

Inequality and Income Distribution in Global Value Chains

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Abstract: Global Value Chains (GVCs) led by transnational corporations (TNCs) have reshaped the world division of labor over the past two decades. GVCs are pervasive in low technology manufacturing such as textile and apparel as well as in more advanced industries like automobiles, electronics, and machines. This hierarchical division of labor generates wild competition at the lower value-added stages of production, where low wages and low profit margins prevail for workers and contract manufacturers in developing countries. At the top of the hierarchy another kind of competition prevails, centered on the ability to monitor and control intellectual property rights related to innovation, finance, and marketing. We argue that GVCs have had crucial effects on income inequality and the appropriation of rents in modern capitalism.

Keywords: global value chains, rents, inequality, intellectual property rights.

JEL codes: O13, O40, E6

Introduction

Global Value Chains (GVCs) led by transnational corporations (TNCs) have reshaped the world division of labor over the past two decades. The emergence of these vertical production networks was made possible by progress in information and communications technologies, extensive economic liberalization in developing countries, and geopolitical shifts that vastly increased the size of the capitalist labor force. GVCs are pervasive in low technology manufacturing such as textile and apparel as well as in more advanced industries like automobiles, electronics, and machines.

This hierarchical division of labor generates wild competition at the lower value-added stages of production, where low wages and profit margins prevail for workers and suppliers operating out of export processing zones in underdeveloped countries. At the top of the hierarchy

another kind of competition prevails, centered on the ability to monitor and control intangible assets related to innovation, finance, and marketing.

Privatization, deregulation, and the enforcement of intellectual property rights have been major features of the world economy since 1980, enlarging the economic rents appropriated by financial interests, CEOs, and detainers of patents and copyrights. These features were closely related, for the expansion of global production networks, commanded by TNCs from the advanced capitalist core, required both a weaker regulatory environment with regard to trade, investment, and finance and a stronger regulatory environment with regard to the protection of extraordinary profits.

This article comprises 4 sections. Section 1 analyzes different concepts of rent in classical political economy and uses them to introduce key sources of rent in modern GVCs. Section 2 discusses the rise of modern production networks and argues increased outsourcing, together with the strengthening of IPR regimes worldwide, has enlarged rent appropriation for lead firms in GVCs. Section 3 examines income distribution within GVCs and points to evidence suggesting that capital and high-skilled labor in wealthy countries reap increasingly large shares of value-added in world trade. Section 4 concludes the paper.

1. Old and New Sources of Economic Rent

Classical political economy examined two basic forms of economic rent, understood as the fraction of surplus appropriated by landowners. The first, emphasized by Adam Smith and Karl Marx, originated from the power of landowners to charge producers for the use of their land, resulting in prices that exceed production cost (which includes the normal rate of profit). The second, associated with David Ricardo, arises when two different productive techniques are simultaneously in use but the normal price is governed by the inferior technique. Both forms of rent originate from a market price exceeding production cost, but only the first, or absolute rent, as Marx called it, is an independent source of price; it is a kind of monopoly price³, emerging when scarcity, natural or created through anti-competitive practices, gives owners the power to fix price above production cost.

Marx regarded the search for extraordinary profits as the main source of technical progress in capitalism. Though analytically similar to differential rent, extraordinary profits were in Marx's view temporary phenomena systematically destroyed by capitalist competition. Profit was for Marx an unearned income, but he regarded it, unlike absolute land rent, as a reward for the "risk and trouble" of productive investment. Absolute rents, on the other hand, serve no productive or industrial purpose. They exist simply because owners of certain kinds of assets—land, technology, finance and CEO pay, for example—have the power to charge a price above production cost. This kind of unearned income, Thorstein Veblen (1919, p. 76) noted, "has some analogy with the phenomena of blackmail, ransom, and any similar enterprise that aims to get something for nothing".

The distribution of surplus to what Veblen called the "vested interests" of shareholders, monopolists and rentiers is a central feature of modern capitalism. Oligopolistic practices do not prevent competition but real competition amongst giant firms includes business strategies and institutions to exploit rents through patents and copyrights, licenses and proprietary technology. In general, these firms seek to extend the commodity space and time length for the appropriation of extraordinary profits and rents⁴. This includes not only traditional forms of rent like land but also rents obtained through the provision of services in computing, software and finance.

Two sources of rents associated with services, finance and intellectual property rights (IPR), are particularly relevant and will be discussed in more detail below. They did not emerge to stimulate innovation or solve productive necessities but to enlarge the value appropriated by transnational corporations (TNCs) in an era of slower economic growth.

