and unequal development.

5.2 A "Rentier Economy," "Unequal Exchange Economy," and "Developing Country" Free Trade Model

However the concern in this paper is not focused on showing how under free trade the "north" exploits the "south" while developing the world economy. Though the extreme global poverty and increasing inequality that result from free trade schematically described in Table 2 can and should be addressed through national and global policy measures as outlined in Baiman (2006), this is, as noted above, the age old story of uneven capitalist development.

In order to expand the unequal exchange model of Table 2 to include rentier economies I need to add a fictitious "product" D representing a "claim on output," specifically one unit of "D" is a claim on output equaling one unit of C, and introduce another "rentier technology" that "produces" these claims on output "D" without producing any real value-added output. We also

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[14]In "new interpretation" terms, the "money equivalent of labor time," or MELT, is 2,000/425 = 4.7059 (Foley 2000), or conversely, the labor required to produce a unit of corn is 425/2,000 = 0.2125. Since 1L + 2M = 10 M, the labor required to produce a machine is 0.125. Thus the north exports 0.125 X 150 = 18.75 units of labor to the south but receives 0.2125 x 900 = 191.25 labor units from the south. Note that 385 – 191.25 + 18.75 = 212.5 which is the labor that northern countries expend under autarky.

expand the definition of "machines" to include high value-added "intermediate goods" for reasons which will become clear below. As before "corn" represents "final consumer goods," so that the list of technologies and their outputs is now:

1) 5 units of labor + 0 machines yields 10 units of corn
2) 2 units of labor + 1 machine yields 10 units of corn
3) 1 unit of labor + 2 machines yields 10 machines
4) 1 unit of labor yields 100 D claims on output (with exchange value equal to a unit of corn) but no actual output

I also change the assumptions a) through f) above relaxing assumption b) to include "saving" or producing more than is necessary for current consumption, and adding a "rentier economy" (RE) as another economy in addition to the traditional "unequal exchange" (UE) economy (substituting for "northern") and "developing country" (DC) economy (substituting for "southern"). I also increase the "initial endowments" of machines for UE and DC economies by 50 percent equal to the magnitude of our expansion of world economic demand. As noted in Figure 14, the United States, Germany, and China are selected as "representative" RE, UE, and DC economies, though China is well on its way to developing advanced manufacturing capability (Baiman 2010a).[15]

So the list of assumptions is now:

a) Each RE, UE, and DC country has 1,000 workers who need 1,000 units of C per period. With its 1,000 workers each country can provide up to 1,000 units of "labor" per production cycle.
b) Workers in UE and DC countries work to satisfy global demand for their output in the most efficient way (the least amount of labor) possible. Demand for their output includes their own domestic demand of 1,000 C each plus another 500 C each of demand from the RE economy. What they do not currently consume they save as claims D on future world output (or on present or future real wealth).
c) Unequal exchange countries have an initial capital stock of three hundred machines.
d) Developing countries have a capital stock of only seventy-five machines.
e) Rentier countries have no capital stock.
f) There are more southern (capital-poor) countries than northern (capital-rich) countries.
g) There are an even smaller number of rentier countries that have the ability to "produce" internationally recognized claims on output (D) without producing any real output or "value-added" (goods and services with "use-value" that are of benefit to humans).

Table 3 shows how the introduction of a rentier economy changes the traditional unequal exchange based global economy. Rentier economies "free load" on the labor of the rest of the world as they force the non-rentier economies to expend more labor to satisfy claims on output (D) by the rentier economy. This, and the fact that the "rentier technology" is extremely "productive" in terms of claims on output per worker means that global productivity (output per labor) becomes less efficient and global income inequality increases. In my example the "rentier"

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[15]China has followed the Southeast Asian model of development first pioneered by Japan, but is the most politically repressive of the Southeast Asian countries. China's political repression and growing influence, especially on the more corrupted democracies like that of the United States, poses a serious long-run threat to global democratic (including democratic socialist) development but this topic is beyond the scope of this paper, see (Fingleton 2008; Mann 2007). Similarly the more advanced social democratic nordic countries, as opposed to the more Christian democratic Germany, are better representatives of successful UE nations on most quality of life and public good indicators, though I use a larger "Christian democratic" country, Germany, as our representative UE example (Hill 2010; Huber and Stephens 2001).

