

FOUR

Lead Firm Strategy and Global Value Chain Structure

In Chapter 3, we saw that a reconsideration of the forces of international capital mobility, technological change and social institutions requires a change in traditional thinking on the determinants of trade. In this chapter, we use the global value chain (GVC) as the unit of analysis of international trade. The gains from offshoring are based on the increase in profits and wages and the creation of jobs. Key is the distribution of value added across producers within the value chain and the resulting potential for “dynamic gains.” These gains come especially from the reinvestment of the profits that emerge from successful GVC management. Lead firms in GVCs raise cost markups and profitability by focusing on core competence and otherwise reducing operations, especially in the domestic market.

GVC management has been an important part of corporate strategy to retain oligopoly power and the rents that go with it. The cost and ease of international communication has fallen, the supply of available labor and productive capacity globally has greatly expanded, and the quality of production and logistical capability of developing country firms has grown. The globalization of production along these lines creates an asymmetry of market structures within the GVC with oligopoly lead firms and competition among suppliers. Expansion of offshoring can also support a financialization of the non-financial corporate sector.

The lens of the GVC puts into focus the dynamic aspects of globalized production, rather than just the static efficiency gains that are the focus of economic theory, even the transactions cost version, in which transactions costs are minimized. The competitive struggle by firms to increase value added within GVCs – so-called industrial upgrading – is a function not simply of factor costs, but of an array of institutional features, including the

power of firms within the value chain, the structure of households and the labor supply conditions this underpins, and the efforts by governments to support innovation and provide the social protection that are so important in determining competitiveness.

The more important source of gains from offshoring comes from the reinvestment of the profits that result from globalization. In the econometric analysis presented in Chapters 5 and 6, we analyze offshoring in GVCs using sectoral data. In this chapter, we look at the relation from the perspective of firms. There is a direct link between these: the firm's pricing and profits are driven by its growth and investment strategy. This investment behavior has immediate consequences for aggregate demand and growth at the sectoral level. **We focus on two sources of power. One is that of lead firms as oligopsony buyers in the market for inputs. The other is that of shareholders and executives in seeking to raise shareholder value in the short-run.**

The next section describes the asymmetry of market structures within the GVC with oligopoly lead firms and competition among suppliers. Section 4.2 takes a closer look at this endogenous asymmetry of market structure including its different forms, its sustainability, and how it is coordinated. In Section 4.3, we then turn to the determinants of value chain structure and focus on the transaction costs-based theory, resource-based theory, and the strategic approach. Section 4.4 takes up the dynamic gains from trade and offshoring and concludes.

4.1 Trade, Profits, and Investment

The motives for offshoring for the strategic firm range from the pursuit of greater flexibility to diversification of location in order to reduce risk to the lowering of production costs. All of these goals can support company profitability, especially lower production costs. In fact, the last decade of heightened globalization of production has coincided with an increase in profits as a share of national income in all the major industrialized countries. Figure 4.1 shows the U.S. corporate profit share, measured by corporate profits as a percentage of gross value added by corporations for the period from 1970 to 2010. After stagnating in the 1980s, the profit share recovered beginning in the mid-1990s. It has been higher during the peaks of the last two business cycles than at any time since the 1970s. Despite the recent economic crisis, the profit share was back at pre-crisis levels in 2010.

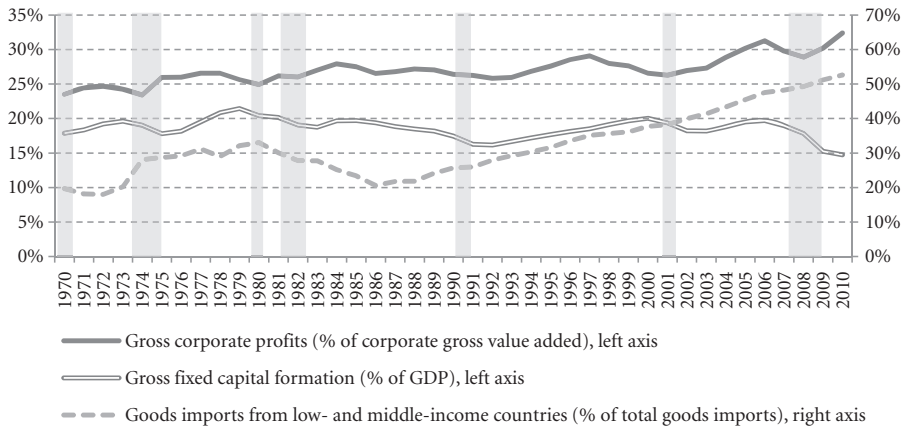


Figure 4.1. Import, Profit, and Investment Shares, United States, 1970–2010. *Source:* Own illustration. Data: U.S. Bureau of Economic Analysis, National Income and Product Accounts; United Nations (UN) Comtrade. Gray bars correspond to U.S. business cycles recessions according to the definition of the National Bureau of Economic Research.

Figure 4.1 also shows the broad measure of goods offshoring, as defined in Chapter 2, which increased constantly from 20 percent in the mid-1980s to over 50 percent in 2009 and 2010. Note that goods offshoring here covers all goods imports rather than only manufacturing imports. In the next section, we show that firms can increase their markup and profit share through increased offshoring. Firms have different options for how to spend their additional savings from offshoring, one of which is investment, which we refer to as the dynamic gains from offshoring and is the focus of the last section of this chapter and also of Chapter 6. Figure 4.1 shows that the U.S. share of gross fixed capital formation as percentage of gross domestic product (GDP) declined slightly since the end of the 1970s and strongly since 2000. This happened despite the simultaneous increase in offshoring and the profit share, providing a first indicator that firms have alternative options to spend their savings from offshoring.

4.1.1 Cost Markups, the Profit Share, and Offshoring

Price Competition, Markups, and the Profit Share

In this section, we consider the firms' markups over costs and their relationship to the profit share from the perspective of the lead firms in GVCs. In Chapters 5 and 6, we look at the profit share in terms of its implications for economic security and for financialization. Economic theories of

markup pricing emphasize the role of product price setting power rather than cost setting power. But substituting lower-cost intermediate goods and services imports for higher-cost domestic inputs can raise firms' markup over costs as well as the economy-wide profit share of national income.

Define the markup, $m = (P - C)/C$, where P is price and C are variable costs. If we reduce these costs to just labor costs, then we can write $m = (P - wa)/wa$, where w represents the wage and a is the labor coefficient. Stated equivalently, we can write $P = (1 + m)wa$. Because the pre-tax profit share PS is defined as $PS = (P - wa)/P$, this implies that the profit share, $PS = ((1 + m)wa - wa)/((1 + m)wa) = m/(1 + m)$. This gives $dPS/dm = 1/(1 + m)^2 > 0$, that is, an increase in the markup yields an increase in the profit share. The focus in the literature has been on the ability of firms to raise P , subject to various constraints. In neoclassical theory, the markup is constrained by the elasticity of substitution in demand. In the Post Keynesian theory, which forms the basis of the analysis here, the constraints include substitution by consumers, entry by new rival firms, the possibility of government intervention, labor union strength, branding effort, and the cost structure of the firm.¹

Oligopoly models predict that the degree to which cost changes are passed through to product prices – and thus the degree to which markups remain constant – will vary directly with the degree of competition, usually measured by the price elasticity of demand for the final good. Under perfectly competitive product markets, the markup of price over marginal costs is zero and thus all cost savings would be passed through to consumers. In oligopoly, if rivals are likely to follow price drops by any one firm, then the cost-reducing firm will retain product price and thus raise its cost markup.² Even when all rivals experience a cost decline, say because of an exchange rate appreciation that lowers the domestic currency cost of imported inputs, there is likely to be incomplete pass-through of the cost savings to the product price.

This is clear in the Kaleckian markup pricing formulation. At the level of the firm, corporate profits depend on the ability of corporations to raise their markup prices above average costs. Kalecki (1971, 1991[1954]) models the markup as a function of “the degree of monopoly of the firm position”

¹ Following Kalecki (1991[1954]), Post Keynesian pricing models emerged in the 1970s. See Eichner (1976), Wood (1975), and Harcourt and Kenyon (1976). For an overview of the Post Keynesian theory, see Shapiro and Mott (1995). See Shapiro and Sawyer (2003) for a discussion of “administered costs” in oligopoly firms' markup pricing strategies.

² This is a version of the traditional kinked demand curve analysis of oligopoly pricing, based originally on Sweezy (1939). For a more formal rendering with econometric tests, see Cowling and Sugden (1989).

(Kalecki 1991[1954], 18), where the degree of monopoly is determined by a set of environmental or institutional factors, including industrial concentration, advertising expenditure levels, the influence of labor unions, and changes in the ratio of fixed to variable costs. In order to determine their output price, P , firms markup over average prime costs and take into account the output-weighted average price charged by rival firms in the industry, giving firm price, $P = \alpha u + \beta \bar{P}$, where \bar{P} denotes the output-weighted average price in the industry, u the average prime costs, and α and β coefficients reflecting the degree of monopoly.

The markup is an increasing function of \bar{P}/P because a larger deviation between the firm's price, P , and the average industry price, \bar{P} , reflects less competition among firms in the industry and is associated with a higher markup. If prime costs (for example, unit labor costs) fall by the same amount for all firms in the industry, then prices for all firms fall accordingly with no change in the markup. But if costs fall for one firm alone, the result of, for example, efficient value chain management, then that firm's price will not fall in the same proportion as its costs, implying an increase in the markup.³

Post Keynesian models of markup pricing have two important features. One is that they link the firm to the macroeconomy, because firm pricing decisions are seen as determined by investment demand and thus have an effect on investment expenditures. Second, and related to the first, is that prices are not understood as signals of efficiency or inefficiency. That is, firm pricing decisions do not serve the role of bringing efficient market outcomes, but rather are driven by firm long-term objectives for investment and growth. Prices serve these firm objectives rather than that of allocative efficiency, as in traditional theory. From this perspective, offshoring is a means for the maintenance of oligopoly power under conditions of product price competition. Just as Hymer (1972) described the rise of foreign direct investment (FDI) by U.S. firms beginning in the 1920s as "a new weapon in the arsenal of oligopolistic rivalry" (Hymer 1972, 44), so has offshoring played a similar role in the new wave of globalization.

There are three channels to maintaining or raising the markup over costs: (i) raising the product price, (ii) lowering input prices, and (iii) raising productivity. Raising the product price is the traditional channel for firms with product market power. Demand-side conditions have been the focus of the theory of oligopoly pricing (see traditional models of imperfect competition, such as Dixit and Stiglitz 1976, or with international trade, such as Krugman 1979). Despite this theoretical focus on product markets and the

³ Milberg (2009) gives an algebraic demonstration.

Table 4.1. *Prices and Money Supply, Average Annual Growth, United States, 1986–2006*

	1986–1990	1991–1995	1996–2000	2001–2006
Consumer Prices	4.4%	3.5%	2.4%	2.1%
Import Prices	5.4%	2.0%	–1.4%	0.7%
Money Supply (M2)	5.7%	1.8%	8.6%	6.2%

Source: Own illustration: Data and notes: Consumer price index data are from the Bureau of Labor Statistics and refer to the base consumer price index for all urban consumers for all items less food and energy. Import prices are from the Bureau of Labor Statistics and refer to the import price index for all items less petroleum. Money supply (M2) is from the International Monetary Fund International Financial Statistics Database and comprises the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government.

demand elasticity, it would appear that over the past ten years the rising profit share has not depended on rising final goods and services prices. An increase in price competition in product markets among oligopoly firms – especially in the retail sector, but also in sectors as technologically diverse as automobiles and computers – has made the firm's implicit cost of raising the price prohibitively high. Inward foreign investment, foreign capacity expansion, changing consumer attitudes, and slow growth in the global economy appear to have rejuvenated price competition among oligopoly firms (Crotty 2005).

Recent popular writings have highlighted the increased intensity of price competition in U.S. product markets and the unprecedented power of consumers in demanding variety and low prices (for example, Reich 2008 and Cassidy 2005). Consumer price inflation (especially prices of non-energy goods and services) has fallen steadily from its post-War peaks in the 1970s, and remained low across industrialized countries during the same period that the profit share has been rising. Over the past twenty-five years, growth in U.S. consumer prices fell constantly from 4.4 percent during the second half of the 1980s to only 2.1 percent during the early 2000s (see Table 4.1). At the same time U.S. monetary policy – the usual first explanation of price level trends – has not been particularly tight. Growth in import prices declined at an even faster pace and actually fell during the second half of the 1990s. Input costs, including the cost of labor and non-labor inputs, have risen very slowly, with the exception of occasional commodity price surges.

Offshoring and the Profit Share

To add the offshoring of inputs to the model, suppose $C = \nu w^* a^* + (1 - \nu) wa$, where ν is the share of inputs produced offshore, w and a denote the wage rate and the labor coefficient, an asterisk designates foreign, and assume

that foreign production costs are lower than U.S. costs, that is $dC/dv < 0$. Offshoring to lower costs can also help to dampen domestic costs, because the move offshore or even its threat can lower wage demands and dampen domestic wages. That is, if $w = w(v)$, and $dw/dv < 0$, then as offshoring rises and U.S. wages fall, the positive relation between offshoring and the markup is reinforced.

Note that while our pricing theory is Post Keynesian, the macroeconomic implications are not. From a Keynesian or Kaleckian macroeconomic perspective, the shift to more intensive use of imports would, *ceteris paribus*, reduce growth and the profit share. Kalecki's analysis is particularly relevant here, because he saw the trade surplus as the basis for expanding the profits through a profits multiplier:

$$\Pi = \frac{1}{1 - C_{\Pi}} (AC + I - S_w + (G - TR) + (EX - IM)) \quad (4.1)$$

where Π designates total profits, AC autonomous capitalists' consumption, I total private investment, S_w total savings out of wage income, G total government spending, TR total tax revenue, EX total exports, and IM total imports. $(G - TR)$ is the government deficit, $(EX - IM)$ the trade surplus, and C_{Π} the marginal propensity to consume out of profit income. $1/(1 - C_{\Pi})$ represents the "profit multiplier."

Kalecki felt that by linking the expansion of export markets with the attainment of higher profits, he had "finally solved the puzzle of 'economic imperialism'" (Blecker 1999, 121). Blecker (1989) sought to place this Kaleckian view in the context of modern trade competition among industrialized countries, and identified import competition as an important force mitigating the power of oligopoly to raise markups. In the presence of import competition, domestic cost increases (such as a wage increase) would reduce firms' markup over costs, reducing the profit share and leading to a reduction in investment and economic growth. Blecker's insight seems to have been borne out, with one unpredicted twist in the U.S. case at least: about half of the imports are being driven by U.S. firms themselves in their effort to cut costs by importing low-cost inputs of goods and services. In the process, these firms have also reduced the demand for and cost of U.S. labor, further easing the costs of production. The result is that, *ceteris paribus*, expanded offshoring is not inconsistent with higher markups, profits, and the profit share.