2. Globalization and Corporate Control of Economic Rents

Modern production is "splintered" into stages and tasks performed by international networks of affiliates and independent suppliers (Nathan and Sarkar 2011). Among other consequences, the intense division of labor characterizing production within GVCs has reduced the bargaining power of labor in the advanced capitalist nations. One reason for this is greater competition from low wage workers in poorer countries like China. Another has to do with subcontracting. Modern network firms rely on their ability to outsource, one of the great advantages of which, from the perspective of these firms, is that it allows them to more efficiently segment the labor market. A drawback of the large integrated firms of the postwar era was that,

though they had substantial monopoly power, their employees could demand relatively high wages. As direct employees, these workers could claim a share of the firm's rents or extraordinary profits. Borrowing from Michael Kalecki's discussion of the effect of monopoly power on wages, Nathan and Sarkar (2011, p. 54) note that the rent "earned by the integrated monopoly firm is likely to have an effect on wages in the firm as a whole", from assembly line workers to those with advanced degrees doing R&D.

Rather than integrated firms, TNCs today are more often commanders of supply chains focused on specific tasks like marketing and design, outsourcing most other activities to independent suppliers. The key to this arrangement, and one of the main sources of higher rents, is that the suppliers, usually contract manufacturers in developing countries, operate in much more competitive environments than the lead firms themselves. The latter control intangible assets related to innovation and branding and are thus able to capture the lion's share of rents.

Network production, however, also involves risks for TNCs, namely technological diffusion and competition from suppliers seeking to move up the value chain. To combat these risks, and increase rent appropriation, TNCs have sought to strengthen and universalize patent and copyrights laws. In pharmaceuticals, computers, and other high-tech industries, the "accumulation of private property rights over intangible knowledge" (Pagano and Rossi 2011, p. 10) became a dominant strategy after 1990. These industries took the lead in pressuring governments to put IPR at the center of trade negotiations. The TRIPS agreement, signed in 1994, established for the first time in modern history a set of enforceable, international IPR standards, which included 20-year patents in various technology fields and 50-year copyrights for most copyrightable material.

The strengthening of IPR laws increased rents in fields such as entertainment pharmaceuticals, computer software and high-tech industry in general. With regard to pharmaceuticals, Baker (2015) notes: "Drugs are an extreme case where the patent monopoly rent is largely the price of the product". Other notable sectors are chemicals, biotechnology, and medical equipment.

Finance is another important source of rents in today's global economy. Of particular relevance to the discussion at hand is the proliferation of tax avoidance schemes, a direct result of financial deregulation, particularly the elimination of capital controls worldwide. Firms like Apple and Boeing, aided by banks and consulting firms, employ elaborate transfer pricing and debt

financing schemes to hide income in offshore tax havens and skirt tax obligations. Rather than repatriate income held abroad, they use their immense “foreign” cash holdings to borrow cheaply in financial markets, rewarding stockholders through share buybacks. UNCTAD (2015) notes a marked increase in the use of special purpose entities and offshore financial centers (such as the British Virgin Islands) to shift profits from regions where production actually takes place to low-tax jurisdictions. By the end of 2010, roughly 30% of world cross-border investment flows was routed through offshore hubs, up from less than 20% at the start of the decade.

Citing the case of Google, which paid a tax rate of only 2.4% on its profits outside of the United States in 2009, UNCTAD (2015, p. 200) argues that transfer pricing and debt financing schemes are widespread and result in fantastic gains for TNCs. These tactics “artificially deflat[e] the average rate of return of foreign investments”, thus reducing, or eliminating entirely, tax obligations in the firm’s country of origin.

Developing countries participating in GVCs are particularly vulnerable to such tax avoidance schemes. UNCTAD (2015, p. 203) estimates \$450 billion in profits is shifted yearly from developing countries to offshore entities, leading to revenue losses on the order 10% of total tax payments made by foreign affiliates in developing countries. Illegal flows, involving abusive transfer prices and non-existent foreign loans, were particularly large out of Mexico and Costa Rica, two of Latin America’s most active participants in GVCs. “In the cases of Costa Rica and Mexico”, the study notes, “the large scale of illicit financial outflows is related to these countries’ participation in global value chains”⁵.

Veblen’s concept of “goodwill” offers an interesting perspective on the technological and financial rents alluded to above. Veblen (1904) included in his definition of goodwill “trademarks, brands, patent rights, copyrights” as well as intangible assets held by banks and financial interests. “All these items”, Argitis (2016, p. 841) notes, “provide a differential advantage to their owners, but they are of no aggregate advantage to the community. They constitute wealth to the individuals concerned (differential wealth), but they form no part in the wealth of nations”.