Table 3. Global "Free Trade" with a Rentier Economy (United States), Unequal Exchange Economy (Germany), and Developing Economy (China).

	Technology	L	M (input)	C	M (output)	D (claims on output in terms of C)
Rentier Economy (United States)						
	4	10				1000
Export of D						1000
Import of C				1000		Price C/D=1
Total Use		10		1000		
Unequal Exchange Economy	2	30	15	150		
(Germany)	3	30	60		300	
Exports of M for C			225			Price C/M=6
Total Production				150	300	
Imports of C for M				1350		
Total Use		60	75	1500		
Imports (Accumulation) of D						500
Exports of C for D				500		
Developing Country (China)	2	570	285	2850		
	3	7.5	15		75	
Exports of C for M				1350		
Total Production				2850	75	
Imports of M for C			225			
Total Use		577.5	300	1500		
Imports (Accumulation) of D						500
Exports for D				500		

technology 4) is ten times as productive in terms of direct output per worker (1 worker generates 100 D in every production cycle) as the capital goods production technology 2 (1 worker and 2 machines produce 10 machines) and does not require any machines (think hedge fund managers). Specifically the 9.625 labor per unit of corn inequality ratio between north and south (577.5/60 = 9.625) between unequal exchange (UE) and developing economies (DC) remains the same, but both UE and DC countries have to expend 50 percent more labor to produce an extra 500 units of corn each to satisfy the 1,000 D claim on output "produced" by the rentier economy (RE). This means overall global productivity declines from 0.1925 (=385/2,000 from Figure 9) units of labor per unit of corn to 0.2158 (10+60+577.5=647.5 divided by 3,000 from Figure 14) units of labor per unit of corn as "free loading" reduces global productivity.

In Table 3, as in Table 2, UE and DC countries maintain balanced trade with each other. However, the RE runs a persistent trade deficit of 1,000 C per production cycle (all of its consumption needs) as it has nothing to sell in exchange for the corn it extracts from the rest of the world. As it cannot satisfy these claims through domestic production a trade deficit is necessary for its economic reproduction. This trade deficit stems directly from its rentier "production" of claims on output (D) with no corresponding output. For example through borrowing from the rest of the world by selling U.S. treasury bonds that generates an inflow of funds on capital account that offsets the current account deficit in "real" currently produced goods and services (e.g. corn)

In return for the corn that the RE receives, it provides "claims on output" D that are accumulated by the other countries. In Table 3 these claims (or imports) are (arbitrarily, without loss of generality) equally divided between the UE and DC economies. Both UE and DC economies export finished goods to the RE economy which does not produce anything, and therefore has no need for intermediate or capital goods (M). As shown in Figure 7 above, much of the apparent

US RE trade deficit with DC like China is actually with advanced UE economies like Japan and Germany. Splitting RE imports equally between DC and UE economies reflects this. Though a share of the "corn" finished good exports from the UE economy to the RE economy are likely to be high value-added finished goods assembled in a DC economy and then re-exported to the RE economy.

These claims D represent foreign exchange reserves accumulated by UE economies and DC that have oriented their economies toward producing more than what they need for immediate consumption. This accumulation of reserves or wealth gives UE and DC countries that are able to do this greater opportunity for future domestic or foreign real investment and correspondingly this gradual accumulation of liabilities increases the debt of the RE country to the rest of the world.[16]

The one caveat in this regard is that as long as this debt is denominated in D claims of which the RE country is the monopoly issuer, the RE debt to the rest of the world can be reduced simply by issuing more D. But doing this would risk a confidence crisis by the rest of the world in the exchange value of the D claims on output and put the RE country's continued ability to function as a rentier economy in jeopardy.

The RE has to expend less labor than the UE and DC economies to satisfy its basic needs of 1,000 C per cycle (10, versus 40 and 285, from Table 3 for 1,000 C only). The 10 workers who have jobs in the RE are thus able to obtain very high incomes. In the absence of steeply progressive taxation and large scale social spending, the other 990 workers must either find work "servicing" the needs of the very high income rentier workers for whatever they can get, or borrow income, or starve. Rentierism thus extends to the domestic economy as well as to the international economy, as has been noted above.

In order to achieve broad based prosperity UE economies must also have progressive taxes and large public sectors. UE economies appear better able to spread economic prosperity as they depend on continuous reinvestment, and productivity enhancing educational and health care systems that allow them to maintain a productive and continuously improving traded goods sector that includes a larger share of the population.