We can broaden the Kaleckian analysis, however, to capture the distinction between different types of imports. Kalecki wrote in the 1930s about an economy like the United Kingdom where imports were heavily oriented towards primary commodities and exports were largely manufactures and

services. Competitive imports lower both profits and wages in domestic competing firms. Non-competitive imported inputs – that is, inputs that do not compete with a domestic producer – would depress wages or employment, whereas boosting profit rates and the profit share.⁴

The implication is that when imports are non-competitive imports, then the trade deficit can have a different impact on profits and the profit share than envisioned in the Kaleckian framework. A mechanical way to think about this is that if imports do not constitute competition with domestic producers then such imports do not lower industrial concentration ratios. Cowling et al. (2000) do precisely this calculation for the case of the U.K. motor vehicles sector (car, vans, trucks, and buses). Traditional measures of concentration show a steady decline in concentration beginning in the mid-1970s through 1995. When they recalculate the concentration figures to account for non-competitive imports (by adding a certain percentage of the imports to the sales of the top five firms), they find that concentration ratios in all product categories returned in the 1980s and 1990s almost to the levels of the early 1970s. The authors write:

UK imports of manufactures should not be construed as independent of the domestic structure of production . . . Previous measures of concentration, which have adjusted domestic concentration ratios for imports, have been made, for the most part, under the assumption that all imports are competitive. In a world of transnationally organized production and trade, where dominant domestic producers may act to control imports strategically, this can no longer be considered an acceptable working assumption (Cowling et al. 2000, 47, 52).

There is a growing body of research on the issue of the impact of offshoring on profits, including our own econometric analysis presented in Chapter 5, which shows that in the United States at the sectoral level offshoring has significantly contributed to lower labor shares and hence higher profit shares across manufacturing and service sectors in the period from 1998 to 2006. Dossani and Kenney (2003) report that a 40 percent cost saving represents the hurdle rate of return on services offshoring. Firm level surveys, such as McKinsey Global Institute (2003), for example, find that offshoring reduces costs to the firm by around 40 percent for the foreign sourced activity. A number of large firms they survey reported savings considerably higher than this. Lazonick (2007) cites reports of 50 to 60 percent cost saving for offshoring of business, professional, and technical services.

Görg and Hanley (2004), using a sample of twelve Irish electronics sub-sectors, find that firm-level profits are directly related to offshoring for large

⁴ We are grateful to Malcolm Sawyer for bringing this point to our attention.

firms (in employment terms) and not significantly related for the small firms in the sample. In a study of small- and medium-size Japanese firms, Kimura (2002) finds no relation between subcontracting and profitability. In a study of German manufacturing firms, Görzig and Stephan (2002) find outsourcing of materials (including domestic purchases) to be associated with higher profits but outsourcing of services (including domestic purchases) to be associated with lower profits. In Chapter 5, our econometric analysis shows that the effects vary by country and in particular depend on the labor market institutions in place.

4.1.2 The Persistence of Oligopoly

The implication of these developments is that the globalization of production has not occurred simply as a generalized increase in the degree of competition among firms. Rather, globalization has occurred instead within GVCs, in which the lead firms, and in some cases supplier firms, are oligopolistic. Oligopoly power in the United States continues to appear as a much higher markup over costs than is found in more competitive sectors. A recent study finds that the oligopoly premium averaged 15 percent in U.S. manufacturing between 1981 and 2004 (see Table 4.2). Although we lack information on market structure in services, the average markup across all service sectors over the same period was 68 percent (see Table 4.3).

Oligopoly power has been affirmed through product and process innovation, as firms have turned to product differentiation and branding to solidify their product market power. The proliferation of varieties in consumer products began with Toyota's introduction of more models in a given year than any of its competitors. This capacity is typically associated with changes in the management of the assembly line, the introduction of just-in-time inventory control, and with a system of industrial relations that promotes flexibility and production worker cooperation. The introduction of information technology (IT) has affected not only productivity, but also the variety of products offered. Mass customization – the rapid proliferation of varieties without sacrificing scale economies – has been an effective corporate response to rising consumer power and the heightened demand for variety and quality (Pine 1993; Blecker and Friedrich 2010).

Computer aided design and computer aided manufacturing have changed firms' ability to vary product lines and rapidly introduce new designs. Computerized inventory controls such as stock keeping units have

Table 4.2. *Markups in the Manufacturing Sectors, United States, 1981–2004*

Industry	1981–2004 United States
Competitive Industries^a	
Food products & beverages	1.12
Textiles	1.07
Wearing, Dressing & Dying of Fur	1.14
Wood, Wood Products & Cork	1.15
Printing, Publishing & Reproduction	1.30
Chemicals & Chemical Products	1.31
Rubber & Plastics	1.19
Other Non-Metallic Mineral	1.26
Fabricated Metal	1.20
Machinery, nec.	1.25
Electrical Machinery & Apparatus, nec.	1.20
Average Markup in Competitive Industries^b	1.20
Oligopoly Industries^a	
Tobacco	1.61
Leather, Leather & Footwear	1.21
Paper & Pulp	1.21
Coke, Refined Petroleum & Nuclear Fuel	1.09
Basic Metals	1.10
Office, Accounting & Computing Machinery	1.19
Radio, Television & Communication Equipment	1.29
Medical, Precision & Optical Instruments	1.35
Motor Vehicles, Trailers & Semi-Trailers	0.98
Other Transport Equipment	2.79
Average Markup in Oligopoly Industries^b	1.38
Oligopoly Premium	15.3%

Source: Own illustration. Data: Christopoulou and Vermeulen (2008), Table A1.c.

^a The authors use concentration ratios for 2002 from the Economic Census to differentiate competitive from oligopoly sectors for the United States. Specifically, the authors looked at the Herfindahl-Hirschman index for the 50 largest companies in the industry and classified indexes larger than 130 as oligopoly sectors. The 2002 Herfindahl-Hirschman indexes for our industries ranged from 32 (rubber & plastics) to 2,905 (tobacco).

^b Unweighted average.

led to rapid and detailed collection of sales and inventory information. Firms can now regulate inventory with precision. Giant retail firms boast of a designer line of consumer goods, changing as seasons and fashions change. In the apparel industry, “fast fashion” is the name given

Table 4.3. *Markups in Selected Service Sectors, United States, 1981–2004*

Industry	1981–2004 United States
Electricity & Gas	1.44
Water Supply	n.a.
Construction	1.31
Sale, Maint. & Repair of Motor Vehicles & Motorcycles; Retail Sale of Fuel	1.02
Wholesale Trade & Commission Trade, except of Motor Vehicles & Mot/cles	1.31
Retail Trade, except of Motor Vehicles & Mot/cles; Repair of Household Goods	1.19
Post & Telecommunications	1.38
Financial Intermediation, except Insurance & Pension Funding	1.39
Insurance & Pension Funding, except Compulsory Social Security	1.14
Activities Related to Financial Intermediation	n.a.
Real Estate Activities	3.77
Renting of Machinery & Equipment	3.21
Computer & Related Activities	1.78
Research & Development	1.62
Other Business Activities	1.26
Average Markup^a	1.68
Average Markup^a without Real Estate Activities and Renting of Machinery & Equipment	1.35

Source: Own illustration. Data: Christopoulou and Vermeulen (2008), Table A1.c.

^a Unweighted average.

to those firms that are able to alter each store's offerings within days, based on the latest trends and buying patterns at that particular store (Abernathy et al. 1999). Variety in consumer goods – from fancy coffees to household appliances to cell phones – has exploded, in part the result of greater flexibility in production, improvements in the logistics of transportation and inventory management, and with massive improvements in data collection on consumption patterns.

The result of many of these changes has been a consolidation of power by large firms, indicated by a rise in industrial concentration since the mid-1990s. Nolan et al. (2002) characterize the increase in industrial concentration internationally as a “global business revolution,” which, they write, “produced an unprecedented concentration of business power in large corporations headquartered in the high-income countries” (Nolan et al. 2002, 1).

They identify a broad range of industries with high degrees of concentration as measured by market share, including commercial aircraft, automobiles, gas turbines, microprocessors, computer software, electronic games, and even consumer goods, including soft drinks, ice cream, film and cigarettes, and services such as brokerage for mergers and acquisitions (M&As) and insurance. A selection of this market share evidence is presented in Table 4.4.

Over the past ten years, the surge of cross-border M&As has contributed to the global consolidation of industry. In the face of an unprecedented globalization of production over the past twenty-five years, with an historic increase in international trade, a steady decline in levels of trade protection, market-friendly policies throughout the world, a global IT “revolution” with its creation of new hardware and software megacorps, still most of the world’s largest firms are based in developed countries. Of the top 100 companies, as ranked in the Financial Times 500 for 2012, 16 are from emerging markets (eight from China, four from Brazil, three from Russia, and one from Mexico). Of these sixteen firms, six are banks and five are oil and gas producers. Of the remaining large firms from emerging markets two are in mining and one each is in beverages, life insurance and mobile telecommunications (from <http://www.ft.com/companies/ft500>).

While branding and product variety have figured in corporate strategies to maintain markups, higher profits have also come from dramatic efforts to control costs. To maintain the markup without the traditional ability to raise product prices, unit costs must be reduced, with the typical strategic options being lower compensation or higher productivity. As has been well documented, hourly U.S. wages and even total compensation (wages, salaries, and benefits) have risen more slowly than productivity growth since the early 1980s (see Figure 4.2). Median hourly compensation of male workers even declined between 1989 and 1999. Recent research has explained this as a result of the collapse of labor-supporting institutions in the United States, as labor union membership has continued to decline (as Chapter 5 discusses) and the real minimum wage has fallen.⁵ While these are no doubt of major importance, here we explore the possibility of another source, which is offshoring, that is, the effective management of GVCs.

⁵ On U.S. wage stagnation and institutional shifts, see Temin and Levy (2007). On the issue of the distribution of productivity gains, see Dew-Becker and Gordon (2005).

Table 4.4. *Global Market Shares for Selected Business Activities*

Firm	Business activity	Market share	Source
Aerospace			
Boeing	commercial aircraft deliveries (100 + seats)	47	FT, 28 July 2005
Airbus	commercial aircraft deliveries (100 + seats)	53	FT, 28 July 2005
Autos			
GM	automobiles	16	DaimlerChrysler, 2005
Toyota	automobiles	13	DaimlerChrysler, 2005
Ford	automobiles	12	DaimlerChrysler, 2005
VW	automobiles	9	DaimlerChrysler, 2005
Renault – Nissan	automobiles	9	DaimlerChrysler, 2005
DaimlerChrysler	automobiles	8	DaimlerChrysler, 2005
Fast-moving consumer goods			
Coca-Cola	carbonated soft drinks	51	Annual report, 1998
Proctor & Gamble	fine fragrances	15	FT, 15 December 2005
L'Oréal	fine fragrances	14	FT, 15 December 2005
Gillette	razors	70	MSDW 1998
Nike	athletic foot wear	33	FT, 4 August 2005
Adidas/Reebok	athletic foot wear	25	FT, 4 August 2005
Philip Morris	cigarettes ^a	27	FT, 7 June 2008
BAT/BAT Associates	cigarettes ^a	24	FT, 7 June 2008
IT/electronics hardware and software			
Intel	micro-processors	80	FT, 20 January 2006
AMD	micro processors	15	FT, 20 January 2006
Microsoft	PC operating systems	85	FT, 29 April 2000
Sony	digital cameras	18	FT, 15 December 2004
Canon	digital cameras	16	FT, 15 December 2004
Samsung	NAND flash memory chips	60	FT, 17 May 2005
Toshiba	NAND flash memory chips	23	FT, 15 December 2005
Hewlett-Packard	notebooks and desktop PCs	17	FT, 28 May 2003
Dell	notebooks and desktop PCs	16	FT, 28 May 2003
Palm	hand held computers	32	FT, 7 August 2001
Compaq	hand held computers	16	FT, 7 August 2001
Sony	electronic games	67	FT, 29 March 2000
Nintendo	electronic games	29	FT, 29 March 2000
Samsung	flat screen TVs	17	FT, 12 June 2003
LG Philips	flat screen TVs	17	FT, 12 June 2003
Nokia	mobile phones	34	FT, 29 September 2006
Motorola	mobile phones	22	FT, 29 September 2006
Samsung	mobile phones	11	FT, 29 September 2006
Matsushita	DVD recorders	30	FT, 6 August 2004
Sony	LCD TVs	15	FT, 27 April 2006
Sharp	LCD TVs	14	FT, 27 April 2006
Philips/Magnavox	LCD TVs	14	FT, 27 April 2006

Source: Own illustration. Data: Nolan (2008). Note: The market share figures given are by various types of measures (volumes, sales etc.) and are intended only as a rough guide. FT is the Financial Times, MSDW is Morgan Stanley Dean Witter published reports.

^a excluding China.

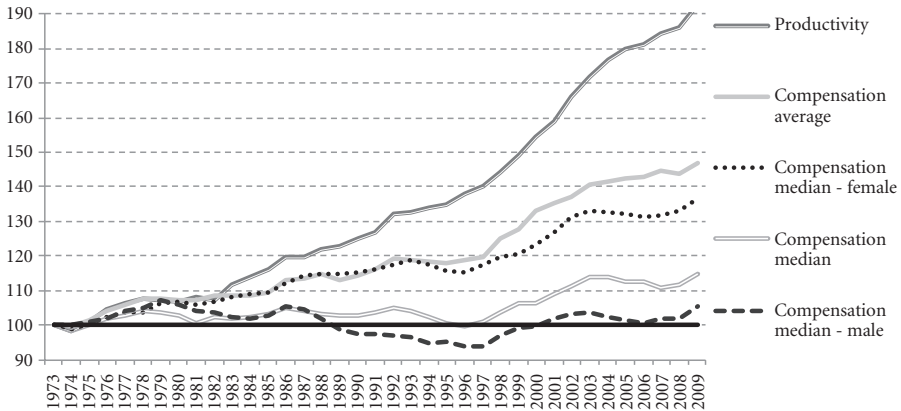


Figure 4.2. Productivity Growth and Hourly Compensation, Index (1973=100), United States, 1973–2009. *Source:* Own illustration. Data: Economic Policy Institute analysis based on Bureau of Labor Statistics and Bureau of Economic Analysis data. Note: Compensation = hourly compensation, Productivity = Output per hour.

