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Classical and Neoclassical Theories of Offshore Outsourcing

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Abstract: We compare neoclassical and classical theories of outsourcing. The former is premised on an improved international division of labor and predicts a rise in the return to skill. This contrasts with the classical model, which emphasizes the distribution of income between labor and capital and its implications for investment and economic growth. But the classical model needs amendment in the contemporary world: International capital mobility, wage stagnation and vertical specialization indicate that the direction of trade depends on both absolute and comparative advantage. Moreover, the classical perspective must be modified to allow for the leakage of profits into financial assets.

1   Introduction

In twenty-first century capitalism, production of goods and services is increasingly organized internationally, within networks of production typically governed by lead firms. The question of the social consequences of offshore outsourcing (herein offshoring) has become one of the central issues of our day. How these consequences are understood, however, depends on the theoretical perspective adopted. In the title of their often-cited paper, Grossman and Rossi-Hansberg (2006a) write "it's not wine for cloth anymore," signaling that Ricardo's trade model is no longer relevant.

Grossman and Rossi-Hansberg propose instead a theory of "task trade" in which goods and services that are components of a final good may now be traded internationally. In this paper we accept the Grossman and Rossi-Hansberg premise, but propose that there are alternative approaches – classical and neoclassical – to

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the modeling of positive and normative aspects of offshoring. The purpose of this paper is to bring together disparate classical contributions to the study of offshoring that provide the foundation for a new way of understanding globalization.

The neoclassical theory of international trade largely focuses on efficiency gains premised on an improved international division of labor and on a rise in the relative return to skill. Capital plays no role, either because it has been dropped from the two-factor model in favor of high-and low-skill labor or because its return is assumed equalized globally due to heightened international capital mobility. This contrasts with the classical perspective, which focuses precisely on the distribution of income between labor and capital.

We propose that the "disappearance" of capital from many neoclassical models is a limitation, since it shifts the focus away from profits and the profit share that are important for understanding innovation and economic growth. In contrasting these two theoretical traditions, we emphasize the impact of offshoring on the distribution of income between labor and capital and the implications of this for long-run growth.

The paper has four sections. Section Two reviews the neoclassical theory, which builds on the traditional Heckscher-Ohlin model of trade. In Section Three we summarize the classical perspective on trade, with a focus on how offshoring leads to cheaper imports –inducing a rise in the profit rate and profit share, and the dynamic gains from trade when higher profits are invested in innovation and employment. We then discuss a number of contemporary extensions of the classical model, including international capital mobility, vertical disintegration and financialization. Section Four concludes.

2 Global Capitalism without Capital: The Neoclassical Theory of Offshoring

2.1 The Heckscher-Ohlin-Wood Model of Trade

The neoclassical theory of international trade is often viewed as a friendly generalization of the classical model. Whereas Ricardo's model had just one factor – labor – the Heckscher-Ohlin (H-O) model has two factors – traditionally capital and labor. The results are the theorems on the direction of trade (the H-O theorem) and shifts in within-country income distribution and production (the Stolper-Samuelson theorem and the Rybczinsky theorem, respectively), in addition to the dramatic theorem on the global equalization of wage and profit rates (the factor price equalization theorem).

The reason given was that it captured the world of today, as Wood (1994a) put it in the subtitle of his book <u>North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World</u>. Wood (1994a) used factor content analysis to show that shifts in world trade patterns increasingly involved high-skill, labor-intensive exports from the industrialized countries and low-skill, labor-intensive goods and services from the developing countries.

In Wood (1995), he explicitly re-specifies the H-O model to reflect the North-South situation. Instead of considering the two-factor model to be about capital and labor, Wood defines the two factors as skilled and unskilled labor, and reinterprets all the classic postulates of the theory accordingly. Under the new interpretation, the factor price equalization theorem and the Stolper-Samuelson theorem predict that trade liberalization would lead to a rise in the wage of skilled workers relative to that of the unskilled in skill-abundant industrialized countries – precisely what was being observed in the 1990s. Given Wood's great influence in rehabilitating the H-O model, we refer to the model as the Heckscher-Ohlin-Wood (herein H-O-W) model.

