Some Alternative Catching Up Strategies for Developing Countries*

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Abstract

This paper identifies a couple recently very popular, alternative strategies for developing countries trying to catch up with rich countries. These include foreign direct investment in the forms of hosting multinationals’ offshoring activities and acquisition of internationally well-known brands through cross-border mergers. The logic behind these strategies is analyzed and some cases are studied. Possible side effects such as the widening of income inequality, environmental degradation and a lowering of labor standards are also examined.

JEL Classification: F21, F23

Key words: Catching up, FDI, Offshoring, Outsourcing, Acquisition, Mergers, Environment, Labor Standards

1. Introduction

The firmest and soundest strategy for long-term sustainable development and growth is always a fair and balanced institution and investment in R&D and innovation. However, due to time and resource constraint, developing countries may take a shortcut and adopt alternative strategies. Various theories and policies have been proposed for them on their way to catch up with rich developed countries. It seems open-market oriented policies and practices have so far beat out more inward looking counterparts. For instance, the successive success stories of the East-Asian economies (e.g., Japan, NIEs, ASEAN, China, etc.) are created by promoting exports and attracting foreign direct investment, rather than the failure cases in some Latin American countries, where import substitution was adopted until the 1980s. Since the early 1990s, even Latin American countries have switched to export promotion, and India, by abolishing long-standing regulations on foreign direct investment, has become the call center of the world, in addition to the IT center of the Orient.

2. Technology Improvement and Offshoring

Technology improvement made it possible to slice the whole production into many

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smaller and mostly sequential parts (or tasks), especially following the telecommunication and Internet expansion of the late 1990s. This technology revolution created enormous reliable and affordable communication and coordination infrastructure, which firms can utilize to reorganize production and seek the highest efficiency globally. As such, even a small country can contribute to the total complicated production process by specializing in a small task, i.e., the production of a small component, benefiting from the global production chain, whereas ex ante technology improvement, a country has to manufacture the whole product in order to export. In other words, technology improvement makes it easier for small countries to identify and create their own comparative advantage, especially in manufacturing and services. Nevertheless, developing countries may be specializing in components of less value on the whole chain; and thus, they face challenges to move upwards along this value chain.

In this spirit, Deardorff and Park (2010) model the experience of the East Asian newly industrialized economies (NIEs). A modern sector requires two intermediate inputs for production, more and less capital intensive respectively, but both are more capital intensive than the traditional sector. In such an environment, if all goods are tradable and capital is mobile across countries, then a developing country can be induced to shift resources into the more capital-intensive production of intermediates than what it was producing in autarky, by opening to trade with a large capital abundant economy.

The biggest gainers from offshoring in the past two decades are perhaps China and India. After its accession to the World Trade Organization (WTO) in 2001, China emerged as a prominent destination for manufacturing offshoring. Multinationals shift a part of their physical production to China, to take advantage of its ‘unlimited’ supply of cheap labor, weak enforcement of labor laws, lax environmental regulations, and huge economies of scale based on cities with population over several million workers dedicated to producing a single kind of product. Offshoring and platform FDI to China have made it the ‘world factory of manufacturing’. However, many companies are reluctant to move high value-added production and leading-edge products to China because of lax enforcement of intellectual property laws. Also, some most recent predictions show that multinationals are re-shoring production back home or to other low-cost countries, due to rising wages and other costs (e.g., Starbucks is moving back to the US and Adidas is shifting out to cheaper countries in South East Asia). Wages rise because the majority of manual workers in China nowadays are those born under the one-child policy; and other costs rise because natural resources and the environment have been depleted significantly during the rapid growth and expansion in the past three decades also.

Almost simultaneously, India became a leader for service offshoring, following the digitization revolution that enabled the actual service production to be shifted to low cost countries in a manner transparent to end-users, for instance, administrative services related to finance and accounting, legal and human resource management; marketing and sales services; call centers; IT infrastructure; and knowledge services including for example engineering support, product design, R&D, and even medical analytics. The so-called Y2K problem triggered a massive demand for software engineering talent. India emerged at the right time with its abundance of such talent and their familiarity with the English language, enabling it to become the offshoring destination for global firms like Accenture, AMD,
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BEA, Cisco, HP, IBM, Intel, Microsoft and Oracle Corporation.

Ireland is a European success story of moving up the value chain via offshoring. It used to be one of the poorest countries in the EU. But since the 1990s, Ireland adopted relatively low corporate tax rates, and thus was able to attract U.S. offshoring of software, electronic and pharmaceutical intellectual property, aimed for exports. This helped create a high-tech “boom”, enabling Ireland to become one of the richest EU countries today.