4.1.3 Global Value Chains and Heightened Competition among Suppliers

There is less evidence available on markups and market structure at upstream points in the GVC compared to the information available on lead firms and performance of developed country sectors. To the extent that markups are associated with firm size, we would expect lower markups among developing country firms since, as we have seen, the world's largest firms are mostly based in developed countries. Although size no doubt matters, it is the structure of markets and the investment strategies of firms that determine markups. Following Mayer et al. (2002), we measure the concentration ratio of supplier markets in terms of the number of countries involved in export.

The pattern of increased spatial dispersion of supply sources has long been identified in the textiles and apparel sector and the consumer electronics sector. In these two sectors there have been regular waves of new, lower-cost entrants over time seeking to capture market share. Not coincidentally, capacity in these sectors is often located in export processing zones (EPZs), the establishment of which represents the policy aimed at gaining export market access through GVCs (see Chapter 7). Here we note simply that in the presence of considerable excess capacity in these sectors, new entrants often engage in trade diversion rather than trade creation. The point is that over time there has been continual entry by new firms into production of

especially low- and medium-technology goods and services that serve as inputs to lead firm outputs.

We measure GVC structure using a modified version of the Herfindahl-Hirschman Index (HHI) calculated for each product category by taking the total sum of the squared market shares of all countries exporting that product and multiplying the sum by 10,000, thus:

$$HHI_i = \sum_c \left(\frac{EX_{ci}}{EX_{Wi}} \right)^2 * 10,000 \quad (4.2)$$

where the term in parentheses designates a country c 's exports of product i as a percentage of world exports of product i , (EX_{Wi}).⁶ The HHI can range between $1/n * 10,000$ (if each of the n countries has the same share), and 10,000, if one country exports all, where n designates the total number of countries exporting this product. A decline reflects a decrease in “concentration,” or, more accurately, a greater degree of spatial dispersion of export sourcing in that sector. The U.S. Department of Justice Antitrust Division considers HHIs between 1,500 and 2,500 points to be moderately concentrated, and those exceeding 2,500 points to be concentrated.⁷ Although this rule of thumb refers to the original HHI, that is, to firms' market shares in a particular market rather than to the market shares of exporting countries, it provides a convenient benchmark for judging export market concentration. Figure 4.3 shows the graph of the index of industrial concentration for a selection of three-digit sectors using the Standard International Trade Classification (SITC) for selected years from 1970/1971 to 2005/2006.

Most of the product areas experience a spatial dispersion of trade although there are a number of exceptions. Moreover, most sectors except for machinery and transportation already start at a relatively low level of concentration in 1970/1971. While materials and articles of rubber experienced a strong dispersion of exports, leather products showed signs of increased concentration, especially in fur skins. In textiles, we see the strongest dispersion in textile yarn and thread or special textile fabrics and related products, whereas made up articles and to a lesser extent cotton experience a concentration of trade. In iron and steel, most sub-sectors show a clear dispersion in exports except for hoop and strip of iron and steel that experienced a strong consolidation.

Machinery shows a clear trend of spatial dispersion in exports, especially in textile and leather machinery and machines for special industries. Office

⁶ This measure was used by Mayer et al. (2002) and Milberg (2004b).

⁷ See <http://www.justice.gov/atr/public/testimony/hhi.htm>.

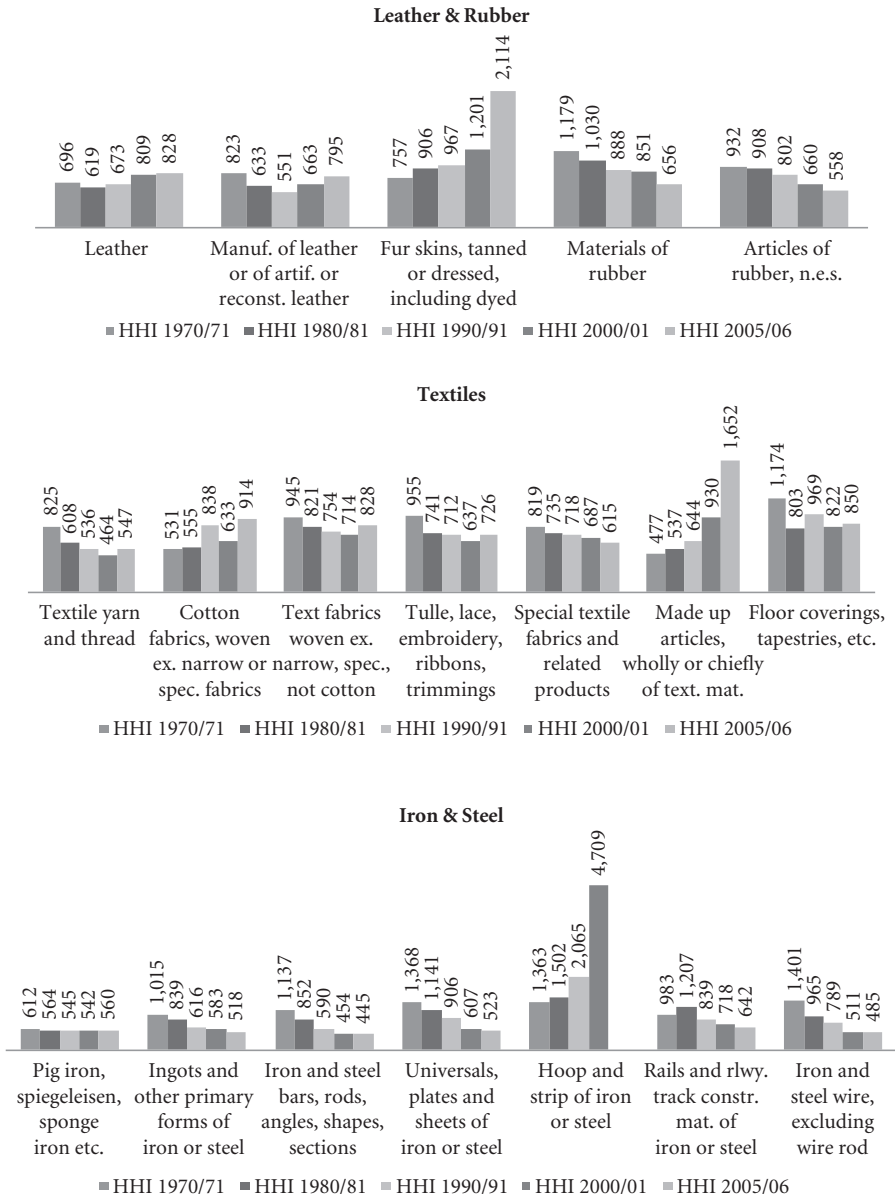


Figure 4.3. Herfindahl-Hirschman Index in Manufacturing by Standard International Trade Classification, 1970/71–2005/06. *Source:* Own illustration. Based on Milberg and Winkler (2010a, 49–51). *Data:* UN Comtrade. *Note:* The Standard International Trade Classification used was Revision 1. HHI = Herfindahl-Hirschman Index.

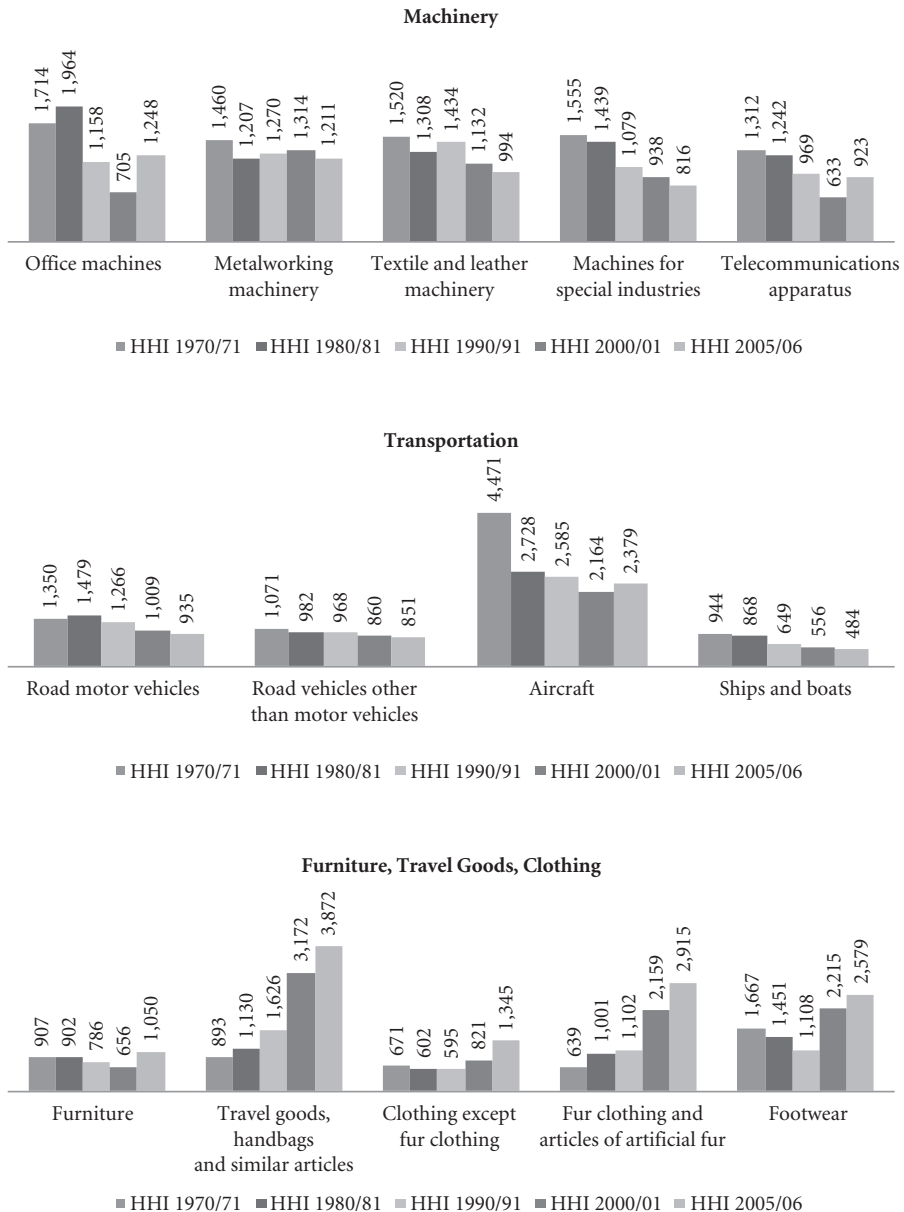


Figure 4.3 (continued)

machines and telecommunication products followed a similar trend until 2000/2001, but show signs of consolidation since then. Transportation follows a constant trend of trade dispersion which was weaker in vehicles, ships, and boats, but much stronger in aircraft. Interestingly, furniture, travel goods, and clothing have seen an increase in concentration of export sourcing, especially travel goods and handbags, fur clothing, and footwear. These are sectors in which China made enormous gains in world market share, pushing out competitors, especially those from Africa and Latin America, but also those from smaller East and South Asian countries.

This direct evidence of greater dispersion of production across a wide variety of generally low value added manufacturing sectors is consistent with previous econometric studies of competition in developing countries. Roberts and Tybout (1996) present a series of country studies that focus on market entry and exit conditions. They present evidence on Chile, Columbia, Mexico, Morocco, and Turkey for the 1970s and 1980s. Summarizing the studies, Roberts and Tybout (1996) write that

entry and exit rates are substantial . . . Despite the popular perception that entry and the associated competitive pressures are relatively limited in developing countries, these entry figures exceed the comparable figures for industrial countries (Roberts and Tybout 1996, 191).

Another study focuses on profitability and its persistence in seven developing countries – Brazil, India, Jordan, South Korea, Malaysia, Mexico, and Zimbabwe – and compare that to estimates for industrialized countries. The authors find that,

Surprisingly, both short- and long-term persistence of profitability for developing countries are found to be lower than those for advanced countries (Glen et al. 2002, 1).

Finally, a study from the labor market perspective also confirms the competitive picture in developing countries. Brainard and Riker (1997) estimate the wage elasticity of labor demand across affiliates of U.S. multinational corporations (MNCs). A drop in the wage in a low-wage affiliate has little effect on employment in the home operation, but a large and significant effect on employment in other low-wage affiliates of the same firm (Brainard and Riker 1997).

In services, we see a similar trend of spatial dispersion. Figure 4.4 shows the HHI for selected service sectors between 1980/81 and 2005/06. Communication services, financial services, computer and information services, royalties and license fees, and other business services all experienced a dispersion over this period, with the highest degree in dispersion in computer

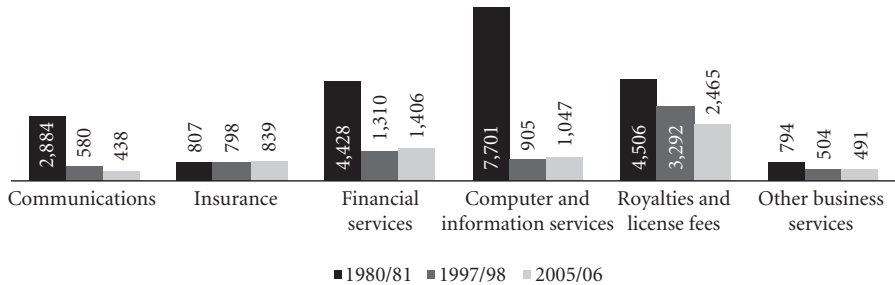


Figure 4.4. Herfindahl-Hirschman Index in Selected Service Sectors, 1980/81–2005/06. *Source:* Own illustration. Data: UNCTAD. Note: Many countries did not have data available, especially in earlier years. Therefore, the high concentration indexes can be somewhat distorted and must be interpreted with caution.

and information services and communication services. Only insurance services show a slight increase in concentration of trade.

The oligopsonistic conditions in supplier markets that emerged in the 1990s and largely persist today are reflected in falling import unit values relative to final goods and services prices. Excluding food and oil, U.S. import prices have fallen slightly on average since the mid-1990s. Import price deflation is more pronounced in those sectors in which dispersion was greatest, which is where GVCs are most developed. Recall that a greater dispersion in a given product, that is, a falling HHI, reflects that more countries export this product than previously. As a result, wider participation of many developing countries in global trade increases the price competition and should lower the import price of this product. Table 4.5 shows U.S. import prices relative to U.S. domestic consumer prices in the period from 1986 to 2006 for two-digit SITC industries. Only six sectors – and those most closely associated with commodities (specifically petroleum and iron) rather than manufactures – experienced relative import price increases.