What a deal! It looks like the RE economy has made it to Nirvana. Living off of others' labor sounds like a great deal. Kick back and relax (or trade a bit and watch your "investments" grow) – for those of us living in the premier RE economy what is the problem?

The problem has been outlined above. All income growth in rentier economies goes to the very top income earners who derive their income from rentier activities (rentier income from finance or from multinationals generating high returns from fictitious mark-up value-added production). Employment and income for other (non-financial activities) declines leaving the bottom 90 percent of the population worse off (real family income for the bottom 90 percent in the U.S. declined by 6.4 percent from 1973 to 2008 even as per family income for the top 1 percent grew by 175.6 percent, for the top 0.1 percent by 354.3 percent, and for the top 0.01 percent by 544.8 percent [Baiman, 2011a]). As income (for the bottom 90 percent) declines, the economy becomes more dependent on private or public deficits to maintain past living standards. As investment and ability to produce real (not fictitious) value-added declines, the economy becomes dependent on imported goods paid for with IOUs to the rest of the world. Eventually domestic private sector borrowing bubbles crash and need to be replaced by massive deficit spending on

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[16]UE economies with excessive surpluses are also a problem for the global economy. Sustainable global development requires more balanced global trade, at least among advanced countries, such as prevailed during the "Golden Age" 1945-1972 period of rapid global GDP and trade growth under the "Bretton Woods" managed trade regime. An exception to this would be modest UE country surpluses corresponding to manageable DC deficits financed through "global Marshall Plan" grants and long-term loans that would increase the pace of DC economic development (Baiman 2006; Marglin and Schor 1992).

the public side, and even with this large injection the economy is stagnant with job growth flat and wages and salaries declining.

Political ignorance, greed, and ineptitude make things worse. A fiction arises that the economic malaise is due to the public deficit! Ignorant and corrupt politicians wage a campaign to restrain the government's ability to deficit spend and try to block (by fanatically insisting that rentiers obscene incomes should be sheltered from any additional taxation) any effort that would use the unique ability to make claims on the labor of the rest of world benefit the broad RE public as opposed to the rentiers who believe that public spending threatens their financial investments. Perhaps they understand (per the deficit linkage above) that reducing the public deficit will cause more economic decline and immiseration for most Americans, or maybe they don't, but in any case the lobbyists and influence peddlers do not care, for the U.S. economy today is run to benefit the upper 1 percent of rentiers whose incomes have less and less relationship to how the rest of the economy is doing (Meyerson 2011). Financial sector and multinational profits went up 40 percent in the seven quarters since the end of the recession even as wage and salary income declined (Sum et al. 2011).

This is the problem with the rentier economy. It no longer functions as an economy for the betterment of the nation and the world but rather as a vehicle for the enrichment of the very highest income earners. In fact, like the famous "Dutch disease" problem, the ability to make such fabulous incomes so quickly with so little work cause the most capable and (potentially) productive individuals to expend their talents on financial gambling and rent seeking rather than invention and innovation to lift world productivity and economic capacity. Both human and physical capital are disinvested from productive sectors including the funding of public infrastructure and goods and services, as the rentier class accumulates ever more economic and political power and forces more and more domestic public and private disinvestment so as to increase rents. The RE economy is a massively failed economy as should be clear from over three decades of real wage decline in the United States and precipitous and accelerated loss of productive capacity (Baiman 2010a).

6. Policy Conclusions

What is to be done?[17]

    a) Failed rentier economies like the United States need to exploit their rentier capacity for public (rather than private rentier) benefit. This means that they need to maintain and increase federal deficit spending to fund existing public services and income support programs both at the federal and state and local levels. Rentier economies are sick and failed economies. They require federal deficit spending to prevent further short-term economic decline. Of course these economies cannot continue to run large federal deficits forever, the world will lose faith in their currencies (e.g. the dollar in the U.S., or the pound in the U.K.)