The H-O-W model of international trade was rehabilitated after more than a decade in which other sources of international trade – including imperfect competition and trade in varieties, increasing returns to scale, and strategic trade policies by governments – were more important than comparative advantage in determining the commodity composition and gains from trade. Moreover, the skills-biased labor demand shift resulting from the liberalization of trade within the H-O-W framework was seen as reinforcing the skills bias in labor demand due to technological change, in particular the introduction of computer technologies. There was considerable debate over the relative impact on wage inequality from these two sources, trade and technological change.

Wood (1994b) justifies the move further, arguing that since capital is internationally mobile, and thus should tend to earn a similar rate of return globally, capital cannot be the basis for comparative advantage. It is skills, or knowledge – embodied in humans – that determines the pattern of international trade. Wood notes, furthermore, that since capital intensity is a positive function of the wage and thus that countries with more high-skill labor and thus higher wages will also be those with relatively greater capital intensity.

2.2 Models of Offshoring in a Comparative Advantage Framework

The recognition of the importance of trade in intermediates in the late 1990s occurred at the same time that the H-O-W model was being rehabilitated. As a result, the early models of offshoring drew on the comparative advantage framework. From this perspective, offshoring is the outcome of a more refined international pattern of specialization as dictated by relative factor endowments and made possible by a reduction of barriers to trade (tariffs, transportation and communication). Trade liberalization in a world where fragmentation is possible is thus expected to have the usual Stolper-Samuelson effect on relative factor prices and an overall beneficial effect on social welfare.

2.2.1 Offshoring as Fragmented Production

Fragmentation is modeled as isolated in one sector, in which the final good is produced using the inputs from the fragmented supply base. In these models, fragmentation is modeled like technological progress that lowers the cost and raises the efficiency of managing a global supply chain, with the outcome dependent on factor endowments, the factor intensity in the fragmented sector, and the factor intensity of the fragment being offshored. From this perspective, the fragmentation of productionenhances the gains from trade beyond those achieved when trade is limited to final goods and services. According to Arndt and Kierzkowski (2001: 2, 6):

> "Spatial dispersion of production allows the factor intensity of each component, rather than the average factor intensity of the end product, to determine the location of its production. The international division of labor now matches factor intensities of components with factor abundance of locations...[E]xtending specialization to the level of components is generally welfare-enhancing."

Extensions along the lines of the insight of Arndt and Kierzkowski are general equilibrium models typically exploring the effect of fragmentation in one sector for a small economy. The models do not assume factor price equalization (since this eliminates the basis for cost-saving offshoring), but the results of these models are ambiguous. As Baldwin and Nicoud (2007: 3) write, these models"present a gallery of special cases that firmly establish the ambiguous sign of the general equilibrium price, production, trade and factor price effects".

As in the standard trade theory regarding final goods, the expansion of offshoring will bring winners and losers within each country (the Stolper-Samuelson effect) and the overall gain to the country (a potential Pareto improvement) depends on the possibility of compensation of losers by the winners. The apparent bias against low-skill labor in much of the trade expansion of the past decade has led to a host of empirical studies of the impact of offshoring on the wages of high-skill workers relative to low-skill workers.

Arndt (2001) shows the efficiency gain by analyzing a shift from integrated to fragmented production in a small, open economy using the H-O model with two

goods, *A* and *B*, and two factors of production, *K* and *L*. Suppose the country is capital abundant and thus in free trade will export the capital intensive good *B* and import the labor intensive good *A*. Factor prices are given by world goods prices. If the importable good can now be broken into two components, a_1 and a_2, where a_1 is more capital intensive, then the country will now produce a_1 and import a_2. The result is an increase in productivity in sector *A*, which shifts out the production possibility frontier and, under the usual assumption of full employment, implies an increase in national welfare. The scenario is depicted in Figure 1.
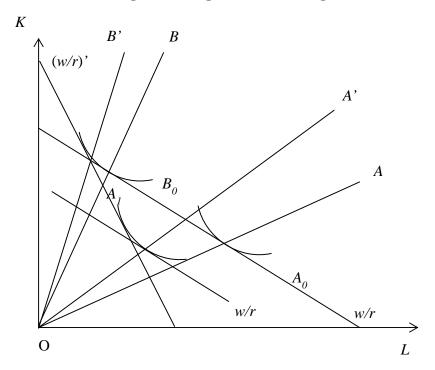
Figure 1: Integrated versus Fragmented Production

Source: Arndt 2001: 77.