Relative import price declines were smallest in manufacturing sectors most intensive in foods, metals, and wood, that is, industries characterized by more competition and lower markups (see Table 4.4). Relative import price declines were greatest in those sectors which have both the technological and the value chain characteristics identified with profitable offshoring – computers, electrical and telecommunications products, that is, oligopoly industries characterized by higher markups (see Table 4.4). But many of the non-electronics manufacturing sectors also showed large and persistent relative import price declines, especially those with well-developed GVCs and high rates of import penetration in the United States. Clothing, footwear,

Table 4.5. *Relative Import Prices, CAGR, United States, 1986–2006*

Sectors	CAGR
1986–2006	
33 – Petroleum, petroleum products and related materials	7.45%
28 – Metalliferous ores and metals scrap	3.34%
68 – Nonferrous metals	3.14%
25 – Wood pulp and recovered paper	1.15%
24 – Cork and wood	1.07%
67 – Iron and steel	0.83%
54 – Medicinal and pharmaceutical products	– 0.01%
63 – Cork and wood manufactures other than furniture	– 0.21%
73 – Metalworking machinery	– 0.23%
72 – Machinery specialized for particular industries	– 0.25%
11 – Beverages	– 0.41%
74 – General industrial machinery, equipment, & machine parts	– 0.55%
66 – Nonmetallic mineral manufactures	– 0.55%
05 – Vegetables, fruit and nuts, fresh or dried	– 0.58%
01 – Meat and meat preparations	– 0.62%
52 – Inorganic chemicals	– 0.86%
03 – Fish, crustaceans, aquatic invertebrates, and preparations thereof	– 0.91%
51 – Organic chemicals	– 1.02%
64 – Paper and paperboard, cut to size	– 1.03%
69 – Manufactures of metals	– 1.03%
59 – Chemical materials and products	– 1.05%
78 – Road vehicles	– 1.11%
83 – Travel goods, handbags and similar containers	– 1.16%
87 – Professional, scientific and controlling instruments and apparatus	– 1.36%
65 – Textile yarn, fabrics, made-up articles, n.e.s., and related prod	– 1.43%
89 – Miscellaneous manufactured articles	– 1.49%
82 – Furniture and parts thereof	– 1.60%
55 – Essential oils; polishing and cleansing preps	– 1.63%
85 – Footwear	– 1.64%
84 – Articles of apparel and clothing accessories	– 1.84%
81 – Prefabricated buildings; plumbing, heat & lighting fixtures	– 1.96%
88 – Photographic apparatus, equipment and supplies and optical goods	– 2.13%
62 – Rubber manufactures	– 2.23%
77 – Electrical machinery and equipment	– 2.89%
07 – Coffee, tea, cocoa, spices, and manufactures thereof	– 3.27%
76 – Telecommunications & sound recording & reproducing apparatus & equipment	– 4.81%
75 – Computer equipment and office machines	– 7.81%

Source: Own illustration. Data: Bureau of Labor Statistics. Note: Import price movements are calculated as relative to changes in U.S. consumer prices. Sector numbers listed are two-digit SITC. CAGR = Compound annual growth rate.

textiles, furniture, miscellaneous manufactures (which includes toys), and chemicals all experienced import price declines (relative to U.S. consumer prices) over two decades of more than 1 percent per year on average, or 40 percent in the period from 1986 to 2006. This occurred despite the apparent consolidation in textiles and apparel, for example, due to Chinese market share growth. This provides further support for Appelbaum's (2008) findings that scale of production has not been associated with a proportional increase in markup pricing power in China. Although these data do not prove the existence of oligopsony power in the GVCs, they are consistent with it. They are also compatible with a number of studies that have identified the declining terms of trade of developing country manufactures as the consequence of a "fallacy of composition," whereby the expansion of manufacturing export capacity in one country makes sense for that country alone, but when many countries expand at the same time, the resulting system-wide excess capacity creates declining prices globally. The greater the capacity overhang, the greater is the ability of lead firms to exert oligopsony power in input markets.

4.2 Endogenous Asymmetry of Market Structure in Global Value Chains

4.2.1 Power and the Distribution of Valued Added

We discerned two, seemingly incongruous, tendencies in the evolving structure of global industry. On one side, there continues to be a high degree of markup pricing power and concentration of industry for global lead firms. On the other side, there is evidence of persistently high levels of dispersion as more developing countries entered lower- and medium-tech industries in manufacturing and services through the 1990s and continued (although at a much slower pace) through the mid-2000s. **The result is an asymmetry of market structures within GVCs, with oligopolistic lead firms at the top, and competitive markets among the lower-tier suppliers.**

The asymmetry of market structures found in many value chains – powerful lead firms able to maintain and increase markups and competitive supplier firms subject to pressure from buyers on supply price, delivery time, quality, and payment schedule at the bottom – is not some natural outcome, but the result of the competitive process itself. The apparent paradox is resolved when we see that it is precisely this asymmetry of market structures in GVCs, and the ability of lead firms to generate and maintain the asymmetry, that is at the core of the oligopoly firms' cost-cutting strategy

that has helped them maintain their cost markups. That is, it is endogenous to the formation and governance of some GVCs. Product market pricing power *per se* is no longer crucial to maintaining markups. **This is now accomplished by mass customization and by cutting costs, both of which are managed increasingly through offshore sourcing in GVCs.** From the lead firm perspective, excess capacity and the steady arrival of new entrants in supplier markets serve the purpose both of cost reduction and of greater flexibility (with the possibility of multiple suppliers). According to Lynn (2005):

A growing number of large firms today view the rise and fall of prices for inputs like labor and raw materials not as a problem to be smoothed out by shelling out capital to bring more activities under the direct control of the firm's management, but rather as a never-ending opportunity to ratchet down costs and hence perpetuate profit margins. And so today's top firms are increasingly designed to play country against country, supplier against supplier and worker against worker. General Electric CEO Jeffrey Immelt put it succinctly in a recent annual report. The "most successful China strategy," he wrote, "is to capitalize on its market growth while exporting its deflationary power (Lynn 2005, 153).

In this section, we discuss a series of firm offshoring strategies aimed at raising competition among suppliers and limiting entry to lead firm markets.

The asymmetry of market structure in global supply chains may take a variety of forms distinguished by the markup over costs and the share of value added at different points in the chain. Four hypothetical cases are depicted in Figure 4.5. In all cases, value added is shown as rising at higher levels of the supply chain, reflecting the standard view that "moving up the value chain" implies moving into higher value added production activities. This is a highly simplified depiction, especially because at lower ends of the value chain there are likely to be multiple suppliers, possibly reflecting great variation in organization, from assembly-line factories, to agglomerations of craft-like production, to small-scale, home-based work.

The point of the stylized representation in Figure 4.5 is to illustrate varieties of vertical arrangements and their implications for markup pricing and the distribution of value added. Each box in the diagram represents the possibility of a different owner and a different location from the other boxes in the chain. Case I in Figure 4.5 is labeled "Vertical Competition" because it depicts that of uniform markups at each point in the chain. A variant of this form is the entry of U.S. MNCs in the IT services exports sector in India and China. IBM, for example, employed 283,455 people outside the United States in 2008 compared to 115,000 employees in the United States and competed with Wipro and Infosys for contracts.

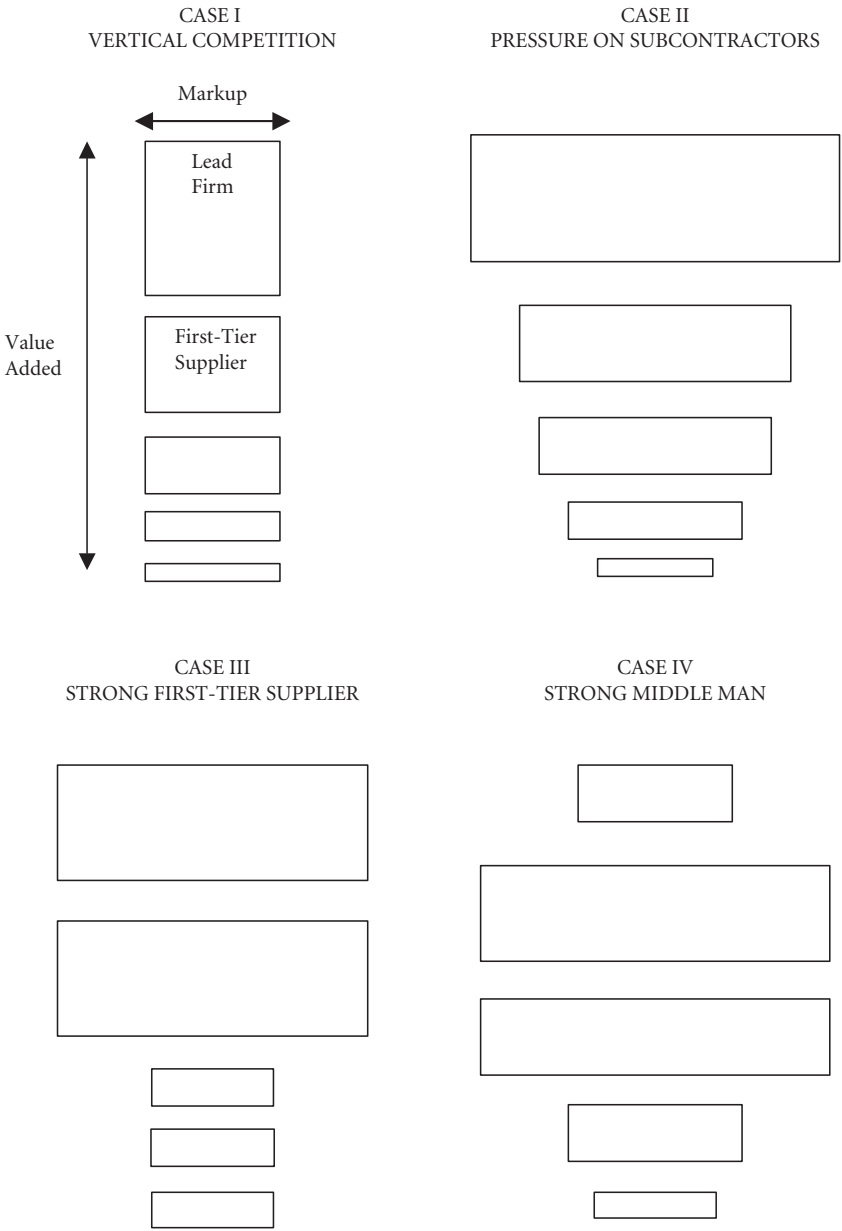


Figure 4.5. Cost Markups and Value Added in the Global Supply Chain: Four Hypothetical Cases. *Source:* Own illustration, based on Milberg (2004b).

Case II is titled “Pressure on Subcontractors” because it shows declining markups and declining value added offshoring (less value added) and the ability to squeeze suppliers (lower markups over costs). Case II describes an oligopolistic market structure at the top of the chain and a highly competitive structure at the bottom. The asymmetry occurs for reasons both technological and institutional, related both to the product side (the purchase of intermediates) and the factor side (the determination of wages). As buyers and (usually) product designers, lead firms often dictate the terms of supply. As Sturgeon and Memedovic (2011) write, “Lead firms tend to have power in GVCs, in part because they select and place orders from suppliers. Because suppliers tend to produce to the specifications of the lead firms, they have unique competencies, tend to exert less power in the chain, and earn lower profits” (Sturgeon and Memedovic 2011, 9).

The ability to divide the production process into numerous steps and tiers creates both a distance between lead firm rents and suppliers, and a greater ability to weaken labor bargaining power by creating more competition in segmented labor markets. Nathan and Sarkar (2011) note that the “splintering” of production in GVCs has two advantages for lead firms. One, with each additional tier of arm’s length supplier, the lead firm is able to distance input producers from the rents earned by the lead firm and thus reduce their claims on that rent. Second, the greater the depth of the supply chain, the greater is the capacity to exploit the segmentation of labor markets. They write:

Efficiency wages can be paid to those whom it is important to retain and who can be expected to provide greater productivity with higher wages. Usually unorganized workers, such as homeworkers, women or those required in peak seasons, can be paid less if the labour markets in which they operate can be separated out. The splintering of production and outsourcing of tasks enables employers to utilize to the fullest the segmentation of the labour force, and that too on a global scale (Nathan and Sarkar 2011, 54).

Gimet et al. (2011) refer to the downward pressure on wages from the supplier’s use of segmented labor as “immiserizing specialization.” Case II most clearly reflects the asymmetry associated with the increasing volume of arm’s-length offshoring.

Case III is that of the “Strong First-Tier Supplier,” typically in a developed or newly industrialized country, for example car parts producers in Brazil, semiconductor firms in South Korea, or even some apparel producers in Mexico (see, for example, Bair and Gereffi 2001; Sturgeon 2002). Case IV is titled “Strong Middle Man,” reflecting a bloated markup in the middle of the chain, resulting from the ability of traders to both squeeze suppliers below

them and to retain proprietary advantages not appropriable by demanders to whom they sell. Examples of this are the cut flower industry, the Hong Kong apparel trade, and the cocoa and coffee trade.⁸ According to Feenstra and Hanson (2004), Hong Kong-based firms earned an average markup of 24 percent on re-exports from China. In the apparel sector, Li & Fung is a buyer for major Western apparel manufacturers and retailers such as Wal-Mart and Target. Li & Fung has such power as a buyer, mainly because of the magnitude of its orders, that it is able to charge a 5 percent fee to suppliers desperate to maintain Li & Fung contracts. According to Tommy Hilfiger CEO Fred Gehring,

Li & Fung has an incredible amount of buying power. When they go to a factory and place orders, they get better clout than if we went on our own (Kapner 2009).

Endogenous asymmetry can take a variety of forms depending on the strategic focus of the lead firm. Four strategies stand out in the recent case study literature on GVCs: (i) inducing competition among suppliers, (ii) offloading risk to suppliers, (iii) erecting entry barriers through branding, and (iv) minimizing technology sharing. Some sectors lend themselves to only one or the other of these mechanisms. In many sectors, lead firms engage in more than one form at a time.

Inducing competition is the process of diversifying among suppliers in order to spur competition among them. Playing one supplier off another, working with multiple suppliers, and even creating new supplier firms has become a standard strategy of lead firms in GVCs, and is a major technique for keeping input prices low. Of course this diversification also reduces risk, in the event of political, economic, or natural disaster in any particular country, or of a unionization effort or work protest at any particular location. It is easiest where global capacity is already excessive (for example, see Gibbon and Ponte 2005; Lynn 2005). The offloading of risk has been documented in a variety of industries, including apparel (Abernathy et al. 1999) and electronics (Kaplinsky 2005). Nolan et al. (2002) analyze the careful control of technology by Boeing in its sourcing with Japanese, British (and American) parts producers.

