

***Post-Hearing Statement by William Milberg<sup>1</sup> to the***

***U.S. International Trade Commission***

***Pursuant to***

***Investigation No. 332-325***

***The Economic Effects of Significant Import Restraints:***

***Seventh Update***

***December 20<sup>th</sup>, 2010***

## **Global Value Chains: Governance and Policy Implications**

### **1. Expansion of global value chains and the growth of offshoring**

Global value chains (GVCs), which only recently entered the purview of economists, are suddenly quite central to debates over the causes and consequences of the economic downturn and the historic collapse (and subsequent recovery) of global trade. A GVC is a system of production in which a “lead firm” delivers a good or service to an end user by governing an international network of producers – a network that extends from raw materials to the final good or service. The lead firm may itself be simply a buyer of finished goods or it may be a producer. The lead firm

---

<sup>1</sup> William Milberg, Professor and Chair, Department of Economics, New School for Social Research, 6 E. 16<sup>th</sup> Street, New York, NY 10003. Email: milbergw@newschool.edu

may own its suppliers, purchase inputs from another firm, or it may enter into a variety of joint or cooperative ventures with its suppliers.

GVCs have been described as “producer-led” and “buyer-led”. Buyer-led chains occur mainly in consumer goods such as apparel, footwear and toys. In this case the global value chain is driven by large retailers (e.g. Wal-Mart, The Gap). Such firms do no manufacturing themselves but focus instead on design and marketing while subcontracting the actual production of the good.

A producer-driven chain is typical in industries requiring medium- to high-technology production that are characterized by significant scale economies, and driven by multinational-producing firms who may subcontract some aspects of production but who keep R&D and final good production within the firm.

Automobiles, aircraft and computer software are examples.

GVCs have grown in importance for the delivery of final goods and one result is the steady growth in “offshoring” over the past 15 years and especially since the early 2000s. Materials offshoring (imported goods inputs as a share of total input use) grew slowly but steadily from 1998-2006 to over 10%. (see Figure 1). At the sectoral level, there is great variation with some sectors importing well over 20% of their inputs, including apparel, motor vehicles and electronics products (see Figure 2)

## **2. Problems with the measurement of offshoring**

These figures are based on U.S. input-output data using the well-known measure introduced by Robert Feenstra and Gregory Hansen in the 1990s. But the measure has a few limitations. The first is that we do not have adequate data on

imported inputs by sector and thus must assume that all sectors import inputs in the same proportion. In research with Deborah Winkler, we find that estimates of the impact of offshoring on employment are very sensitive to this assumption (Winkler and Milberg, 2009).

A second measurement issue is that import price indices are not accurate at the level of specific goods, and imported input price changes appear to have been underestimated. If import prices are underestimated then import values are understated and GDP overstated (see Houseman et al., 2010). This may be part of the reason that the U.S. “economic recovery” appears to be so “jobless”

A broader measure of offshoring that avoids some of these problems is the simple ratio of manufactured imports from low- and middle-income developing countries as a share of all manufactured imports. Figure 3 shows the rather dramatic rise in this ratio for the U.S., similar to that of Japan and reaching much higher levels than in Germany, France and the U.K.

A third measurement issues that arises in the presence of GVCs is that increasingly exports also rely on the importation of inputs. As a result there is a deviation between the value of exports and domestic value added in exports. This deviation has been shown to be about 20% for the U.S. and almost 50% for China (see Koopman et al., 2010).

### **3. Implications of GVCs for determinants of trade**

Economists traditionally have treated trade within GVCs – offshoring – as no different from trade in final goods. Such trade brings welfare gains because it is the result of a more efficient international division of labor. Recently GVC-based trade

has been understood as fundamentally different from final goods trade, and has been described instead as “trade in tasks.” (Grossman and Rossi-Hansberg, 2007). The combination of internationally mobile capital and trade in inputs means that absolute advantage plays a role in determining the direction and commodity composition of trade, along with comparative advantage.

#### **4. GVCs and the gains from trade**

The gains from trade liberalization are traditionally understood to be the result of the combined gains from specialization and from exchange at world prices. Gains from task trade are distributed differently. There are fewer “competitive imports”, and there are more “competitive tasks.” That is, imports reduce firm costs, raising profit margins, while some labor and capital within the firm may be rendered obsolete. Thus the static efficiency gains from trade liberalization accrue to profits and to those tasks not facing low-cost competition. Losses are incurred most by those performing mobile (including digitizable) tasks. Consumers gain from lower prices of goods and services.