Deardorff (2001a, b) uses a H-O framework with two countries, two factors, many goods, and Cobb–Douglas technology and preferences. Cost-saving offshoring is modeled by assuming that the countries' endowments lie in different diversification cones. Deardorff (2001a, b) shows that the capital-to-labor-ratios and the domestic weighted average of the goods' factor intensities determine the wage ratio in both countries. Fragmentation changes the factor intensity of the

produced goods and can cause converging or diverging relative factor prices. The outcome is determined by the factor intensities of the fragments and of the original technology (Baldwin and Robert-Nicoud 2007).

2.2.2 Offshoring as "Trade in Tasks"

However, fragmentation models face some problems, as listed by Grossman and Rossi-Hansberg (2006b):

> "[R]esults depend on details about which production process can be disintegrated, whether factor price equalization holds initially, and what are the absolute and relative factor endowments in each country in relation to world demands for the various goods. It is not easy to glean general principles from the cases that have been considered. Nor do the models lend themselves readily to analysis of new issues, because firms in the model make no marginal decisions about how to organize production and there are many different configurations that could characterize an equilibrium. Moreover, the modeling of fragmentation as a discrete choice makes it difficult to study the evolution of task trade over time (Grossman and Rossi-Hansberg 2006b: 4)."

Therefore, models have started to focus on trade of a continuum of inputs. The production of the inputs can happen in different locations and its organization can vary continuously. Some inputs can be produced offshore and traded, but the offshorability varies and depends on the kind of input. Ultimately, the cost of the marginal input is equalized across the different locations (Grossman and Rossi-Hansberg 2008). Yi (2003) and Grossman and Rossi-Hansberg (2008) have modeled trade in costly inputs (the former) or tasks (the latter). Feenstra and Hanson (1996) used another approach to determine the set of inputs produced offshore, which in their model depends on the countries' factor endowments.

Grossman and Rossi-Hansberg (2006a, 2006b, 2008), in a widely cited set of papers, assert that globalization is no longer characterized by the traditional image of an exchange of "wine for cloth," but instead by what they term "tasks trade." In their model of offshoring, the production process includes a set of intermediate tasks that can be produced by low-skill or high-skill labor. There are two countries, home and foreign, and there are two goods, a skill-intensive and a low skill-intensive good. The domestic country exports one of the two goods (e.g., the skill-

intensive good) and imports the other good, but it might also have a second import-substituting sector that produces the other good. Both sectors are assumed to be perfectly competitive.

In the first scenario only low-skill tasks can be offshored. A drop in the cost of offshoring – presumably due to technological improvements in transportation and communication – can affect low-skill labor through three channels: (1) the productivity effect; (2) the labor-supply effect; (3) and the relative-price effect. While offshoring first reduces the demand for low-skill labor at home since foreign workers substitute for domestic workers, a positive productivity effect occurs because lower unit costs due to offshoring act as an incentive for both sectors to expand, more so for the low skill-intensive than for the skill-intensive sector. This results in a growing demand for low-skill labor and in higher low-skill wages.

The labor-supply effect refers to the substitution of foreign for domestic low-skill labor due to offshoring, making some low-skill workersredundant that previously produced these tasks. This creates imbalances between labor supply and labor demand (at primary factor prices), output levels, and techniques of production. The effects depend on the extent of offshoring. The relative-price effect refers to changes in output composition (at initial prices) due to offshoring, since the two sectors of the economy have an incentive to expand. If the country is large, it influences world markets at its initial prices leading to a change of the relative wages.

The authors distinguish between offshoring in a small economy (which is unable to influence world prices) and in a large economy. Since the model assumes full employment, changing factor supplies have no influence on factor prices, and thus in the small economy case only the productivity effect remains. Low-skill workers reap all the benefits from increased offshoring possibilities in the form of wage increases, whereas high-skill wages are unaffected.

In the case of a large economy, the expansion of production of labor-intensive goods at initial prices raises world relative prices of skill-intensive goods and

increases the home country's terms-of-trade. This change in relative prices leads to wage increases of high-skilled labor and to wage reduction for low-skill workers in both countries, comparable to the Stolper-Samuelson-effect. There is still no labor-supply effect due to the assumption of incomplete specialization in both economies. The net effect on the wages of low-skill workers in the developed country is ambiguous due to the two opposing effects.