The implications of this institutional evolution in mature capitalism for developing economies—the subject of Section 3—are vast. Historically, backward economies nationalized and exerted control of economic rents in land, technology and finance for developmental or distributive purposes. In developmental states, these rents were appropriated by domestic firms in

industrial activities or were transferred to social groups by public policies⁶. Deregulation and privatization led to the dissolution of these protectionist rents and their appropriation by transnational corporations through market forces. The emergence of global, rules-based organizations like the WTO and the internationalization of IPR law make technological catch-up costlier and more difficult for developing countries. This is a crucial development, for as the Brazilian economist Celso Furtado (1978, p. 152) noted decades ago, “technological control is the bedrock of the international power structure. Reduced to its ultimate consequences, the fight against dependence is an effort to nullify the effects of the monopoly of this resource” by the advanced capitalist nations.

The new division of labor in global manufacturing, backed by an institutional structure that reinforces the technological and financial power of large TNCs, generates an uneven value distribution between activities (mainly in services) where economic rents are pervasive and activities (mainly in manufacturing) where competition is fierce. Though power asymmetries within GVCs are widely recognized (Milberg and Winkler 2013; Gereffi 2014), current estimates of value appropriation within GVCs cover only part of this process. As argued in the next section, hidden incomes in GVCs are pervasive.

3. Winners and Losers in GVCs

World network trade is dominated by TNCs based in wealthy countries and characterized by regional blocks centered around the US, Japan, Germany, and, increasingly, China. Describing the “technological asymmetry” within GVCs, Baldwin and Gonzalez (2013) argue global production is essentially divided into “headquarter” economies located in Japan and the West and “factory” economies located in Asia and Eastern Europe. “[F]irms in the headquarter economies...arrange the production networks; factory economies provide the labor” (p. 1696).

GVCs expanded rapidly after 2000, and this coincided with an increase in the technological sophistication of developing country exports. However, as UNCTAD researchers pointed out in the early 2000s, this increasing sophistication was largely a “statistical mirage”, as it involved a heavy reliance on imported inputs. In most developing countries, “exports have increased substantially without having led to comparable increases in DVA, therefore weakening the production-linked gains commonly expected with export-led growth” (UNCTAD 2015b, p. 30)⁷.

Wealthy countries retain much larger shares of their gross exports in the form of domestic value-added than the poorer “factory” economies. In 2011, the foreign value-added (FVA) share in gross exports for the United States, the United Kingdom, Germany, Japan and France ranged between 15 and 25%, compared to 35-45% in Eastern Europe and Southeast Asia⁸.

Given these trends, it is perhaps unsurprising that GVC income since the mid-1990s has become increasingly skewed in favor of capital and high-wage earners in wealthy countries⁹. Timmer et. al. (2014) find that the share of value-added accruing to capital increased between 1995 and 2011 in almost two-thirds of the over 500 value chains covered in their study. The value-added share of high-skilled workers, which includes managers and CEOs, increased in 92% of the chains, while the low-skilled labor share fell in an astounding 91% of the chains. In terms of gains by factor groups, high-skilled laborers in wealthy countries were the biggest winners, with a positive increase of 5%. The biggest losers were low-skilled workers in developing countries, whose share in value-added fell by 6.3%, the largest variation (positive or negative) among all factor groups analyzed.

Over half (55%) of value-added generated within GVCs, the authors add, accrues to just 21 high-income countries: the United States, Japan, South Korea, Taiwan, Australia, Canada, and the 15 pre-2004 members of the European Union. Though significant, this result is below estimates based on data supplied by the Organization for Economic Cooperation and Development (OECD) and well below Banga’s (2014) estimate of 67% accruing to OECD countries.

Timmer et. al.’s calculations, however, likely underestimate the share of GVC income appropriated by wealthy countries. First, the study is restricted to manufactured goods, and thus does not analyze income distribution within value chains for services or agricultural commodities like coffee and chocolate, in which retailers from wealthy countries earn most of the value-added. Second, the national accounts data used to estimate GVC income only track payments for produced assets, ignoring certain types of income related to the use of intellectual property. Third, value-added trade data use basic or ex-factory gate prices for final products in manufacturing, excluding distribution and retail margins. The problem with this is that much of the income earned within GVCs surfaces only in the retail stage of the value chain, where lead firms often exercise strict control and obtain large premiums on sales to consumers. For brands like Apple, profits reflect control over intangible assets related to product design and technology, and “the use of these

intangibles is typically not compensated for by a direct money flow from the users” (Timmer et al. 2015, p. 593). Finally, and perhaps most importantly, value-added trade data are compiled on a domestic rather than national basis, meaning that if a French multinational operating in Vietnam exports a machine to Japan, the capital income is credited entirely to Vietnam, not France. Given that foreign direct investment (FDI) stocks and income are overwhelmingly from high-income countries, estimates of value-added trade on a domestic basis will inflate the developing world’s share¹⁰.