Branding activity is a textbook example of constructing an entry barrier (see, for example, Bagwell 1989; Porter 1998). There is considerable theoretical analysis of entry barriers, but limited study of the economics of branding *per se* within value chains. Branding tilts bargaining power

⁸ On cut flowers, see Ziegler (2007). On Hong Kong apparel trade, see Feenstra et al. (1998). Regarding coffee, see Fitter and Kaplinsky (2001) and Fafchamps and Hill (2008), and on cocoa, see Cowell (2002). McMillan et al. (2003) find a similar asymmetry in Mozambiquan cashews.

in the production process to the firm that holds the brand design. In industries in which production technology is standardized, for example apparel, footwear, airlines, and now even some computers, consumer electronics and even to some extent automobiles, branding is a key part of lead firm strategy. Davis (2009) cites the following exchange between the founder of a Chinese auto manufacturer and the Chairman of Ford Motors:

The firm's founder stated, "How to make cars is no longer a big secret. The technologies are widely used and shared." Tellingly, Ford Chairman William Clay Ford Jr. responded, "It's easy to build a car. It's harder to build a brand" (Davis 2009, 200).

Heintz (2006) explicitly models "unequal exchange" within GVCs as a function of brand power by the lead firm. Bardhan et al. (2010) model so-called "middlemen margins" as rising from buyer pressure to ensure (supplier) brand reliability. Thus the importance of branding can apply to both cases II and IV in our taxonomy, but in both cases branding serves as an entry barrier and as a source of unequal distribution of value added in the GVC. As Bardhan et al. (2010) point out, the preset of these middle men in developing countries can explain the rise in inequality there, a finding that is contrary to the prediction of the Stolper-Samuelson theorem. Brand power is not attained costlessly, and can be associated with considerable technological design content (such as Apple or Toyota) or with considerable marketing and advertising effort (such as Nike or J. Crew). But in either case, the maintenance of brand loyalty can become the main focus of operation and origin of rent generation, whereas production can be fully outsourced at arm's length. Even the emergence of large contract manufacturers, who produce multiple brands within the same plant, has not cut significantly into the power of branding. According to an executive of Hewlett-Packard,

The consumer doesn't care if all the computers [bearing different brands] were made on the same production line. The only thing that matters is who will stand behind it (Davis 2009, 94).

4.2.2 Sustainability of the Asymmetry

At least four factors make the asymmetry of the type depicted in case II to be sustainable over time. First is the nature of entry barriers, which we have seen are formidable at the high end of the value chain and non-existent at the low end. At all levels of the global supply chain, scale economies may deter entry. In addition to the barrier from branding, which makes

market access difficult at the top of the supply chain, scale economies may deter entry especially for lead firms and many first-tier suppliers. Even “fab-less” firms (those who do no fabrication) limit market access by innovative product design and marketing activity. In this environment, it is difficult for developing country firms to develop their own brands. The exception is when buyers themselves demand supplier reliability, creating the need for high-reputation middle men.

A second factor is capital mobility, which affects the low value added operations much more significantly than the high value added ones. Gereffi (1999) shows how apparel production has moved over time to lower and lower cost (such as wage) locations. There is evidence that this mobility is affected even when the supply chain is organized within a single firm. Brainard and Riker’s (1997) finding that the elasticity of labor demand is much greater for low-wage affiliates of MNCs with respect to other low-wage operations than it is between a high-wage and low-wage location suggests that capital mobility creates competition among low-wage locations.

A third factor is political. Tariffs have fallen most in low value added sectors. This is true generally, but has also been an explicit policy goal, as seen in the tariff policies that promote low-wage offshore assembly operations, such as the duty drawback clause (Section 9802) of the Harmonized Tariff Schedule of the United States, rule of origin principles of the African Growth and Opportunity Act and the Central American Free Trade Agreement and the Lomé Convention, and the establishment of EPZs in many developing countries. These programs are highly concentrated in the garment and electronics sectors. Textiles and apparel are traditionally one of the lowest value added sectors in manufacturing. The electronics parts and components that dominate in EPZs are at the low end of the spectrum of value added for electronics goods.

A fourth factor sustaining the asymmetry is the persistence and growth of global excess capacity in many industries. Freeman (2007) describes the entry of China, India, and Eastern Europe into the world capitalist economy as a historic, “great doubling” of the world’s labor force, adding enormous productive power and greatly lowering the world’s capital-labor ratio. This competitive pressure on suppliers translates into pressure on labor costs or on labor standards. Similarly, arm’s-length relations with suppliers reduce the buyer firms’ responsibility for standards in the supplying firm. A company is less likely to be held accountable for standards if the supplier is independently owned than if it is an affiliate of the buyer firm. We do not have good information on the extent of excess capacity globally in different industries. What is clear is that the drop in income and thus import demand in the industrialized countries beginning in 2007 and accelerating

through 2009 has led to a surge in excess capacity. Small and large exporting firms across the globe have had to shut down. Recent reports claim that the downturn had resulted in 10 million new unemployed workers in China alone by mid-2009 (Hurst et al. 2009).

4.2.3 What Drives Foreign Direct Investment?

The logic of endogenous asymmetry of market structures is that global production is increasingly coordinated externally rather than within firms if off-shoring can create competition among suppliers, reducing costs and raising flexibility beyond what could be accomplished with internalized operations. **Externalization is the result of successful creation of asymmetries in market structure across GVCs.** Thus we shouldn't be surprised, even in the age of MNCs, that the share of intra-firm trade in total U.S. trade has not increased. The MNC is often viewed as a key driver of the process of the globalization of production. This is understandable, since the existence of the MNC is, by definition, premised on some previous and significant (controlling) foreign investment.⁹ Moreover, the past twenty years have seen an explosive rise in the activities of MNCs, despite a huge drop-off in FDI in 2009.

According to the World Investment Report there were about 82,000 transnational corporations with around 850,000 foreign affiliates worldwide in 2008. Between 1990 and 2010, the stock of outward FDI increased from \$2.1 trillion to \$20.4 trillion. Foreign affiliates employed over 68 million workers in 2010, compared to only 21 million in 1990. Their sales were almost \$33 trillion, more than five times of their sales in 1990. In 2010, foreign affiliates accounted for more than one-tenth of global GDP and one-third of world exports (UNCTAD 2010, 2011).

Globally, FDI skyrocketed in the 1990s, although it dipped suddenly in 2001 as a result of world recession, asset deflation (especially stock market declines), and consequently a decline in value of a number of large mergers, mainly in Europe. This drop-off in FDI flows was skewed toward developed countries. Average FDI flows to non-developed countries (developing countries and countries in transition) rose from \$6.3 billion in the 1970s to \$140 billion in the 1990s to \$394 billion in the 2000s. The non-developed country share of global FDI rose from 22 percent in the 1970s to 27 percent in the 1990s to almost 35 percent in the 2000s (Table 4.6). This has not been

⁹ The convention for measurement purposes continues to be greater than ten percent ownership in a foreign asset. With the growth of stock markets in even many developing countries in the 1990s, the liquidity of FDI was raised, further blurring the distinction between portfolio investment and FDI. See Milberg (1999) for a more detailed discussion.

Table 4.6. *Distribution of World Foreign Direct Investment Flows, Averages, 1971–2010*

	1971–1980	1981–1990	1991–2000	2001–2010
FDI Inflows (in B. \$)				
Developed economies	21.8	84.9	381.3	741.2
Non-developed economies	6.3	23.3	140.3	394.4
Shares (% of World FDI Inflows)				
Developed economies	77.6%	78.4%	73.1%	65.3%
Non-developed economies	22.4%	21.6%	26.9%	34.7%

Source: Own illustration. Data: UNCTAD Handbook of Statistics.

enough of an increase, however, to make a change in the non-developed countries' share of the world stock of foreign investment, which has fluctuated around 28.5 percent for the past 30 years.

While the developing country share of world FDI flows has increased slightly, the role of FDI in the total inflow of foreign capital to low- and middle-income countries has risen dramatically (see Table 4.7). Since the debt crises of the 1980s, direct investment has supplanted private debt,

Table 4.7. *Long-Term Net Resource Flows to Low- and Middle-Income Countries, 1970–2010*

	1970	1980	1990	2000	2010
B. \$					
<i>Long-term net resource flows</i>	16.2	123.0	173.3	383.1	1,305.4
FDI, net inflows	1.5	8.0	21.5	149.1	509.2
Profit remittances on FDI	1.0	11.1	16.1	67.8	342.9
Portfolio equity flows	0.0	0.1	3.4	14.0	128.4
Net flows on debt, total long-term	7.5	57.7	42.6	16.5	212.9
Interest payments, total long-term	2.5	28.8	48.9	93.9	111.9
Grants	3.5	17.2	40.9	41.8	106.3 ^a
Percentage					
<i>Long-term net resource flows</i>	100.0%	100.0%	100.0%	100.0%	100.0%
FDI, net inflows	9.5%	6.5%	12.4%	38.9%	39.0%
Profit remittances on FDI	6.3%	9.0%	9.3%	17.7%	26.3%
Portfolio equity flows	0.0%	0.0%	2.0%	3.7%	9.8%
Net flows on debt, total long-term	46.7%	46.9%	24.6%	4.3%	16.3%
Interest payments, total long-term	15.6%	23.4%	28.2%	24.5%	8.6%
Grants	21.9%	14.0%	23.6%	10.9%	7.5% ^a

Source: Own illustration. Data: Global Development Finance, World Bank.

^a 2009 data.

equity, and government grants as the major channel of foreign capital inflows into developing countries.

To understand what is motivating such high levels of FDI, it is useful to distinguish vertical and horizontal FDI. Horizontal FDI is associated with “market-seeking” in that it involves a replication of productive capacity in the foreign location, presumably to better promote sales in that location. Two conditions are necessary to induce such FDI. First the foreign market must already exist or be about to develop. Second, replication of production on foreign soil must be preferable to export from home.

Typically, this second condition depends on an absence of significant economies of scale and the presence of high tariffs in the foreign market, and for this reason such horizontal FDI is often termed “tariff hopping.” Certainly, most FDI to developed countries is aimed at better serving host markets, and some FDI in developing countries is driven by similar reasoning – Brazil being a well-documented example. Thus, studies looking at all FDI will likely find host-market GDP as the most significant determining variable.

Backward vertical FDI involves capital movement mostly aimed at more efficient linkages, either in production or in natural resources.¹⁰ Efficiency-seeking vertical FDI is the movement abroad of productive resources with the aim of lowering costs. It can be driven by a variety of factors, including lower labor costs, lower taxes on profits, and low or lax standards on labor or the environment. These advantages must more than offset the tariffs and transportation costs incurred as a result of the international movement of any parts, components or assembled goods. Efficiency-seeking FDI is typically viewed as investment in low-wage countries, but it is not exclusively so. Considerable U.S. direct investment in Canada, for example, serves to produce or assemble parts used in goods sold in the United States. Japanese direct investment in Ireland has been understood as driven by that country’s relatively efficient labor force and proximity to the EU market.

Resource-seeking vertical FDI is driven by the desire of lead firms to control supplies of natural resources or primary commodities used in the production of other goods. This motivated the traditional structure of colonial and neocolonial foreign investment, led by Britain between 1870 and 1913, and by the United States after World War II, but continues to be a factor in FDI today for sectors which are resource-intensive, such as steel or fabricated metal products. Some analysts have recently added “strategic-asset seeking” as an additional motive for FDI, where firms are

¹⁰ One could also envisage the case of forward FDI (such as retail, wholesale), which is more likely to serve the purpose of market-seeking abroad.

Table 4.8. *Horizontal versus Vertical FDI Stocks Abroad, United States, 1985–2010*

	1985	1990	1995	2000	2005	2008	2010
U.S. FDI Stocks (M. \$)							
Horizontal ^a	28,069	84,369	166,253	329,133	580,227	958,095	1,101,934
Vertical ^b	82,430	148,468	215,462	304,553	426,151	510,841	625,241
U.S. FDI Shares (%)^c							
Horizontal ^a	25.4%	36.2%	43.6%	51.9%	57.7%	65.2%	63.8%
Vertical ^b	74.6%	63.8%	56.4%	48.1%	42.3%	34.8%	36.2%

Source: Own illustration. Data: Bureau of Economic Analysis, U.S. Direct Investment Position Abroad on a Historical-Cost Basis.

^a Horizontal sectors include: Utilities; Food and beverage and tobacco products; Paper products; Printing and related support activities; Petroleum and coal products; Nonmetallic mineral products; Broadcasting and telecommunications; Information and data processing services; Federal Reserve banks, credit intermed. & related activ.; Securities, commodity contracts, and investments; Funds, trusts, and other financial vehicles; Rental & leasing services and lessors of intangible assets; Computer systems design and related services.

^b The remaining sectors of Table 4.8 are rather characterized by vertical FDI stocks.

^c Share of considered FDI stocks abroad.

seeking skilled labor, specialized knowledge, or knowledge spillovers abroad, referring to cases such as European investment in Silicon Valley, IBM's investment in Southern India, or Microsoft investment in research and development facilities in China (Dunning 2000).

Table 4.8 provides a crude breakdown of global FDI, between horizontal and vertical FDI. The calculation of U.S. FDI stocks does not include all FDI positions abroad. We focused on the twenty-one manufacturing sectors and fourteen service sectors, for which offshoring intensities are available. We used sectoral materials (services) offshoring intensities of 1998 (see Figures 2.10 and 2.11), as defined in Chapter 2, to determine the type of FDI for manufacturing (service) sectors. Sectors with offshoring intensities that exceeded the weighted average across all thirty-five sectors were classified as vertical FDI as they show a high proportion of imported inputs. Sectoral offshoring intensities below the weighted average were considered horizontal FDI.

The table shows that the accumulated stock of vertical FDI has increased gradually over time, although at a much lower rate as horizontal FDI, resulting in a substantial decline in its share from 75 percent in 1985 to 35 percent in 2008.¹¹ The dominance of horizontal FDI would explain why

¹¹ Hanson et al. (2001) find evidence of increased verticality in U.S. outward FDI in the 1990s compared to the 1980s.