The labor-supply effect can be studied in a small open economy, characterized by a simple H-O world with two factors that produce only one good. Besides the positive productivity effect, the authors derive a negative labor supply effect. The net effect is more likely to be positive if the share of low-skill labor in total costs is large, if the elasticity of substitution between low- and high-skill labor is high, and if there is a sufficiently large decline in costs of offshoring. Finally, the authors consider a second scenario, namely offshoring skill-intensive tasks and also address the possibility that offshoring is not linked to skill-levels.

The key finding of Grossman and Rossi-Hansberg (2006a) is that the productivity effect of offshoring low-skill intensive tasks was so large in the U.S. over the period 1997-2004 that it offset the negative effect on wages from the relative price effect and the labor supply effect, resulting in the surprising result that increased offshoring over this period led to an increase in the wages of low-skill domestic workers. The premise is that when the cost of offshoring declines – leading to an increase in trade in tasks – this is equivalent to an increase in productivity of low-skill workers that generates an increase in their real wage.

The Grossman and Rossi-Hansberg model goes beyond the standard 2x2x2 H-O-W approach to allow for tasks that are produced by other factors of production, such as capital or other categories of labor. Skill-intensive tasks are offshorable, a growing feature of the world economy today. And even low-skill tasks vary in their offshorability in the model, another important issue in contemporary discussion of offshorability.

But even the Grossman and Rossi-Hansberg model, perhaps the most sophisticated and flexible of the neoclassical models, still suffers from some of the same limitations as most contemporary models of offshoring. For one, the model assumes full employment and thus is not able to consider the effect of offshoring on employment. This model should not be singled out for this criticism. Most trade models assume full employment, so that adjustment to imbalances or shocks of any sort occurs through changes in wages or the exchange rate.

The "productivity effect" is also questionable, although again this is not a feature unique to their model. If we consider that the decline in domestic labor demand is matched by foreign labor demand, then the productivity of operations would be unchanged. Houseman, Kurz, Lengermann and Mandel (2010) criticize the exclusion of foreign labor from the calculation of productivity gains. Shifting to less productive labor may lower costs, they argue, but it also lowers labor productivity. They estimate an adjusted labor content to include offshored labor and conclude that the omission of this labor component led to an overstatement of U.S. productivity gains from offshoring by approximately 15 percent per annum over the period 1990-2000.

Lastly, the Grossman and Rossi-Hansberg model, like most trade models adopted since the mid-1990s, ignores capital. This has important implications. The first is the effective disappearance of the firm and its profits from the discussion of offshoring. This is a limitation, since the focus on profits and the profit share is important for understanding innovation and economic growth. Moreover, it is precisely as part of the bigger role for firms to organize production and reduce production costs that offshoring has played such an important role.

3 Trade, Profits and Capital Accumulation: Towards a Classical Theory of Offshoring

3.1 The Classical Theory of Trade

While economists cite the famous Ricardian principle of comparative advantage to show the static gains from offshoring to all countries, in our view the benefit of offshoring 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.[3]   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).

As Steedman (1979) and others pointed out decades ago, the rendition of the history of the theory of international trade is a slanted view of the classical model. Ricardo's great interest in international trade was not driven by an interest in mutually beneficial gains from specialization and trade that follow when production shifts to the sectors that use relatively intensely that factor which is relatively abundant. Maneschi (1983, 1992, 1998) has shown in great detail that Ricardo's focus was on the effect of trade liberalization on the profit rate and its knock-on effect on the rate of accumulation, as Ricardo writes in Chapter 7 of the Principles. He notes that "free trade in corn would thus have dynamic benefits in addition to the static efficiency ones in comparative cost theory" (Maneschi 1992: 433). We
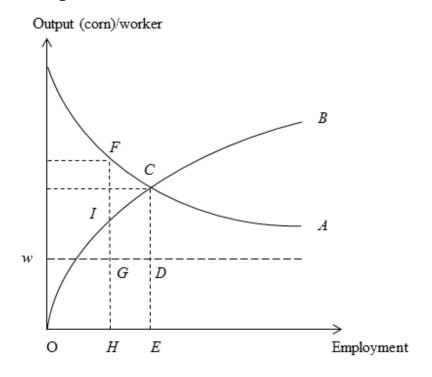
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[3] The original statement is Ricardo (1981[1817]).

refer to the investment and innovation that result from the higher profits from trade as "dynamic gains" from trade.