A second source of improved social welfare from offshoring is the capture of “dynamic gains,” that is the result of extra demand for domestically-produced inputs generated by the profits from lower-priced imported inputs. Dynamic gains accrue not for traditional efficiency reasons, but because of the extra business spending on domestic goods and services that the cost saving from offshoring spurs. Catherine Mann (2006), for example, argues that the globalization of IT hardware production has contributed to a decline in IT hardware prices, which is equivalent to an increase in productivity and which thus raises firms’ profit margins. This in turn has

led to a greater quantity of IT hardware being demanded by business, further raising productivity. Because of this higher return on investment, firms undertake more investment generally, because “more projects achieve internal benchmarks that firms use to decide whether to invest” (Mann, 2006, pp. xviii-xix).

## **5. Evidence on dynamic gains from offshoring**

Econometric evidence at the sectoral level for 1998-2006 (Milberg and Winkler, 2010a) shows that offshoring has indeed raised corporate profitability and the overall profit share of national income. Both services and materials offshoring were positively and significantly associated with higher profit shares between 1998 and 2006. Holding all other variables constant, a 1% increase in services offshoring increased the profit share by 0.22%. A 1% increase in materials offshoring led to an average profit share growth between 0.51 and 0.69%, all other variables held constant.

A rising profit share should generate dynamic gains from offshoring, as firms reinvest profits in new plant and equipment, new technologies and in the creation of new jobs.

But investment has been relatively insensitive to the rise in the profit share. Figure 4 shows that as imports and the profit share rose, investment as a share of GDP was flat. Figure 5 shows that fixed investment as a share of non-financial corporate profits has fallen since the 1980s.

The rise in offshoring has, however, been associated with a wave of “financialization” by non-financial corporations, specifically the purchase of share buybacks, dividend payments and M&A activity. These financial activities constitute

a “leakage” from the stream of potential dynamic gains from offshoring, as shown in Figure 6. Figure 7 shows how buyback soared as a share of non-financial corporate internal funds (largely profits).

Financial data suggest that firms with extensive global supply chains undertook massive share buybacks in the 2000s. IT hardware and software manufacturers (Cisco, Microsoft, Hewlett Packard, Dell, Texas Instruments and Intel), retailers (Wal-Mart and Home Depot), and consumer non-durables firms (Procter & Gamble, Johnson and Johnson, Kimberly-Clark), all of whom rely heavily on sophisticated global value chain arrangements, were among those returning the highest levels of dividends and share buybacks. Figure 8 lists the top repurchasers of stock among non-financial, non-energy corporations in the S&P 500 over the period 2000-2008.

Clearly offshoring is just a part of the explanation for the rise in the corporate profit share of national income in the 2000s. It should be viewed in context of a change in corporate strategy that has occurred in the 2000s, what William Lazonick and Mary O’Sullivan (2000) call the shift from “retain and reinvest” to “downsize and distribute.”

## **7. Implications for policy**

My point is that the governance of GVCs and the issue of corporate governance are connected. My analysis of the expansion of GVCs points to the need to capture greater dynamic gains from offshoring, by encouraging reinvestment of profits in physical capital and human capital, and reducing the attraction of share buybacks. This may require a combination of more regulation of share buybacks

and of the executive compensation packages that encourage them, along with more generous depreciation allowances for non-financial corporate investment.

Eliminating a tax deferral on profits held abroad only makes sense in this reformed regulatory environment since, as research has clearly shown, the moratorium on taxes on repatriated profits from abroad translated at a rate of over 60% into share buybacks.

A second issue in the rise of GVCs is the change in the political economy of trade policy. Outsourcing of “tasks” means that task employees can be hurt while firm profits and share price are helped. Before the widespread use of offshoring in GVCs, labor and management were more closely allied in seeking protection from imports. As economists, we must be consistent by advocating policies so that winners from task trade compensate losers, through more generous Trade Adjustment Assistance, for example.

Third, the expansion of GVCs means that in many industries there is a rising import content of exports. This has at least two implications, both related to the current debate over “rebalancing”. One is that the employment effect of “doubling U.S. exports over ten years” is lower than it would have been before the great wave of offshoring. The other implication is about China: China too is heavily involved in GVCs, both those led by US firms and those organized largely in East Asia (for example with Japanese lead firms). As research from the ITC has shown, China’s value added from exports is much less than the total market value of Chinese exports. Targeting China burdens also those non-Chinese firms and countries that have built GVCs that run through China.