The choice of offshoring destination though, is often made according to cultural concerns and geographical proximity. Japanese companies like to outsource to China, where large numbers of Japanese speakers can be found—particularly in North Eastern China that was occupied by Japan for decades in the last century; German companies tend to outsource to Poland and Romania, where proficiency in German is common; French companies outsource to North Africa for similar reasons; Indonesia is one of the major offshoring destinations for Australian IT companies, perhaps due to its near-shore location, common time zone and adequate IT work force. Of course, many other countries also serve as offshoring destinations, such as Mexico, Central and South America, the Philippines, Vietnam, South Africa and Eastern European countries. But so far Asia (especially east Asia) has had the biggest share, largely due to trade and FDI networks formed around China and India, because multinational affiliates in these countries buy a large portion of their inputs locally as well as from neighboring countries (see Ando and Kimura, 2003). Smaller countries in this network benefit even though they do not directly attract multinational firms, by trading with the main destination countries of offshoring.

3. Offshoring and Labor Cost

It is undeniable that multinationals undertake offshoring to reduce labor costs, especially in unionized sectors. For instance, many large U.S. service projects are outsourced to Bangalore, spawning the neologism Bangalored, used to indicate a systemic layoff due to corporate outsourcing to lower wage countries. Some multinationals may undertake FDI just to improve its relative bargaining position vis-à-vis the union, or to avoid employing union workers.

FDI may benefit or hurt workers regardless where they are, depending on if the multinational enterprise (MNE) is horizontally or vertically structured. A horizontal MNE produces identical goods in several countries, while a vertical MNE produces inputs in some countries and final goods in other countries. The theoretical literature suggests that horizontal MNE can hurt labor, because by moving production facilities across borders, firms shift the demand for labor, which drives down the negotiated union wage (see for instance Zhao, 1995, 2001). Glass and Saggi (1999) employ a similar idea, but ignore labor-management interactions. They demonstrate the possibility that FDI shifts labor demand from the source country to the host country, reducing wages in the former while raising that in the latter. Skaksen and Sorensen (2001) show that if there is a big degree of substitutability (complementariness) between the activities in the home country and the host country, it is likely that the workers lose (gain) on FDI. They work out particular examples of CES, Cobb-Douglas, and Leontief production functions. In a model with a traditional and a modern sector, Dinopoulos and Zhao (2007) examine various policies that can reduce the incidence of child labor, including
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trade, FDI, emigration, subsidy to reduce child labor, etc.

On the other hand, most offshoring is vertical in nature. Zhao and Okamura (2010) show that undertaking vertical FDI in a lower wage country has two effects: an output-expansion effect versus a demand-shifting effect. The output-expansion effect stems from using cheaper labor and various other inputs in the host country, which reduces the MNE’s overall average cost, and enables higher output and employment. And the demand-shifting effect is that FDI reduces labor demand in the source country but increases that in the host country. If the first effect dominates the second, then offshoring benefits labor in the source country as well as in the host country. This arises more often if the wage in the host country is not too much below that in the source country. Otherwise, the second effect dominates the first and labor in the source country loses from FDI. One important conclusion is that if the wage in the host country is relatively high (nevertheless lower than in the source country), then offshoring benefits the labor union and the MNE in the source country, as well as the host country itself.

Quite a number of empirical studies find that FDI benefits workers in the host country, which gains in both employment and wages. Aitken, Harrison and Lipsey (1996) and Lipsey (2002) note that foreign firms tend to be in “higher wage sectors,” generally hire “better educated and more qualified workers” than locally-owned firms, and “tend to be larger and more capital intensive.” More conclusively, foreign investment significantly boosts exports and economic growth in the host country. These match the predictions of Zhao and Okamura (2010).

However, there is also concern that the wage gap between skilled and unskilled workers is enlarged by FDI inflows. Feenstra and Hanson (1995) examine the increase in the relative wages of skilled workers in Mexico during the 1980s. They argue that the rising wage inequality there is linked to capital inflows from abroad, in particularly it corresponds to an increase in outsourcing by multinationals from the United States and other Northern countries. And it shifts production in Mexico towards relatively skill-intensive goods thereby increasing the relative demand for skilled labor.