Maneschi's interpretation is summarized in Figure 2, 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 trade liberalization and the inflow of imports and assuming no change in the wage, then the firms wage bill relative to revenues falls, and the profits 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. 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 (1991[1894]: 351), foreign trade "cheapens commodities and the means of subsistence," and this can raise the rate of profit by raising the rate of surplus value and reducing the cost of circulating capital (wages) required for production.

Figure 2: Trade and the Profit Rate in Ricardo's Corn Model

Source: Based on Maneschi 1998: 70.

Mill (1968 [1849]) is 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 was 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 necessaries" 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 will lower the real wage and raisethe profit rate and, when the imports are agricultural products lead to a reduction in rent earned by landowners.

3.2 Classical Considerations in the Contemporary Period

In the remainder of this section, we discuss some well-established aspects of 21st century world economy which should be part of any relevant rekindling of the classical theory of international trade, namely international capital mobility and the stagnation of wages, vertical disintegration of production and financialization. Before turning to these specific issues, we should note that a few recent studies address the issue of dynamic gains from trade. Akyuz and Gore (1996) emphasize the "nexus" amongexports, profits and investment in East Asian development. In a Ricardian model of offshoring, Rodriguez-Clare (2007) finds 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, increasing wages for research workers.

Mann (2003, 2006) looks at offshoring of information technology (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)."

Imported intermediates raise profit margins directly and then indirectly through resulting productivity gains from greater use of IT. This, in turn, should spur growth in demand, output and employment.[4]

3.2.1 *Mobile Capital and Stagnant Wages*

For the classical economists, real wages are based on a subsistence consumption bundle and even in the absence of countervailing factors are assumed

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[4] For a critique of the elasticity assumptions, see Mahoney, Milberg, Schneider, and v. Arnim (2007). For doubts about the magnitude of the productivity growth estimates see Houseman et al. (2010).

to remain relatively constant. In the case of constant real wages, allowing for international capital mobility can result in absolute advantage determining the trade pattern, not comparative advantage. Brewer (1985) shows this in a model of two countries (1 and 2) and two goods (*A* and *B*).

Production, which requires capital and labor, takes time.   Technology is assumed to exhibit constant returns to scale.   There are no trade distortions, implying a single world price for each good. Both labor and capital are measured in real terms, that is, in terms of the bundles of goods they can buy. Labor is assumed to be immobile, which means that wages can be persistently different between the two countries. Wages are assumed constant in both countries, presumably the result of a persistent excess supply of labor. Capital can move internationally, which is captured in the model as a transfer of a certain number of standard consumption baskets and matched by an equivalent change in the value of the capital stock.

By definition, country 1 has a comparative advantage in good *A* if its relative productivity advantage in the production of good *A* is higher than the relative productivity of good *A* in country 2. Country 1 has an absolute advantage in good *A* if the wage costs of producing good *A* are lower than in country 2.

Suppose that country 1 has both a comparative and absolute advantage in good *A*. Brewer considers four scenarios, depending on whether wages are fixed or flexible and whether capital is internationally mobile or not. Here we take up only the case of fixed real wages and internationally mobile capital. Capital will flow to where its return is the highest, and each good will be produced only where it is most profitable.   That is, good *A* will be produced in country 1 if it has an absolute advantage over country 2. If each country has an absolute advantage in one good, then both countries specialize completely according to comparative advantage, which gives the same prediction as comparative advantage.

If country 1 has an absolute advantage in both goods, then all capital will flow into country 1 and country 2 will have zero output and employment in equilibrium. This is the case where, as Joan Robinson put it, country 2 is "undersold all around".

Cost reductions in one location, through technological progress or a decline in wages, can cause a reversal in the direction of trade for a given good or, as Brewer puts it, "a movement of industry with no replacement." Similarly, shifts in demand can lead to permanent unemployment.

3.2.2 Vertical Specialization

Besides its clear contemporary empirical relevance, "task trade" or "vertical specialization" has implications for the classical theory of trade because it challenges our understanding of how countries fit into the international division of labor. In his Ohlin Lectures, entitled "Globalization and the Theory of Input Trade," Ronald Jones (2000) explains how the introduction of trade in intermediate goods alters the determination of the composition of trade. Jones writes,

> "Once international mobility in an input is allowed, absolute advantage becomes a concept that takes its rightful place alongside comparative advantage in explaining the direction of international commerce (Jones 2000: 7)."