Table 4.9. *Return on Foreign Assets (ROFA), United States vis-à-vis Region (%)*,
1985–2010

	1985	1990	1995	2000	2005	2007	2010
All countries	12.1%	13.5%	12.5%	10.2%	12.1%	12.5%	10.5%
Canada	10.8%	6.9%	10.5%	12.2%	8.9%	8.4%	10.0%
Europe	13.1%	15.2%	11.9%	9.5%	11.2%	11.4%	9.1%
Latin America and Other Western Hemisphere	8.9%	12.2%	12.3%	7.4%	12.7%	14.1%	12.4%
Africa	15.7%	24.7%	29.9%	16.9%	23.2%	21.7%	13.6%
Middle East	8.9%	27.1%	19.1%	20.9%	24.2%	25.3%	25.1%
Asia and Pacific	14.2%	15.0%	14.8%	13.5%	15.1%	15.4%	12.3%
OPEC	23.8%	39.9%	25.5%	16.6%	25.0%	29.8%	19.4%

Source: Own illustration. Data: Bureau of Economic Analysis, Balance of Payments and Direct Investment Position Data. ROFA = FDI income / FDI stock, OPEC = Organization of the Petroleum Exporting Countries.

horizontal investment swamps the dynamics of vertical investment in most econometric studies. Another reason these studies have often not found cost differences to be a significant driver of globalized production is that such movements in relative costs may trigger production sharing through external rather than intra-firm channels, an issue we consider in detail in the following section.¹²

The asymmetry of lead and supplier market structures, we have argued, has created the conditions for greater returns from externalization than internalization. That is, externalization is a rational governance strategy if the return on offshore-outsourcing – implied by the cost reduction it brings to the buyer firm – exceeds that on internal vertical operations. The return on vertical FDI suggests a lower bound on cost saving from offshore-outsourcing.

To get a simple measure of implicit profit flows from FDI, we can apply the return on foreign assets (ROFA) to all trade in intermediate goods. We calculated the *ex-post* rate of return on U.S. operations abroad, by dividing foreign income earned on U.S. FDI by the corresponding accumulated stock of foreign investment in various countries and regions in the period from 1985 to 2010. The results are presented in Table 4.9. For the aggregate of U.S. investment abroad, this return was 12.5 percent on a foreign capital stock of \$2.8 trillion in 2007. Compared to 1985, this return remained

¹² See Feenstra (1998) for a similar criticism of studies of offshoring that only include foreign investment data, that is that exclude arm's-length subcontracting.

relatively stable over time, but was slightly lower in 2010 with a ROFA of 10.5 percent.

At the regional level, however, we see strong differences. The average ROFA of U.S. FDI in developed countries such as Canada and Europe declined during the period of 1985 to 2007, although Canada's ROFA increased again in 2010. In contrast, the average return on assets increased in developing regions, especially in the Middle East, Latin America and Africa. Asia's development seems relatively low, which is because of the many developed countries in the region. The return in China, for instance, grew from 7 percent in 1995 to 21 percent in 2007. Between 1985 and 2007, the average ROFA in developed countries was 9.1 compared to 9.82 in developing countries. When we break out the vertical from the horizontal investment in all countries, the gap widens further, at 10.96 for vertical and 8.45 for horizontal. In principle, the return on offshore-outsourcing must exceed that on vertical FDI, implying considerable cost savings from externalization. Previously we saw that cost savings from offshore-outsourcing are reported at between 40 and 60 percent.

In Chapter 7, we explore the extent to which this competitive pressure on suppliers translates into downward pressure on developing countries' terms of trade, wages, and labor standards as managers in supplier firms themselves seek to retain their slim cost markups in the face of oligopsony power from lead firm buyers. We note here only that arm's-length relations with suppliers reduces the buyer firm responsibility for standards in the supplying firm. A company is less likely to be held accountable for standards if the supplier is independently owned than if it is an affiliate of the buyer firm.

The managerial focus on core competence is the mirror image of the picture we have presented here of the development of oligopsony markets for inputs which no longer yield rents and thus are, from the lead firm perspective, better subcontracted at arm's length. The point is that offshoring has had a dual role for lead firms, one being the support of cost markups, the other being the reduction of the scope of productive activities of the firm.

4.3 Determinants of Global Value Chain Structure

4.3.1 Transactions Cost-Based Theories

Because of its concern with the governance of production, GVC analysis is often associated with the transactions cost theory of the firm, which focuses on transactions costs and the specificity of a firm's assets. In transactions

cost analysis, firms are a governance structure of contractual relations that focuses on attracting orders, reducing conflicts, and thus realizing profits by minimizing transactions costs.¹³ The existence of the firm itself is the result of its efficiency compared to market relations. The transactions cost approach thus departs from the neoclassical conception of the firm, where the latter is essentially defined by a production function and an objective of profit maximization. According to Ronald Coase (1937):

The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism. The most obvious cost of “organizing” production through the price mechanism is that of discovering what the relevant prices are (Coase 1937, 4).

Transactions costs comprise all sacrifices and disadvantages that arise for the involved parties when exchanging goods and services. They include all information and communication costs that are associated, *ex ante*, with the initiation (for example, travel, communication, and consulting costs), the agreement (for example, contract arrangement costs, legal advice), the transaction (for example, management costs for leadership and coordination) and, *ex post*, with the control (for example, control of quality and date) and adjustment (extra costs due to subsequent changes in amount and dates) of an exchange that is perceived as fair (see, for example, Picot 1982, 1991).

Williamson (1985, 1996, 2002) has extended Coase’s framework in a number of ways relevant to the study of globalized production. First, Williamson specifies why the firm might be more efficient than a market. Williamson (1996) attributes a firm’s decision for in-house production (vertical integration) to market failure, especially of product and capital markets. Firms exist because they economize on transactions costs more effectively than markets. Thus, Williamson rejects the neoclassical model of the firm in which competition promotes efficiency in product and capital markets by squeezing out inefficient firms.

Firms have informational advantages over markets, therefore, according to Williamson, the corporate head office can coordinate the firm’s divisions more efficiently than the capital market would if these divisions were each independent firms. Hierarchy can also be more efficient than the external market solution because of the existence of incomplete contracts. According to Williamson (2002),

¹³ See Winkler (2009) for a longer discussion of transactions costs considerations in the theory of offshoring.

All complex contracts are unavoidably incomplete. For this reason, parties will be confronted with the need to adapt to unanticipated disturbances that arise by reason of gaps, errors and omissions in the original contract (Williamson 2002, 174).

Because the environment in which transactions occur is uncertain and because agents have bounded rationality, a “complete” contract is not attainable.

Williamson (1975) emphasizes the specificity of assets as another factor favoring internalization. He differentiates among specialized physical assets, specialized human assets, site specificity, dedicated asset specificity, and brand capital. Specific transactions thus depend on site-specific facilities, specialized machines and technologies, specialized and qualified employees, or on buyer-specific investments. The higher the degree of asset specificity for a particular production process, the greater is the efficiency of hierarchy compared to market-based organization. This focus on asset specificity leads to the possibility of hybrid forms of governance, characterized as “market-preserving credible contracting modes that possess adaptive attributes located between classical markets and hierarchies” (Williamson 2002, 181).

Hybrid forms of governance are particularly relevant in the study of GVCs. Lead firms cooperate, train, and provide support to supplier firms even in the absence of an ownership stake, and certainly in the absence of a controlling authority. Gereffi et al. (2005) identify three hybrid forms common to GVCs. “Modular” governance involves numerous suppliers of components and materials and a large turn-key assembler supplying the lead firm. A “relational” GVC has considerable interaction and technological sharing between the lead firm and first-tier supplier. In a “captive” GVC structure, the lead firm contracts directly with an array of much smaller supplier firms.

Figure 4.6 maps the comparative costs of governance in markets, $M(AS)$, and in hierarchies, $H(AS)$, both being functions of asset specificity. When asset specificity is low or even zero, the costs of governance with hierarchy are higher because costs of bureaucracy are not offset by any particular advantages compared to markets, such as $H(AS) > M(AS)$. As asset specificity rises, the more the initial cost advantage of the market solution falls and at some point the hierarchy becomes more advantageous than the market because of its savings on transactions costs. For $0 \leq AS < AS_1$, the market solution dominates the two other options. For $AS_1 < AS < AS_2$, the hybrid solution is preferred, whereas if $AS > AS_2$, hierarchy is the best option (Williamson 2002).

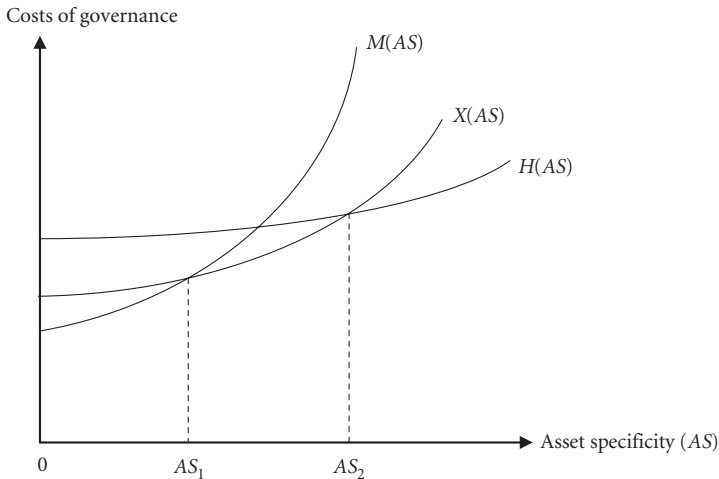


Figure 4.6. Externalization – A Transactions Costs Perspective. *Source:* Modified from Williamson (2002, 181), permission granted by the American Economic Association.

The transactions cost approach gives a number of insights into the latest wave of globalized production. Improvements in transportation and communications may well have reduced the cost of market-based organization (although they have reduced costs of hierarchy as well). The GVC focus described by Gereffi et al. (2005) can be depicted as hybrid forms. We can also see how suppliers would be inclined to move toward modular production platforms, because customer-specific investments leave the supplier bargaining power vis-à-vis the buyer (from the perspective of pricing or delivery times) greatly reduced (Sturgeon 2002). Because the subcontractor can already anticipate such a situation, he is tempted to make more general investments, which could be used more widely (such as with a lower asset-specificity), but would be less efficient than the optimal investment. We can also use Figure 4.6 to describe the basic notion that technological change has led to greater market-based governance.

Langlois (2003), following Coase (1937), attributes the rise in arm's-length international transactions to a decline in transactions costs in market exchange resulting from technological change as well as a reduction in asset specificity of a variety of tasks in the production process. This is the result of the improved functioning of markets that reduce the efficacy of vertically integrated firms.

The transactions cost approach has informed a generation of sophisticated mathematical models of outsourcing. Incomplete contracts have been used in several models to explain the make-or-buy decision of a firm (for

example, Antràs 2003). Grossman and Helpman (2002, 2005) emphasize the search costs of finding a supplier and the degree of incompleteness of contract between buyer and supplier. Outsourcing (which can be domestic or international) occurs when the cost savings to the lead firm buying from “specialized input producers” exceed the costs resulting from search and incomplete contracting, where the latter is associated with a higher potential for holdup (that is, a broken contract), or with a greater difficulty of convincing suppliers to customize products to the buyer firm’s needs and to deliver inputs of acceptable quality. In sum, the firm’s “make or buy” decision is

a trade-off between the transactions costs that stem from search and incomplete contracts on the one hand and the extra governance costs associated with vertical integration on the other . . . [W]hen product markets are highly competitive . . . the occurrence of outsourcing requires a large per-unit cost advantage for specialized input producers relative to integrated firms. This advantage must be large enough to overcome search frictions and the pricing disadvantage that stems from the holdup problem. In contrast, when markets are not highly competitive, the viability of outsourcing hinges mostly on a comparison of the fixed costs that must be borne by an integrated firm and those that are paid by specialized producers (Grossman and Helpman 2002, 118).

Therefore, Grossman and Helpman (2002) see entry in the supplier market as raising the likelihood of outsourcing, not because it increases the cost savings for lead firms by adding additional capacity at the supplier level, but because it reduces search costs by adding to the number of potential suppliers.

4.3.2 Resource-Based Theories and the Shift to Core Competence

GVC analysis is compatible with the transactions cost approach to corporate governance, but value chain research extends beyond the make-or-buy decision, to questions of the distribution of value added both within and across links in the chain, and especially to the ability of supplier firms to upgrade their role within the value chain. Value chain analysis in its full scope requires a broader conception of the firm. The tradition of Penrose and Chandler, focusing on corporate strategy, provides a more fruitful foundation.¹⁴

In her *Theory of the Growth of the Firm*, Penrose (1959) describes the firm as a collection of productive resources that have the capability to generate services. Productive resources are managed within an administrative organization, which can determine the amount and type of these services.

¹⁴ See Winkler (2009) for a longer discussion of resource-based theories of the firm.

Productive resources are similar to what later writers refer to as “firm-specific” or “knowledge-based” assets (for example, Amsden 2001). Such resources are the basis of the firm’s productive services that are the source of rents for the firm. According to Penrose:

A firm may achieve rents not because it has better resources, but rather the firm’s distinctive competence involves making better use of its resources (Penrose 1959, 54).¹⁵

Penrose focuses on the need for firms to create a sustainable competitive advantage over competitors, including technological superiority, strong marketing, and operational scale effects. Penrose also provides an early statement of the advantages of mass customization and core competence. Customization is an aspect of “diversification.” A firm is diversified when it offers new and sufficiently different products in addition to its already existing product range of intermediate and final goods. The “diversification of . . . activities, sometimes called ‘spreading of production’ or ‘integration’” increases the variety of final goods, vertical integration, and the number of basic business areas (Penrose 1959, 104).

According to Penrose (1959), efficient production at a given product variety is only possible for large firms with strong diversification and integration because only high product variety can protect a firm from major demand shifts – neither monopoly power nor technological progress alone will do. Distributing productive resources to a larger variety of goods can thus be more profitable in certain periods. Second, and more important, is the fact that diversification extends the production and investment possibilities into new areas, while maintaining or even expanding the existing production lines (Penrose 1959).

Core competence in the Penrosian firm means divesting those resources which are “excess,” meaning those that do not generate rents. The main limitation on firm’s growth is the shortage of managerial resources, which Slater (1980) calls the “Penrose effect” (Slater 1980, 521). According to Penrose,

The Schumpeterian process of ‘creative destruction’ has not destroyed the large firm; on the contrary, it has forced it to become more ‘creative’ (Penrose 1959, 106).

If offshoring can create competition among suppliers, reduce costs and raise flexibility beyond what could be accomplished within the realm of

¹⁵ Also see Wernerfelt (1984) and Foss (1997, 1998).

internal operations, then globalized production will be increasingly coordinated externally rather than within firms. Thus, an additional consequence of globalized competition is that the scope of the firm has in many cases narrowed. In knowledge-based theories, a separate school of thought among the resource-based theories, this is presented as a focus on “core competence,” and management reviews are filled with advice on how to focus on core competence (Prahalad and Hamel 1990). A core competence should at least have three features:

First, a core competence provides access to a wide variety of markets. . . . Second, a core competence should make significant contribution to the perceived customer benefits of the end product. . . . Finally, a core competence should be difficult for competitors to imitate (Prahalad and Hamel 1990, 83–84).