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[17]In the U.S. progress in pursuing the economic policies above is probably dependent on progress in addressing deeper institutional problems of our "rentier society" (not just economy) including: a) ending "corporate personhood" (Hartmann 2010); b) enacting "industrial democracy" laws like Europe's "co-determination" laws (Hill 2010); c) creating a quasi socialized financial sector that serves the real economy like the German landesbaken, or regional community banks noted above; d) implementing an expansive "industrial policy" including public-private partnerships for education and training and applied sectoral research and development institutes (Helper et al. 2012); e) reforming U.S. political democracy (that is now so corrupt that it has become in effect a plutocracy rather than a democracy) through measures such as: public campaign finance, strict regulation of lobbying and lobbyists, more open media access and robust public media, one-person one-vote laws (changing the Senate), proportional representation and weighted, cumulative or "second choice" voting, measures to increase voting and reliable vote counting (Hill 2010); and f) measures to drastically reduce wealth and income inequality such as much higher minimum wage laws and maximum wage laws, and steeply progressive income (like the Eisenhower era 92 percent bracket – that would erase our current deficit if just applied to the upper 10 percent [Baiman 2011a]) and wealth taxes.

at some point and they will lose the ability to exploit their rentier capacity. However, the point that has to be stressed is that under current conditions these countries need a large amount of deficit spending to keep their economies going and that maintaining a deficit to support critical public services and transfers is better than blowing up (and then bailing out) another unsustainable private deficit run-up, the benefit of which will mostly accrue to rentiers.

b) Rentier economies do not need to "shrink the size of their public sectors" (what the underlying "deficit" or "austerity" debates are all about). They need to dramatically increase their public sectors. In fact they need to vastly expand taxing and spending in order to re-orient their economies away from an RE and back to a UE configuration. This could be done, for example, through large scale federal jobs programs that expand public and private sector living wage employment in a) social services, b) infrastructure, c) new green technologies (CPEG 2009, 2011). Future economic prosperity for these economies is dependent on a large scale revival of public jobs programs, industrial policy, and major changes in trade policy. The most successful UE economies in the world use their advanced traded goods production capacities to generously fund large public sectors, at up to 50 percent of GDP, that ensure that the benefits of UE are broadly spread to the entire nation (Baiman 2010a; Hill 2010). Rentier economies have the more difficult task of rebuilding a UE economy *and* vastly expanding and enhancing their public sectors.

c) As they exploit their greatest remaining "economic" asset (rentierism) these economies need to shrink and eventually eliminate their rentier sectors. A straightforward way to do both (exploit and gradually eliminate) is to impose a financial transaction tax on all financial trading (the EU parliament has already recommended this) worldwide. It is indicative of the degree of economic distortion of the RE economy, that, just for the U.S., this one tax has the potential to raise up to $1 trillion a year and fund up to 25 million living wage jobs over 5 years (Barclay 2010; CPEG, 2009, 2011). This should be immensely politically popular, would directly repress rentier activity, and if used for a productive jobs program, directly redevelop the UE side of the economy. Gradually, as these economies change their self-destructive and misguided "free trade" policies (designed for financial and multinational outsource rentierism) and are able to again produce competitive exports, they can reduce their federal deficit without causing more unemployment and shrink their financial sectors to the point where FTT revenue will not be so large.[18] Recognizing that world trade cannot be sustainably managed (even under the most idealistic – and unrealistic - assumptions) on "autopilot" "free market" principles or exchange rate "price signals," and that a politically constructed world trading system needs to be put in place to replace the highly-successful Bretton Woods regime will be the first step in reducing and eventually eliminating "outsourcing rentierism" and implementing a global trading system that benefits public rather than rentier interests (Baiman 2010c, 2011b). At this point these countries will be able to rely on more stable broad-based steeply progressive income and wealth taxes to fund a much larger and more generous public sector that will also provide high value-added (in the real human use-value sense) and well paid "human service" (broadly defined) employment to the ever larger share of the workforce not engaged in high value-added traded goods production (Baiman 2010a).

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[18]Contrary to received wisdom, when studied carefully, Ricardian comparative advantage is an argument for *managed* trade. "Free trade" in the Ricardian parable is over-determined and unsustainable (Baiman, 2010c). More generally, unrelated to specific Ricardian assumptions or other *detailed* international trade modeling assumptions – assuming only exchange-rate based demand effects, global "free trade" is mathematically unstable and thus economic infeasible - see (Baiman, 2011b). For an excellent critique of the theoretical assumptions, and policy arguments behind the "free trade" doctrine, see (Fletcher, 2009).

Declaration of Conflicting Interests

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