One final point –one that I expect you hear often from economists: Better data – on both the structure of imported inputs and their prices - would greatly aid our ability to analyze the social consequences of global value chains.

### References

Grossman, G. and E. Rossi-Hansberg (2006), “The Rise of Offshoring: It’s Not Wine for Cloth Anymore,” Proceedings, Federal Reserve Bank of Kansas City, pp. 59-102.

Houseman, S., C. Kurz, P. Lengerman, and B. Mandel (2010) “Offshoring and the State of American Manufacturing,” Upjohn Institute Working Paper 10-166.

Koopman, R, W. Powers, Z. Wang and S. Wei (2010) “Give Credit Where Credit is due: Tracing Value Added in Global Production Chains,” mimeo, U.S. International Trade Commission, September 17.

Lazonick, W. (2009), “The New Economy Business Model and the Crisis of US Capitalism,” Capitalism and Society. V. 4, Issue 2, Article 4.

Lazonick, W. and M. O’Sullivan (2000) “Maximizing Shareholder Value: A New Ideology for Corporate Governance,” Economy and Society, V. 29: 13-31.

Mann, C. (2006) Accelerating the Globalization of America: The Role of Information Technology, Washington: Institute for International Economics.

Milberg, W. (2008) “Shifting Sources and Uses of Profits: Sustaining US Financialization with Global Value Chains,” Economy and Society, V. 24: 340-351.

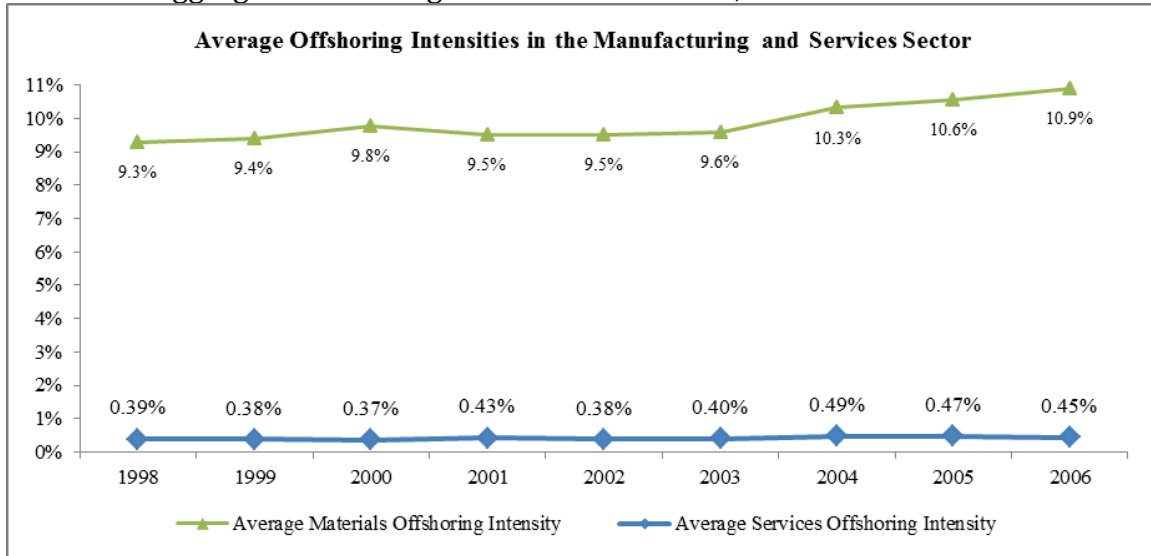
Milberg, W. and D. Winkler (2010a) “Financialization and the Dynamics of Offshoring in the USA,” Cambridge Journal of Economics, V. 37, No. 3: 420-51.

Milberg, W. and D. Winkler (2010b) “Outsourcing Economics: Power, Profits and the Globalization of Production,” mimeo, New School for Social Research.

Winkler, D. and W. Milberg (2009) “Errors from the “Proportionality Assumption” in the Measurement of Offshoring: Application to German Labor Demand,” working paper, 2009-12, Schwartz Center for Economic Policy Analysis, The New School for Social Research.