4. Brand Creation and International Acquisition

Creating their own globalized firms in order to compete in the world market is a major challenge facing the newly emerging economies, such as the so-called BRIC countries, namely, Brazil, Russia, India and China, and the alike. Without well known brands, firms in these countries are basically stuck in low-end factory work, while foreign designers and engineers reap the profits through patent royalties and licensing fees. For instance, China is nicknamed “the world factory” of many low-end consumer products, but it only receives three to four percent of their gross sales, including payments for the costs of labor, land, raw materials, factory facilities and transportation.\(^1\)

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1) It is estimated that for a 10 dollar Barbie doll sold in the U.S., China gets only 35 cents; for a high-end iPhone, China receives 1 dollar out of every 30 dollars (data from various sources). Thus Chunyong Fan, the secretary general of the China Industrial Overseas Development and Planning Association complained: “Our clothes are Italian, French, German, so the profits are all leaving China. ... We need to create brands, and fast.” (Washington Post, May 25, 2010)
However, brand names do not come easy. Rather, they take decades or even generations to build, based on long-term investments and technological innovations. A shortcut that some newly emerging countries take, is to acquire foreign brands through international mergers, e.g., SAB’s takeover of Miller in 2002 from Phillip Morris, Lenovo buying IBM PC in 2004, Turkish acquisition of Godiva and Acer’s purchase of Gateway in 2007, Tata acquiring Jaguar and Land Rover from Ford in 2008, Geely’s merger with Volvo in 2010. In all these cases, the acquirer was a relatively unknown firm, while the acquiree was a famous international brand name, even though it might be in temporary financial trouble. By acquiring a famous brand, the firm aims to obtain better technology, brand reputation and an international sales network. In addition, some firms use going out as a secret strategy to staying on top at home, because consumers in developing countries tend to buy products associated with a famous foreign brand name.

Apparently not all firms are so lucky. Only high quality firms from developing countries can successfully convince global consumers of their quality by international acquisition and eventually make a profit, even though they may have to borrow funds to carry out the initial acquisition. In contrast, low quality firms cannot take advantage of acquisition synergy such as cost reduction and demand expansion. For instance, an attempt by TCL (a Chinese electronics firm) to become the world’s biggest TV manufacturer in 2003 fizzled when its French subsidiary lost US$250 million.

Two cases: Lenovo and Tata

Lenovo purchased IBM’s laptop division for $1.25 billion in 2004. With the acquisition of a famous brand, Lenovo expected to become internationalized and obtain a warehouse of technology as well. But its American competitors immediately insinuated that Lenovo could insert spyware into the computers it was selling to the U.S. government. The firm also faced enormous challenges bridging cultural divides among different divisions, namely, the U.S. workers at its U.S. headquarters (Raleigh, North Carolina), the Japanese who made Think-Pads and the Chinese who made Lenovos. However, the acquisition pushed Lenovo’s sales in China to skyrocket level, with prices there twice as high as they were in the United States: Lenovo offered its top-of-the-line ThinkPad W700 to the Chinese government at $12,500 in 2010, while in the United States, it ran for $2,500. Lenovo’s success fits perfectly well into the giant plans of Chinese officials looking for a model to push the going-out strategy, nevertheless, going out might be the secret to staying alive at home for many companies. Hence, came Geely’s buying of Volvo in 2010 from Ford Motor Co. for $1.8 billion.

Tata paid US$2.3 billion for the British brands Jaguar and Land Rover in 2008, hoping to expand its presence in the passenger car market beyond India and gives it the clout necessary to compete with international rivals. The acquisition also complements Tata’s focus well. In the domestic market, Tata Motors mainly produces trucks (e.g., pick-ups) and a range of small cars that includes the Nano (the world’s cheapest car selling at US$2,500). By contrast, models produced by Jaguar and Land Rover are amongst the world’s most expensive and exclusive cars.
5. Curses to Late Comers?

The “curses to the late comers” hypothesis argues that less developed countries who in their rush to chase rich countries pick the easier way out by copying mature technologies and buying assembly lines, instead of taking the more difficult route of gradually developing institutional and political systems conducive for innovation and sustainable growth. As such, current growth may be fast, but it is very costly and short-lived, and inevitably it comes with various kinds of social inequalities due to the lack of a fair institution or system.

Some of the “curses” can be found in the following examples. In China, urban especially coastal regions experience rapid growth, drastically increasing the income gap between these regions and remote areas. In 2009, the annual per-capita income in China was about $750 for rural residents, while that for urban residents was about $2500. The inequality in India is slightly better. In the same year, the annual per-capita income in India was about $750 for rural but $1500 for urban residents. Such income inequality has caused workers to migrate in large scales from rural to urban areas and from inner to coastal regions, pushing housing bubbles to become bigger. At the same time, newly constructed roads, railways, bridges, buildings and even food products are of poor or even hazardous quality, and have caused fatal accidents, some of which have to be torn down within a short period post construction. Public morality seems to be in a landslide, culminated by a recent death (October, 2011) of a 2 year old girl, run over twice by vehicles and subsequently ignored by 18 cyclists and other passers-by (A rag collector eventually came to her aid). These phenomena have generated heated debates in the media, among policy makers and researchers alike. There are soul searching cries in the popular press that China in its rush to modernity should slow down its pace, in order to decrease man-made errors and potential disasters, to reduce ever increasing pollution, and to make more efficient use of its depleting resources.