From an economic perspective, core competence is a synonym for a rent-generating proprietary asset, and as competition in other aspects of production has increased, lead firms have outsourced the non-rent-generating parts of their operation, further encouraging competition among suppliers and lowering prices for purchased inputs. Thus, the flip side of the asymmetry of market structures is the externalization of global supplier relations. We saw previously that despite the growth of MNCs over the past twenty years in terms of assets, sales, and employment, intra-firm trade has remained constant as a share of U.S. trade.

In the Coase tradition, as discussed previously, internalization is explained as the result of firms seeking to minimize transactions costs in situations in which organizing production within the firm is more efficient than by means of the market. With the current trend apparently in the opposite direction, that is, with more arm’s-length relationships within the value chain for particular commodities, the Coasian logic would imply that there has been a reduction in transactions costs for market-based relations. Langlois (2003) attributes this to technological and legal developments that make markets more efficient, and he posits that this increased market efficiency has brought the end of the Chandlerian era of complex multidivisional corporate structures. The situation could be represented in Figure 4.6 as a downward shift in the $M(AS)$ curve, leading to a greater share of organization being governed by the market.

An alternative interpretation is that externalization has developed from the logic of vertically integrated markets, with continued pressure on competition among suppliers, offloading of risk, and increased focus on core competence, all part of business strategy whose financial dimension is the focus of Chapter 6. Specifically, when suppliers have the capacity to act

as monopolists there is a greater incentive for buyers to internalize supply production. When there is a high degree of competition among suppliers, then arm's-length relations between buyer and supplier are more likely. At issue is the ability of suppliers to capture value added in the GVC.

Grossman and Helpman (2002, 2005) and Antràs (2003) among others follow Coase in identifying the logic of outsourcing in transactions costs. There is no doubt some truth to this, but the approach should be expanded to comprise the perspective of Hymer (1976), according to whom it is the market power of corporations rooted in the ownership of knowledge-based assets that results in FDI. In the current context, with some transactions costs declining due to information and computer technology, and productive capacity and skill in developing countries rising, lead corporations have successfully encouraged competition among suppliers while limiting channels for upgrading that would threaten their own position.

4.3.3 Beyond Transactions Cost Minimization: Global Value Chain Governance Strategies

The prevalence of externalization in offshoring is consistent with different theories of the firm and thus should not simply be read as a decline in transactions costs as argued by Langlois and depicted in Figure 4.6. The power of lead firms in GVCs can make such relative cost profiles endogenous to the process of GVCs themselves with implications for the scope of lead firms and their suppliers.

Transactions cost economics are very useful in thinking about the governance of GVCs. But the focus on the transaction leaves the analysis largely one of constrained optimization in which (transactions) costs are minimized, subject to given technology, input prices, and market prices. From this perspective, the firm does not have a strategy for growth – in size, market share, or profits – other than transactions cost minimization under given constraints. Even asset specificity is assumed given.

In transactions cost economics, structure (that is, the structure of transactions costs) drives strategy. In this view, the constellation of transactions costs determines the relative efficiency of different structures, that is, vertically integrated or not. The governance structure that emerges in transactions cost economics is by definition efficient and thus optimal.

An alternative perspective on the firm is that the firm's strategy for growth is aimed precisely at overcoming constraints, whether it is in terms of product or process innovation, investment in asset specificity, factor or input prices, or even markets. As Lazonick (1991) writes, strategic firms "seek to generate a new cost structure" (Lazonick 1991, 288). The shift to core competence also is a strategic move to raise the intensity of asset specificity for the firm.

To put it in Chandlerian (1962) terms: strategy drives structure. Today this is not the multidivisional structure that was the concern of Chandler. The structure is the GVC, and it is driven by a strategy of governance emphasizing shareholder value from within a context of technology, transportation, communication, and global capacity in which vertical disintegration is feasible in a variety of forms.¹⁶ In the GVC approach, lead firm strategy and the institutional context in which strategy is developed, determines value chain structure. **Firms are profit-oriented, but maximization of shareholder value and long-run growth – two strategic objectives that are by no means necessarily consistent with each other – rather than simply the presence of transactions costs, result in a particular GVC structure. In the strategic approach, there is no reason that a particular structure (of the GVC, for example) is optimal in the sense of Pareto.**¹⁷

The strategic perspective provides a different understanding of the apparent reemergence of arm's-length transactions in the global economy. The notion of corporate strategy connotes more than in the negative sense of simply protecting rents, but in the positive sense of innovating for growth and even altering market conditions. Offshoring is driven centrally by such corporate strategy, and the observed persistence of arm's-length trade in a world in which MNCs are larger than ever. While the firm in both conceptions is rational, the firm approaches the issue of profit maximization differently in the two conceptions. In the transactions cost approach, the firm is a transactions cost minimizer. For the strategic firm, offshoring is a means to cost reduction, flexibility enhancement, entry deterrence, and at the same time serves the broader strategy of focusing on core competence and shareholder value. Offshoring allows diminished obligations to domestic labor and poses a threat to the ongoing domestic employees. Bas and Carluccio

¹⁶ For Chandler, vertical integration is not the result of high transactions costs, but of profit opportunities from large-scale production, the exploitation of which required specialized managerial expertise.

¹⁷ Thus Pitelis (1991) writes about market and non-market failures. See also Cowling and Sugden (1987).

(2009), for example, find that offshoring by French corporations is much more likely to be at arm's length when unions are strong in the supplier country:

Multinational firms use their organizational structure strategically when sourcing intermediate inputs from unionized markets . . . International outsourcing provides a strategic way of accessing the higher productivity workers in [the supplier country] while avoiding the exposure of worldwide profits to extraction by the union . . . [W]hen union bargaining power is sufficiently strong, subcontracting is chosen despite the inefficiencies it entails (Bas and Carluccio 2009, 1–2).

Supplier firms are not simply given as part of a menu of production options, but are nurtured and encouraged, both for the purpose of increasing the reliability and precision of supply and also as a means to enhance competition among supplier firms. To the extent that such inducements are effective, then more arm's-length transactions are the rational result of lead firm strategy. Hymer's (1972) theory of the MNC stresses oligopoly internalization as the means to preserve rent-generating proprietary assets. The logic also predicts externalization when supplier operations are no longer rent-generating. What matters strategically is control, not ownership. Lead firms may induce more competition among suppliers. They also may work extensively with suppliers to improve quality, design, and reliability of supply and logistics. They take great pains to retain brand identity and to create other barriers around self-identified core competence. They may exploit segmentation in labor markets to further increase flexibility and reduce production costs.

If the strategic approach to understanding the firm emphasizes the effort to overcome constraints and produce a new cost structure rather than accept that which is given, this does not imply that strategic choices are infinite. From a strategic perspective, businesses have a finite set of options. One reason for this is that the cost of knowing the effectiveness of different production techniques can be prohibitive (Rosenberg 1982). According to Piore (1998), the institutionalist approach sees choice as narrower, discrete and the result of ongoing conflict and dialogue. He writes:

It is as if the isoquant were to collapse into a few widely dispersed points on the capital-labor map. We can talk about those alternatives as business strategies . . . [T]he discrete alternatives that the economic agents face are not worked out in advance . . . It is a product . . . of the understandings about the constraints and opportunities that emerge as the actors talk to each other (Piore 1998, 261).

Another reason is that business culture is just that – a culture – and certain strategies take hold and are emulated. Rubery et al. (2009) note the “fad” nature of offshoring, that firms see others doing it and decide they do not want to be left behind. Moreover, the options are path dependent and may emerge as the strategy is implemented.

The transactions cost and the corporate strategy approaches may not be incompatible, but the latter emphasizes the dynamics of firm behavior and sheds more light on the social conflicts inherent in the offshoring decision, that is on the welfare consequences of particular outcomes. Both the transactions cost and the resource-based theories clearly have some explanatory power regarding the expansion of arm’s length trade in intermediates. The latter would seem to be the result of a combination of declining transactions costs because of digitization and the expansion of manufacturing and services productive capacity, and continued power of lead firms in their ability to retain rent-generating assets in-house and to encourage competition among suppliers. The governance structure that emerges in transactions cost economics is by definition efficient and thus optimal. In the strategic approach, there is no reason that a particular structure (of the GVC, for example) is optimal in the economics sense of Pareto. We have argued that both transactions costs and corporate strategy-based theories of the firm help to explain the expansion of globalized production and this also includes the motives for FDI.

There is a commonality across the three motives for FDI in the traditional taxonomy. In all cases, firms have decided to maintain the foreign operation within the firm. This is the process of internalization, according to which firms will expand their own operations when they control an asset – often an intangible or knowledge-based asset – that allows them to earn above-normal profits rather than seek another firm to supply the downstream, upstream, or horizontal product or service. The internalization motive is rooted in the very logic of the firm itself: firms are organizations that exist distinct from markets precisely because they can organize production at a lower cost than would be incurred if all aspects of the production process took place in markets. Coase (1937) identified lower transactions costs as the source of the advantage of firm rather than market-based organization of production. This rationale for the existence of the firm was extended to explain FDI, that is, as the simultaneous desire of firms to expand markets and retain the benefits of the firm organization.

Coase’s insights have formed the basis for the theory of the MNC for the last three decades. Hymer (1976), and later others, described the

multinational firm as a non-market institution in the Coasian sense: The international extension of the firm reflects its apparent organizational superiority, perhaps because of the transactions cost savings it brings compared to market transactions. Such savings, or rents, could result from the firm's intangible assets related to technology, production process, product design, management, labor relations, marketing, service, or any other dimension of the production or delivery of a good or service. While the internalization of international operations through foreign investment is a result of the relative inefficiency of the market, the strategic protection of such knowledge assets by keeping them internal to the firm is widely recognized as the prime reason for firms to invest abroad rather than serve foreign markets in other ways, such as exports or even through licensing or subcontracting. Today, the advantages of internalization strategies are still seen as the key explanation of FDI.¹⁸

The relative gain from vertical disintegration make apparent some limitations of the vertical organization that characterized successful firms for the entire twentieth century. Powell (1990) mentions three weaknesses of vertically integrated firms:

An inability to respond quickly to competitive changes in international markets; resistance to process innovations that alter the relationships between different stages of the production process; and systematic resistance to the introduction of new products (Powell 1990, 318–319).

Trade patterns may be a function of global production location strategies of firms, but does the ownership structure within these global production systems matter? We have argued that this structure is partly endogenous to the dynamics of international competition itself. Specifically, if intra-firm trade is the result of firm internalization strategies, then the observed rise in arm's-length subcontracting requires a theory of externalization. Firms internalize an international production process to protect rents that accrue to their firm-specific (often knowledge-based) assets. Such rents are possible only in an oligopolistic industry, in which economies of scale and market power can both foster the development of such assets and permit their continued profitability.

Conversely, firms will externalize a portion of the operation if the expected cost savings exceed the expected rent accrual. This is more likely to be the case when (intermediate) product markets are competitive. That

¹⁸ Dunning (2000) has for many years embellished the internalization theory with two other types of advantages that would explain FDI: ownership and location.

is, firm strategy is to externalize whenever downstream markets are competitive. If externalization itself fosters downstream competition, the asymmetry of market structures along the global supply chain can be considered endogenous to lead firms' competitive strategies.

To the extent that the asymmetry in market structures is endogenous, then by the same reasoning so is the rising incidence of externalization. Competition among suppliers is beneficial to lead firms not only because of its cost implications. It also enhances the flexibility of lead firm supply conditions. Lead firms can set relatively short-term subcontracts, allowing the ability to more rapidly respond to changes in final good demand conditions or changes on the supply side, on issues ranging from changes in product design, to changes in wage, exchange rate or policies in the countries with suppliers or potential suppliers. According to Strange and Newton (2006):

If there are a large number of competitive suppliers of raw materials and/or intermediate goods, then the corporation might well choose to externalize production in order to (a) reduce the risks associated with the commitment of resources, and (b) save capital for other activities. One might also put forward a further advantage, namely that a monopsonistic buyer would be able to push down the prices of supplies to marginal cost and thus extract the full profits from the sales of the final goods from a smaller capital stake – i.e. the buyer would show a higher return on capital. If there were but a few suppliers, in contrast, then there would be a situation of bilateral monopoly (or oligopoly) and conventional internalization arguments might dictate vertical integration (Strange and Newton 2006, 184).

Externalization also results from the firms' tendency to focus on core competence and to otherwise rely on arm's length offshoring. Such a shift permits firms to focus on aspects of the process in which entry is difficult, mainly because of the skill and technology they require. Firms reduce their scope to their core competence not only for the obvious reason that this is what they are best at, but also because this is the aspect of the integrated production process that generates rents and which maximizes the possibility of retaining those rents over time. Thus core competence is difficult to isolate from market power. Discussing Hewlett-Packard personal computers, one Hewlett-Packard executive is quoted:

We own all of the intellectual property; we farm out all of the direct labor. We don't need to screw the motherboard into the metal box and attach the ribbon cable (quoted in Davis 2009, 94).

Another factor driving such externalization is policy, both in the developed and developing countries, in particular the establishment of EPZs, that is special areas in which goods may be imported duty free and most output is for export. EPZs are most common in East Asia and Latin America and are largely concentrated in just two sectors, apparel and electronics. Electronics is considerably more capital-intensive than apparel. The degree of foreign ownership of EPZ-based firms varies across regions, and is much higher in Latin America than in East Asia. Yeats (2001) finds that “much of the offshore assembly processing activity is by locally owned producers rather than with foreign owned manufacturing activities” (Yeats 2001, Box 2). We return to the role of EPZs in GVC upgrading when we analyze economic development in Chapter 7.

4.4 A Classical Approach to Offshoring

4.4.1 Relevance of Ricardo’s Dynamic Gains from Trade

What exactly is at stake in the demotion of the principle of comparative advantage, a doctrine that is almost 200 years old?¹⁹ The principle of comparative advantage is one of the great insights in the history of economics since, as Samuelson (1969) has written, it is logically true – ignoring the conceptual issues previously raised – and it is not intuitively obvious. To suggest limits to the relevance of this principle is to open up the enormous question of what determines the international division of labor in a world characterized by historically unprecedented levels of trade and international capital mobility, in which globalized production is a standard feature of business strategy and in which productive capacity globally continues to expand despite already existing excess capacity. And to reduce the relevance of the positive dimension of the principle of comparative advantage – that is, its relevance as a predictor of the direction and commodity composition of trade – is also to reduce the relevance of its normative flip

¹⁹ There is some debate about the exact origins of the principle of comparative advantage. Thweatt (1976) shows that the idea of comparative advantage predated Ricardo and that it was only on James Mill’s urging that Ricardo included the passages most explicit about comparative advantage. An implication of this is that Ricardo’s central purpose in Chapter 7 was not to explain the efficiency gains from specialization according to comparative advantage but to analyze the implications of trade liberalization for the determination of rent and profit.

side, which is the notion of the optimality and mutual beneficence of free trade.