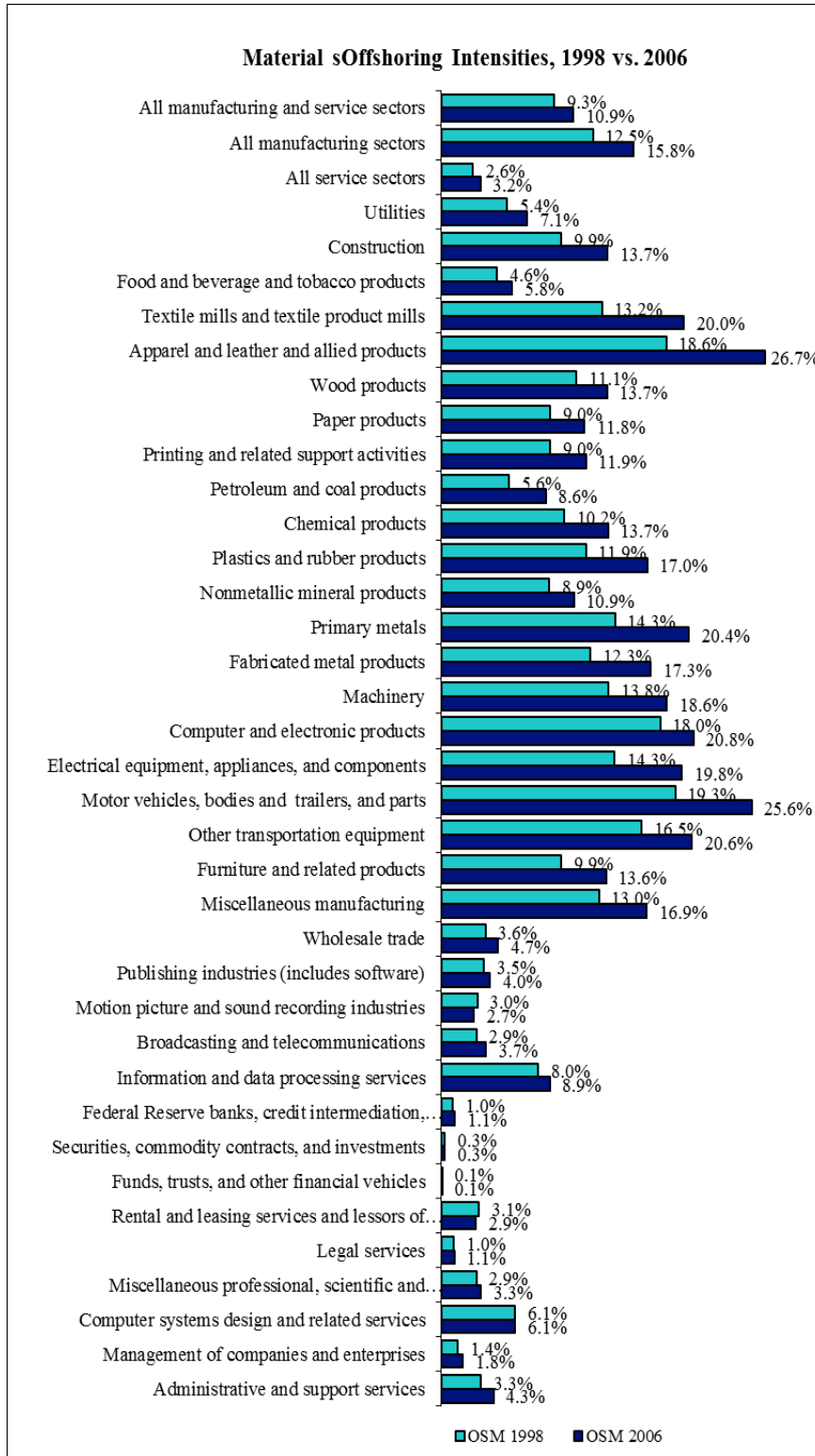
FIGURE 1: Aggregate Offshoring Intensities in the U.S., 1998-2006



Source: Own illustration. Data: Milberg and Winkler (2010b).