Measures to improve data collection, such as including estimates for FDI income, will not necessarily solve these problems. As noted in Section 2, TNCs often hide foreign income for tax purposes and avoid repatriation to their countries of origin. These hidden incomes will not appear in FDI data, obscuring the extent to which the gains from global trade are lopsided in favor of wealthy countries.

4. Conclusion

The ability of big business to extract technological and financial rents—to “get something for nothing”, as Veblen put it—explains much of the social and economic polarization of modern capitalism. The rise of GVCs led by a select group of powerful corporations has created a vast and unequal international division of labor dividing the world into “headquarter” economies located in Japan and the West and “factory” economies located in Southeast Asia, Eastern Europe, and Latin America (Baldwin and Gonzalez 2013). Tangible activity, mostly in manufacturing and assembly, takes place in developing countries, while intangible intellectual work, mainly in services (R&D, design, finance and marketing), is concentrated in wealthy countries. The “core business” of every TNC, irrespective of its particular branch, is to control and capitalize on these intangible assets.

The legislative and institutional changes associated with globalized trade and finance have increased corporate mobility in two key ways: first, they have made it easier for firms to outsource activities and relocate facilities to lower-wage areas, putting downward pressure on wages in their countries of origin; second, they have made it easier for firms to transfer funds around the world and shift accounting profits to low-tax jurisdictions. This increased mobility has enlarged rents for large firms and helped redistribute income along the value chain from productive workers to shareholders and salaried executives.

Footnotes

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3. “The rent of land, therefore, considered as the price paid for the use of the land, is naturally a monopoly price. It is not at all proportioned to what the landlord may have laid out upon the improvement of the land, or to what he can afford to take; but to what the farmer can afford to give.” (Smith 1976, vol. 2, p. 161 – I.xi.a5). Smith continues: “The price of monopoly is upon every occasion the highest which can be got. The natural price, or the price of free competition, on the contrary, is the lowest which can be taken, not upon every occasion, indeed, but for any considerable time together. The one is upon every occasion the highest which can be squeezed out of the buyers, or which, it is supposed, they will consent to give. The other is the lowest which the sellers can commonly afford to take, and at the same time continue their business.” (Smith 1976, vol. 2, p. 78,9 – I.vii.26, 27).

4. As Veblen recognized, innovation is a collective endeavor. Rather than a “creative achievement” of self-sufficient individuals or firms, technical progress is a “joint possession of the community” (Veblen 1919, p. 57). This observation maintains relevance today, not least in the US, where new technologies are largely the result of state funding and planning (Mazzucato 2014).

5. Analyzing illegal trade invoicing in Latin America, ECLAC (2016, p. 125) observes: “[I]llicit financial flows have increased sharply in the last decade, with outflows from trade misinvoicing rising by an average of some 9% a year...”

6. Kaplinsky (1998) deals with competitive advantages that emerge from several sources of economic rents that he examines (resource rents, policy rents, human resources rents,

organizational rents, relational rents, product and marketing rents, infrastructural rents, and finance rents).

7. In the 1970s, South Korea's export share of GDP was similar to that of Malaysia and Thailand today, but the domestic value-added (DVA) share of its gross exports was well over 75%, much higher than any Southeast Asian country today. Between 1995 and 2011 the domestic value added (DVA) share of gross exports fell in every Asian country except the Philippines and Indonesia.

8. Results based on authors' analysis of the OECD-WTO's database on Trade in Value-Added (OECD-TiVA).

9. The World Input-Output Database project (WIOD), funded by the European Commission, along with the OECD-WTO's database on Trade in Value-Added (OECD-TiVA), are the main sources of data value-added in GVCs. Other databases exist, but are either not publicly available or provide data for a limited set of countries.

10. Dedrick et. al. (2010) took the opposite and arguably more realistic approach in their well-known studies of the iPod and iPhone supply chains (crediting income to the country of origin of multinational firms), leading them to conclude that China retains almost none of the value-added created in these chains even though Chinese workers provide almost all of the labor.

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