Whereas economists cite the famous Ricardian principle of comparative advantage to show the static benefits of offshoring to all countries, in our view the case that offshoring benefits the U.S. economy overall relies more firmly on another argument found in Ricardo – his theory of economic growth and especially of the link between international trade and domestic investment.²⁰ In Ricardo's view, the importance of trade liberalization was through its impact on the profit rate. He saw agricultural protectionism in his day as keeping the price of food high, and, as a consequence, pushing up the cost of subsistence and thus the real wage. Relatively cheap food imports would lower the real wage paid by employers and thus raise the rate of profit. A higher profit rate would induce a more rapid rate of investment, which in turn would generate a higher rate of economic growth. As Ricardo writes,

Foreign trade... increases the amount and variety of objects on which revenue may be expended, and affords, by the abundance and cheapness of commodities, incentives to saving and to the accumulation of capital (Ricardo 1981[1817], 133).

Ricardo emphasizes that the increase in profits due to trade results from real wage declines that come with lower priced consumer goods. We refer to the investment and innovation that results from the higher profits from trade as “dynamic gains” from trade. Maneschi (1983, 1992, 1998) emphasizes the importance of this dynamic interpretation of the classics. In this view, free trade can have both dynamic and static efficiency benefits.

Ricardo's point is that trade liberalization can raise the profit rate if it reduces the cost of wage goods, and that this leads to investment and growth. Maneschi's interpretation is summarized in Figure 4.7, which shows a one-sector model (corn as the good, made with labor and corn inputs), with a diminishing marginal product of labor (curve *A*) and rising corn demand with labor force growth (curve *B*). With no international trade (autarky) and labor demand *E*, the profit rate is the ratio of total value of profits minus the total wage bill per unit of output, or *CD/DE* in the figure. With

²⁰ The original statement is Ricardo (1981[1817]).

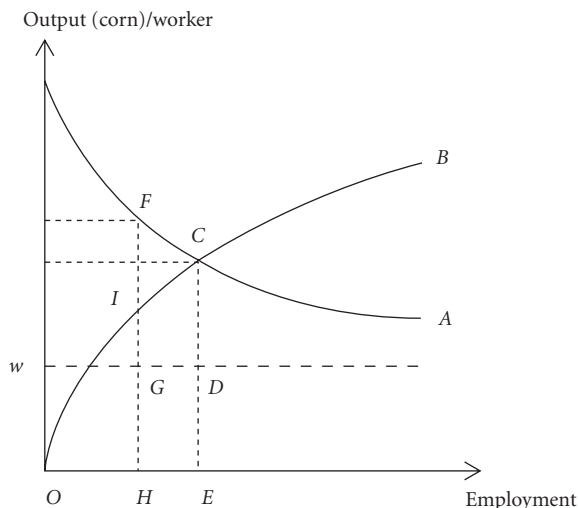


Figure 4.7. Trade and the Profit Rate in Ricardo's Corn Model. *Source:* Modified from Maneschi (1998, 70), *Comparative Advantage in International Trade: A Historical Perspective*, Cheltenham, UK and Northampton, MA: Edward Elgar Publishing Ltd.

trade liberalization and the inflow of imports and assuming no change in the wage, then the firm's wage bill relative to revenues falls, and the profit rate rises to FG/GH .

Ricardo was not alone in emphasizing the role of cost reduction, profits and investment in the analysis of international trade. It was common across the classical economists. Only with the modern neoclassical theory does the focus of the analysis shift to the static gains from trade, that is the productivity gains from a more efficient international division of labor. Marx includes foreign trade as one of five "counteracting factors" that slow or halt the tendency of the rate of profit to fall. According to Marx, foreign trade "cheapens commodities and the means of subsistence" (Marx 1991[1894], 351), and this can raise the rate of profit by raising the rate of surplus value and reducing the cost of circulating capital required for production.

John Stuart Mill (1968[1848]) was also concerned with the tendency of capital accumulation to lower the rate of profit and thus the incentive for further investment and growth, potentially leading from a progressive state of economic growth to what he termed a "stationary state." Mill identified a series of forces that would hold off the arrival of this stationary state

by keeping profit rates up. One channel is productivity growth that, by lowering the cost of production of consumer goods, could lower wages and thus push up the profit rate. Another channel is “imports of cheap necessities” that Mill understood as equivalent to “an improvement in production.” This idea is very similar to Ricardo’s notion that cheap imports of consumer goods could prop up the profit rate (and reduce rents in agriculture).²¹

Mann (2003, 2006) is among the few contemporary analysts to emphasize the dynamic effects of offshoring, associated with downstream effects of input price declines. She looks at offshoring of IT, and 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, *ceteris paribus*, has raised the profit margin. This in turn has led to 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

relatively lower prices for IT products due to the globalization of production raises the rate of return to IT investment, and more projects achieve internal benchmarks that firms use to decide whether to invest (Mann 2006, 18–19).

The positive outcome is the result of the capital deepening that comes from increased business purchases of IT hardware in response to the price reduction from cheap imports. Mann estimates that imports of IT hardware between 1995 and 2002 accounted for 20 percent of the observed decline in IT hardware prices and as a result raised U.S. real GDP by 0.3 percentage points over what it would have been otherwise.²²

Her analysis shows that the strongest case for services offshoring is not found in the static efficiency gains identified in the traditional theory of international trade, but in the dynamic process of capital deepening that can occur when the offshored good is an input to production. Imported intermediates raise profit margins directly and then indirectly through resulting

²¹ Note that Mill did not think that the stationary state was such a bad thing, since it would allow a greater focus on “human improvement” and for a policy goal of reducing inequality through redistributive tax policy, including an estate tax.

²² Mann’s estimate has been lauded by many as proof of the positive long-term effects of offshoring and has been criticized by others for overstating the share of IT capital income in total national income and thus for overstating the implications for GDP growth. For praise, see Bhagwati et al. (2004). For a critique, see Bivens (2005).

productivity gains from greater use of IT hardware. The higher capital intensity of production following the price decline leads to higher productivity, spurring demand, output and employment. Thus the dynamic gains from the globalization of production of IT hardware are the result of the productivity gains made by firms that face lower costs due to relatively inexpensive imports. One can question the elasticity and rate of return estimates cited by Mann, and especially her effort to generalize the IT hardware example to the case of software and business services generally, but her focus on the effect of offshoring on firms' return on investment highlights that dynamic effects of trade may be greater than the static, efficiency effects.²³

Rodríguez-Clare (2007) has a similar finding in the context of a multicommodity Ricardian model. He shows that the "rich country" will experience a wage decline in the short-run, but that a "research effect", whereby rich country firms invest gains from cost saving due to offshoring into research, increases wages for research workers. Akyuz and Gore (1996) emphasize the "nexus" between profits and investment in East Asian development. In this more conventional case, profits are tied to export performance.

4.4.2 Static and Dynamic Gains from Offshoring

The focus on dynamic effects of offshoring puts profitability at the center of the analysis of welfare, in contrast to approaches using social indifference curves or a social welfare function. It goes beyond the focus on direct welfare gains from specialization and improved terms of trade and emphasizes instead the effects of trade on the return on investment and the subsequent impact on investment demand. We have seen that our approach is in the spirit of classical economics, with labor demand affected by trade through its "cheapening of commodities," outsized profits, capital investment, and possible leakages to the financial sector. The classicals did not foresee the development of GVCs and the outsized development of the financial sector, but by placing international trade in the context of investment and economic growth, the classical economists provided a useful starting point for the analysis of offshoring.

The static and dynamic effects of offshoring are summarized in Figure 4.8, which adopts domestic labor demand as the outcome variable. The

²³ See also Amiti and Wei (2009). For a critique of the elasticity assumptions, see Mahoney et al. (2007). For doubts about the magnitude of the productivity growth estimates see Houseman et al. (2010).

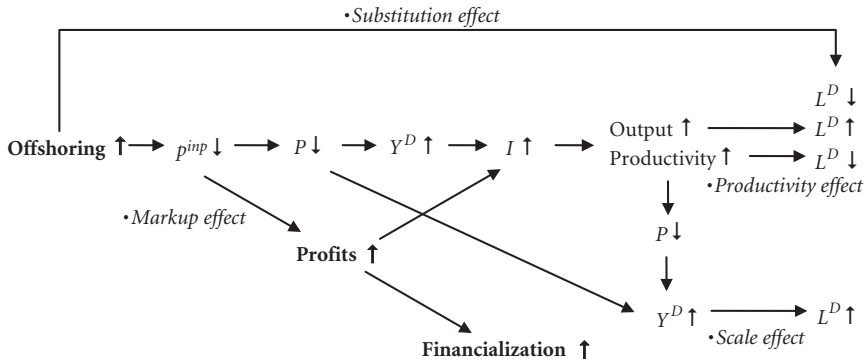


Figure 4.8. Gains and Losses from Offshoring. *Source:* Milberg and Winkler (2010c, 278). Note: p^{inp} = intermediate input price, P = output price, Y^D = demand for output, I = investment, and L^D = demand for labor.

figure is a simplification that considers all labor as one type, and leaves out some potentially significant indirect effects; for example, the increased sensitivity of labor demand to wage changes at home and abroad (that is, an increase in the wage elasticity of labor demand), and the greater use of company threats to move production abroad that reduce wage bargaining power and wages.

Weakening labor demand results from the direct replacement of foreign for domestic labor (the “substitution effect”) and the “productivity effect” which involves reduced demand for labor for each unit of output. Productivity gains from offshoring can occur through various channels, including specialization in more efficient, core aspects of production, and mechanization that can result from increased expenditure on cheaper – imported – inputs. Another important channel is the “scale effect,” where lower intermediates prices are passed on to the consumer in the form of lower output prices, resulting in higher demand for final goods. Labor demand increases with the scale of production, offsetting the negative labor demand effects from substitution and productivity. Whereas the scale effect raises labor demand, scale economies lead, by definition, to less labor demand per unit of output.

The productivity and scale effects are filtered through by a “markup effect,” according to which lead oligopoly firms in GVCs are able to raise the markup over costs, not in the traditional oligopoly fashion of raising product prices, but through the control of input costs. If product markets are purely competitive, then the cost decline is passed through entirely to lower product prices with no change in the markup. In oligopoly product markets,

however, the pass-through is incomplete. With heterogeneous oligopoly firms, the result could be different cost savings through offshoring and different degrees of pass-through across firms in the same industry.²⁴ This effect is implicit in the productivity effect, but in the dynamic approach it is assumed that the productivity gain will lead to higher rates of firm investment in the cheaper inputs as well as in other inputs, and new plant and equipment.

The markup effect is particularly important in light of the creation of oligopsonistic buyer relations in global supply chains that underpinned some shifting in the source of corporate profits, from traditional oligopoly pricing power in product markets to oligopsony power in global supply chains in which lead firms have greater control over input prices and greater flexibility because of the presence of multiple, competing suppliers.

The markup effect, however, leaves open the possibility that not all of the rise in profits results in new investment and labor demand. Corporations may also choose to return their net gains immediately to shareholders through higher dividend payments and share buybacks that create capital gains by reducing the supply of outstanding equity and raising share prices. This is the financialization of the nonfinancial corporate sector, and it constitutes a leakage in the nexus between profits and investment in the analysis of offshoring. This leakage is especially important because recent studies have established that financialization has come at the expense of investment, implying that offshoring has enabled financialization and, in turn, financialization has reduced the dynamic gains from offshoring. Pressures for greater shareholder value – financialization pressures – can thus be connected to the lead firm strategy of promoting market structure asymmetry across GVCs.

Expansion of global production networks has served a dual purpose in the evolving corporate strategy. Cost reductions from the globalization of production have supported the financialization of the non-financial corporate sector, both by raising profits, and by reducing the need for domestic reinvestment of those profits, freeing earnings for the purchase of financial assets and raising shareholder returns. It should not be surprising, then, that the emphasis on maximizing shareholder value and aligning management interests with those of shareholders emerged around the same time – the

²⁴ We are grateful to David Kotz for emphasizing the disequilibrium nature of this process. On partial pass-through of cost changes under conditions of oligopoly, see Blecker (2012) and Arestis and Milberg (1993–1994).

late 1980s – that management experts advised corporations to reduce the scope of corporate activity to focus on core competence. In addition to the direct cost reduction, the move offshore or even its threat can lower wage demands and dampen domestic wages, reinforcing the positive relation between offshoring and the markup.

4.4.3 Conclusion

The scale and productivity effects are both premised on a “markup effect,” according to which the lead firm in the GVC is able to raise the markup over cost, not in the traditional oligopoly fashion of raising product prices, but through the control of input costs. The markup effect, however, leaves open the possibility of financialization, which represents a drain on labor demand and, as we discuss in Chapter 6 may play an important role in the link between globalization and economic insecurity. Therefore, the central question from the classical, dynamic perspective is whether offshoring is leading to higher profits, and if these profits are then being invested and bringing higher productivity and output, or if they are leaking into the purchase of financial assets. The evidence on the United States presented in Chapters 5 and 6 is that the dynamics are being only partially captured. Offshoring is contributing to lower costs of production, higher profits, and a higher profit share, but this is not being matched by a rise in investment that would spur productivity gains and economic growth. Instead, firms in the United States have invested in financial assets and focused on returning value to shareholders through dividend repayments and share buybacks in particular.

The key to the markup effect is the asymmetric nature of market structures along the global supply chain. The effect is enhanced by the ability of the lead firm to successfully induce oligopsonistic input markets along GVCs. Specifically, we have argued that the creation of oligopsonistic buyer relations in GVCs has allowed some shifting in the source of corporate profits: from traditional oligopoly pricing power in product markets to oligopsony power in global supply chains in which lead firms have greater control over input prices and greater flexibility due to the presence of multiple, competing suppliers. We should note again that in addition to the direct cost reduction, the move offshore or even its threat can lower wage demands and dampen domestic wages, reinforcing the positive relation between offshoring and the markup. That is, embedded in the markup effect is the “threat effect” of offshoring, according to which the threat of offshoring

leads to a dampening of wage demands in the domestic labor market. This may be an important aspect of the economic insecurity felt by many workers in the industrialized countries under the new wave of globalization. We turn now to an analysis of the relation between globalization and economic insecurity.