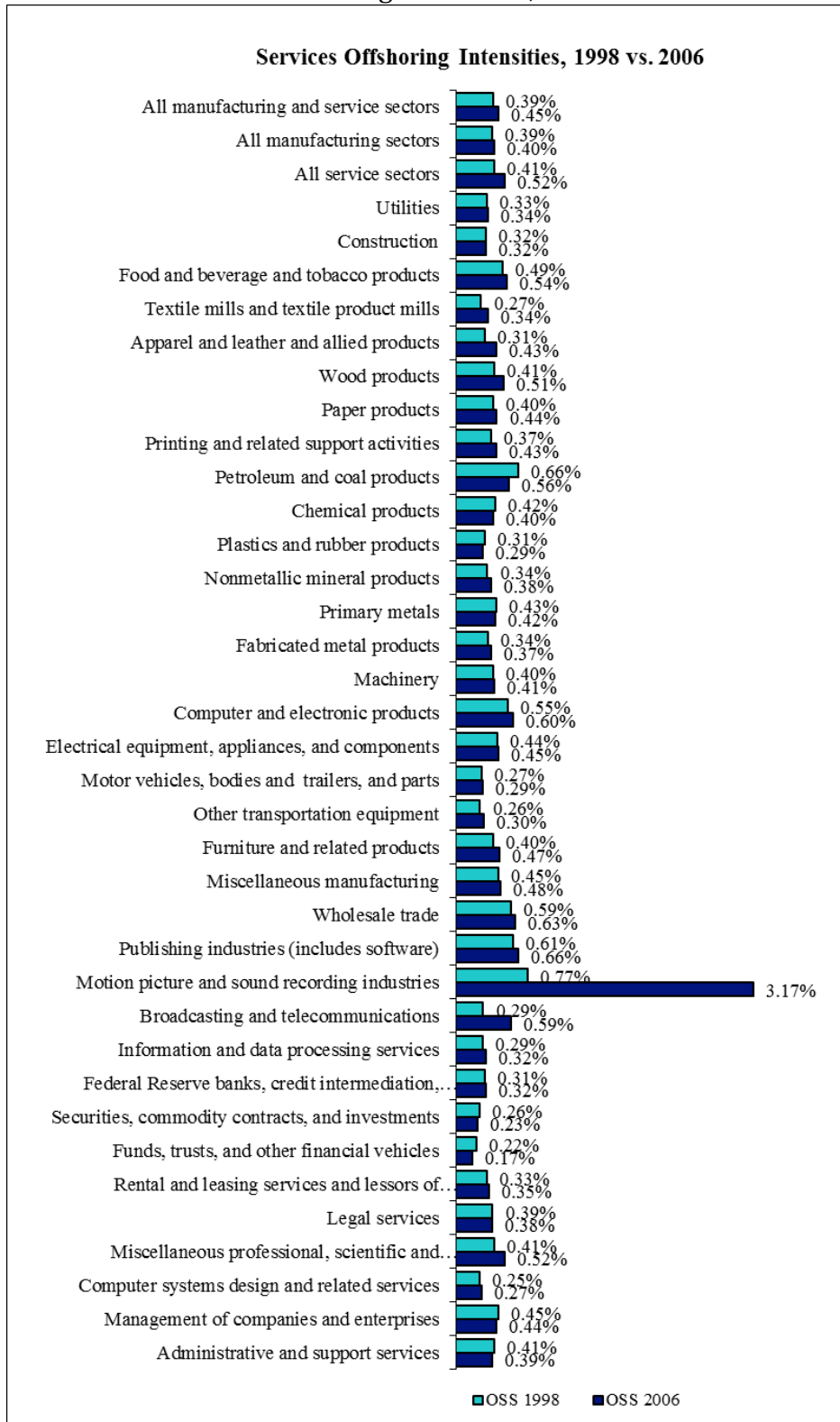


FIGURE 2a: Material Offshoring Intensities, U.S., 1998 vs. 2006



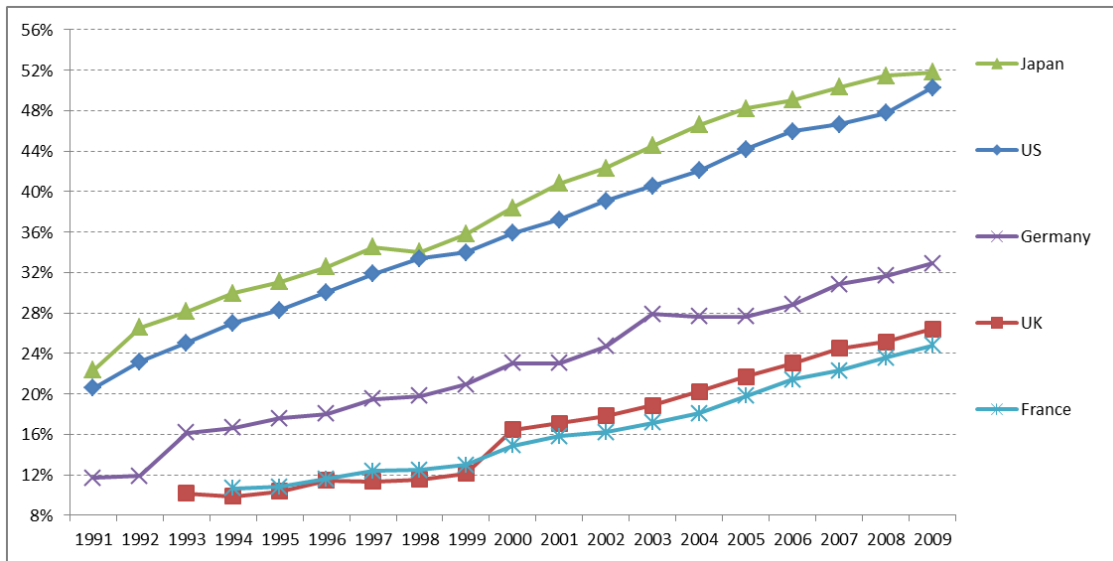
Source: Own illustration. Data: Milberg and Winkler (2010b).