Jones's model is what he calls an "augmented Ricardian" trade model with two small (i.e. price-taking) countries and two goods, and in which capital is a physical input for one of the goods and is located in different countries, but which can move from one country to another in response to changes in its rate of return in different countries. Assuming perfect competition implies that no positive economic profit can be made producing either good. Thus for country 1, the cost (and thus price) of goods A and B are given as follows:

$$w^1 L_A^1 = P_A \quad \text{and} \quad w^1 L_B^1 + r^1 L_B^1 = P_B$$

Jones considers two possibilities. In the first, country 2 is assumed to have lower labor and capital productivity. In this case, specialization and trade follow Ricardian comparative advantage, that is, according to the pattern of relative labor productivities.In the second scenario, country 2's lower labor productivity is offset in the B sector by its high capital productivity. In this case, capital will move to earn the higher return in country 2 and that country will specialize in and export good B irrespective of the comparative advantage.

According to Jones, "[O]nce international mobility in an input is allowed, absolute advantage becomes a concept that takes its rightful place alongside comparative advantage in explaining the direction of international commerce (Jones 2000: 7)." Baldone, Sdogati and Tajoli (2006) make a very similar argument, showing with a numerical example that with the international fragmentation of production disintegration of production, autarky positions become delinked from the final division of labor. The result of such fragmentation, the authors find, is "a lessening of the power of the concept of comparative advantages when it comes to explaining both merchandise composition and directions of trade – while it is the concept of absolute cost advantage to become increasingly relevant" (Baldone et al. 2006: 2).

3.2.3   Financialization

The focus on dynamic effects of offshoring puts profitability at the center of the analysis of welfare. The classicals did not foresee the development of global value chains nor the expansion of a financialized non-financial sector, but by placing international trade in the context of investment and economic growth, the classical economists provided a useful starting point not only for the analysis of offshoring, but also for a connection between the real and financial sides of the economy, something greatly lacking in the run-up to the recent economic slump.

The dynamic gains from offshoring discussed above do not accrue automatically with the reduction of input costs and rise in the profit share. Financial investment by non-financial firms represents a significant leakage from the potential dynamic gains from offshoring. This has been particularly marked in the U.S, with the massive use of retained earning for the purpose of share buybacks, dividend payments and merger and acquisition activity. Offshoring has thus supported the financialization process that has been part of the overall economic crisis.

The financialization of the non-financial corporate sector has been a somewhat hidden dimension of the economic crisis, since so much of the focus has been on the

financial sector itself. Studies of financialization tend to leave as implicit the link to production and investment. In addition, analysis of GVCs often leaves aside the financial implications. Milberg and Winkler (2010, forthcoming) argue that the globalization of production and financialization are fundamentally connected. Financialization has encouraged a restructuring of production, with firms narrowing their scope operations strictly to an area of "core competence." The rising ability of firms to disintegrate production vertically and internationally has allowed them to maintain cost markups – and thus profits and shareholder value – even in a context of slower economic growth. The point is not that globalized production triggered financialization, but that global production strategies have helped to sustain financialization.

4   Back to the Future: Extending the Classical Trade Model for the 21st Century

We showed that the neoclassical theory of international trade largely focuses on efficiency gains premised on an improved international division of labor and on a rise in the relative return to skill. The H-O-W, like the H-O model before it, is a static model of efficiency. We proposed that the "disappearance" of capital from many of the models is a limitation, since it shifts the focus away from profits and the profit share that are important for understanding the impact of trade on innovation and economic growth. Thus efforts to link trade to growth from a neoclassical perspective have never been very effective.

This contrasts with the classical model of trade, which focuses on the distribution of income between labor and capital and its implications for investment and economic growth. The point of the "cheapening of commodities" that offshoring produces is to raise the rate of profits that induces an increase in the rate of accumulation.

We argued that the classical model also needs amendment in the contemporary world, both its positive and normative dimensions. First, international capital mobility andwage stagnation and vertical specialization all

indicate that the direction of international trade depends on both absolute and comparative advantage. Second, while the classical emphasis on the dynamic gains from trade is preferable to the neoclassical view, the classical perspective must be modified to allow for the leakage of profits into financial assets.

As often in the history of economics, the positive and normative sides are hard to disentangle from each other. In the case of international trade, the governance of global value chains is connected to shareholder governance.   Offshoring has permitted firms to focus on "core competence," thus reducing labor demand and investment at home while raising the return on equity. 21st century capitalism has experienced a finance-bias that is more important than the skills-bias that is so much the emphasis of international economics today.

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