FIGURE 2b: Services Offshoring Intensities, 1998 vs. 2006



Source: Own illustration. Data: Milberg and Winkler (2010b).

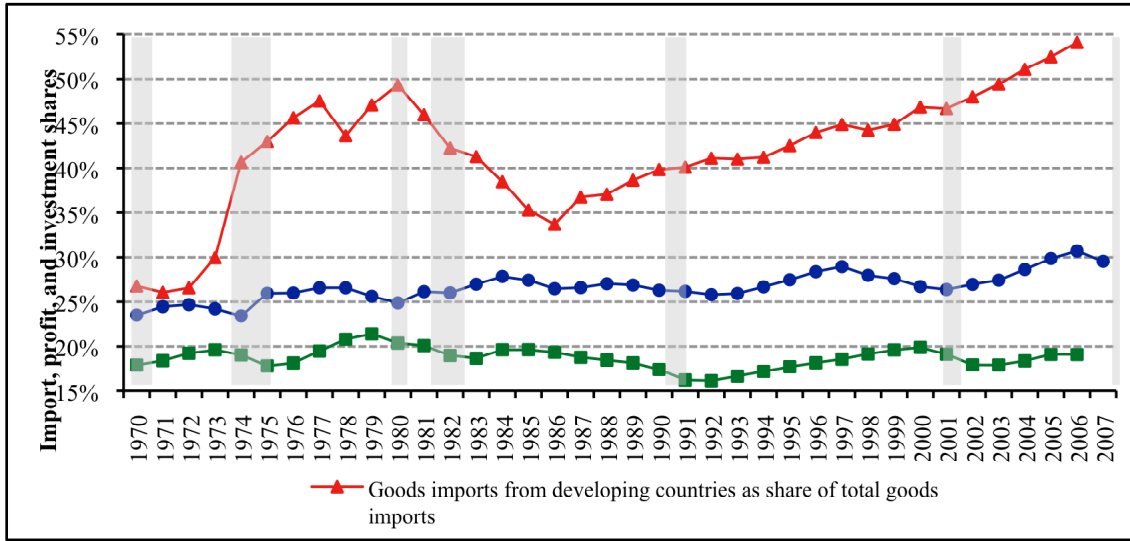
**FIGURE 3: Broad Measure of Offshoring, Selected Countries, 1991-2009**  
 Manufacturing imports from low and middle income countries in total manufacturing imports



Source: Milberg and Winkler (2010b). Data: UN Comtrade.

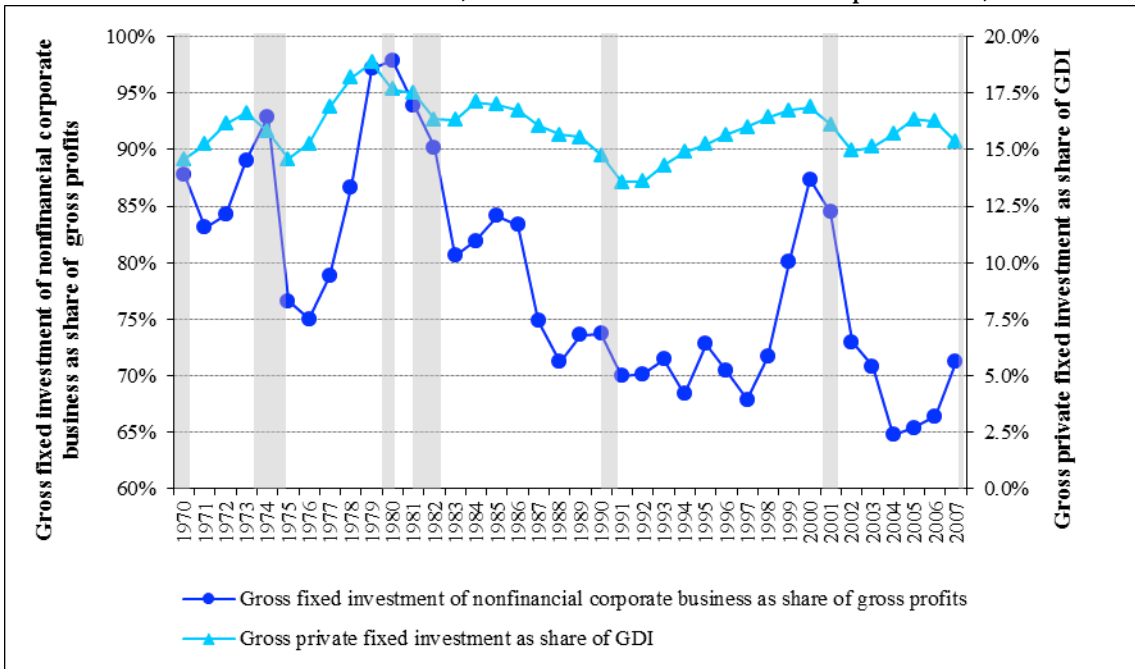
NB: Manufacturing imports comprise imports to sectors 15 to 36 at the two-digit ISIC Rev 3 level.

FIGURE 4: U.S. Import, Profit and Investment Shares, 1970 – 2006/7



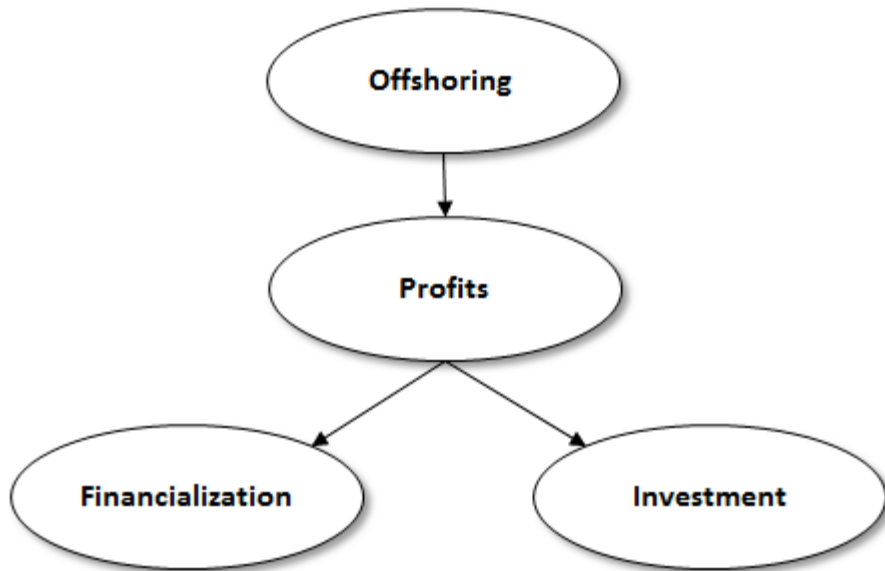
Source: Milberg (2008)

FIGURE 5: U.S. Investment Shares, Total and Non-financial Corporations, 1970-2007



Source: Milberg and Winkler (2010a). Data: U.S. Bureau of Economic Analysis, National Income and Product Accounts. U.S. Federal Reserve Bank, Flow of Funds Account, Schedule Z.1. NB: Gross profits of nonfinancial corporate business are calculated by adding net operating surplus and consumption of fixed capital. Gray bars correspond to U.S. business cycles recessions according to the definition of the NBER.

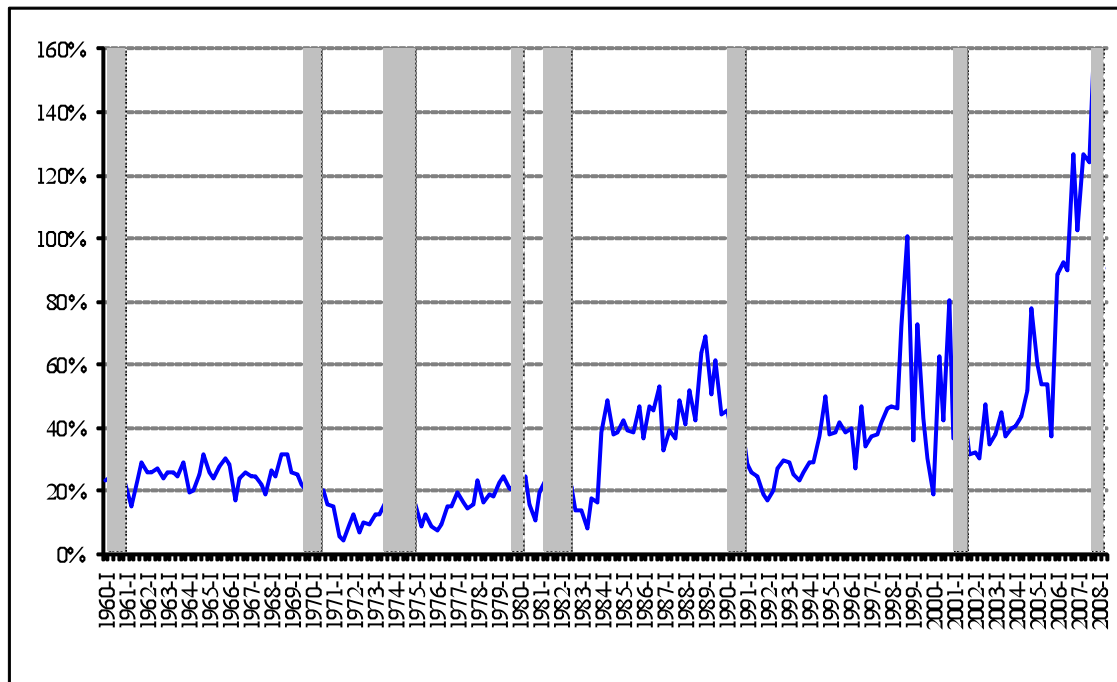
FIGURE 6: Dynamic Gains from Offshoring versus Financialization



Source: Own illustration.



FIGURE 7: Net Dividends plus Share Buybacks as % of Internal Funds, 1960-2008, U.S. Nonfarm Nonfinancial Corporate Business



Source: Milberg and Winkler (2010a). Data: U.S. Federal Reserve Bank, Flow of Funds Account, Schedule Z.1. NB: Quarterly figures are seasonally adjusted annual rates; share buybacks correspond to negative net new equity issues. Gray bars correspond to U.S. business cycles recessions according to the definition of the NBER.

FIGURE 8. Top Repurchasers of Stock among Non-financial, Non-energy Corporations, 2000-2008, in the S&P 500 Index in January 2008

Company	RP (\$m) 2007	RP (\$m) 2008	RP (\$m) 2000-2008
MICROSOFT	27,575	12,533	94,280
IBM	18,828	10,563	72,881
CISCO SYSTEMS	7,681	10,441	53,570
PFIZER	9,994	500	50,632
INTEL	2,788	7,195	48,770
PROCTER & GAMBLE	5,578	10,047	46,371
HEWLETT-PACKARD	10,887	9,620	43,341
JOHNSON & JOHNSON	5,607	6,651	33,345
DELL	3,026	4,004	29,549
AT&T	10,390	6,077	27,705
WAL-MART STORES	1,718	7,691	27,324
HOME DEPOT	6,684	10,815	27,203
ORACLE	3,937	2,023	25,962
TIME WARNER	6,231	332	25,497
PEPSICO	4,312	4,726	25,430
UNITEDHEALTH GROUP	6,599	2,684	23,362
AMGEN	5,100	2,268	22,629
WALT DISNEY	6,923	4,453	22,268
UPS	2,639	3,570	20,944
ALTRIA GROUP	0	1,166	19,379
MERCK	1,430	2,725	18,709
TEXAS INSTRUMENTS	4,886	2,122	18,418
MCDONALD'S	3,943	3,919	16,797
CBS	3,351	46	16,565
BOEING	2,775	2,937	15,813
3M	3,239	1,631	15,152
WELLPOINT	6,151	3,276	14,867
COMCAST	3,102	2,800	12,289
UNITED TECHNOLOGIES	2,001	3,160	11,902
COCA-COLA	1,838	1,079	11,668
KIMBERLY-CLARK	2,813	653	10,655
CATERPILLAR	2,405	1,800	10,496
CARDINAL HEALTH	3,662	1,182	10,315
APPLIED MATERIALS	1,332	1,500	10,241

Source: Adapted from Lazonick, W. (2009) "The New Economy Business Model and the Crisis of U.S. Capitalism", Table 6. RP: repurchases of common and preferred stock. Information obtained from S&P Compustat database, 2000-2006; company 10-K filings, 2007; Fortune 2008.