5.1 Race to the Bottom in Environmental Protection?

According to the pollution-haven hypothesis, pollution-intensive industries will tend to move to developing countries that usually have laxer environmental regulations, especially following the recent wave of globalization and offshoring boom. However a majority of the empirical findings on the pollution-haven effect are weak, and some even find that polluting industries tend to migrate to developed countries rather than developing countries.

Using a monopolistic competition model, Zeng and Zhao (2009) provide an alternative explanation. Their model first extracts an income-reducing effect of pollution, even if the two countries are completely symmetric. It arises from the cross-sectoral assumption that manufacturing pollution reduces agricultural production, which in turn decreases the local wage if pollution affects the emitting country more heavily than the other country. This results in a lower national income and a lower demand for manufacturing goods. The income-reducing effect discourages firms to move to the country with laxer environmental

2) See, for instance, Antweiler, Copeland and Taylor (2001), and Markusen, Morey and Olewiler (1993).
3) See, Eskeland and Harrison (2003) and Levinson (1996). An exception is Levinson and Taylor (2003), who adopt a different approach, by using imports instead of outward FDI to measure the migration of firms. Their results indicate that the industries where abatement costs have increased most have seen the largest increases in net imports.
regulations. A second related effect is called the cost-reducing effect in manufacturing, stemming from laxer environmental regulation. It allows firms to spend less labor on pollution abatement, and thus results in lower manufacturing costs and generates more pollution. This effect is the mechanism that leads to the so-called pollution haven in the received literature.

In the model, the above two effects work in opposite directions and jointly determine the total effects of pollution. They can partly explain the empirical findings of Eskeland and Harrison (2003) that there exists some pollution-haven effect in industries with air pollution but not in industries with water pollution. According to Zeng and Zhao (2009), this arises because air pollution is more global which hurts both countries to more or less the same degree, and therefore the income-reducing effect is small. In contrast, water pollution is more local and the corresponding income-reducing effect is large enough to obscure the cost-reducing effect.

The paper further finds that under asymmetry in country sizes, the manufacturing agglomeration force in the larger country N, stemming from imperfect competition and increasing returns to scale, can alleviate the pollution-haven effect in the smaller country S, stemming from laxer environmental regulations. The analysis demonstrates that if environmental regulation is slightly more stringent in N than in S, then agglomeration forces can dominate the pollution effect and a pollution haven does not arise, as strongly supported by a recent empirical paper Wagner and Timmins (2009).

5.2. Labor Standards and Child Labor

The basic guidelines of labor standards (LS) provided by the International Labor Organization (ILO) includes broad contents such as freedom of association, freedom to unionize, no child labor, no forced labor, no forced overtime work, no hazardous work environment, no discrimination based on age, gender or religion, etc.

There have been heated debates concerning international LS recently, especially in forums of the ILO, the former GATT and now the WTO. Labor unions, human rights groups and other non-governmental organizations in a few industrialized countries have campaigned for LS to be included in WTO clauses, notably in the Doha Round of trade negotiations. They argue that weak LS is a means for generating artificially low wages and thus firms able to adopt a lower LS gain a competitive edge. Some even advocate for trade sanctions against countries that do not enforce a set of agreed LS.

Many economists counter this point of view. Bhagwati (2003) and Basu (1999) believe that the recent surge in the demands for LS stems overwhelmingly from lobbies whose true agenda is protectionism. Brown Deardorff and Stern (2001) demonstrate that the diversity of LS between nations reflect differences in factor endowments and levels of income. Bagwell and Staiger (2001) argue that efficiency can be achieved without negotiating over LS. In contrast, some other economists such as Rodrik (1996) and Elliot (2000) embrace linking LS to trade and FDI.4)

While the Core Labor Standards are generally observed and followed in the developed countries, the situation in the developing countries is much less optimistic. It is alleged that some MNEs can be good citizens in their home countries, but may apply lower standards when they go to poor countries because in these countries, the legal system is incomplete, and there are insufficient laws and law enforcement. Labor can be taken advantage of by
MNEs, and governments in poor countries can also compromise with MNEs. A simple search on the net will turn out many websites maintained by labor organizations, which organize campaigns to improve working conditions and the treatment of workers. Some of the examples are: Clean Clothes Campaign, Toy Campaign, Solidarity Campaign, and Work Safety Campaign. They are against MNEs such as: Adidas, Reebok, Levi’s, Mattel, Disney, GAP, Nike, Wal-Mart, Timberland, New Balance, etc. These campaigns call for monitoring by independent human rights organizations, and for MNEs to abide by international LS and local labor law. It is believed that there are more violations of international LS in low skilled industries, which poor countries have a comparative advantage in. Specific violations include: child labor, minimum wage violations, illegal overtime, hazardous chemicals and machinery, poor ventilation and lighting, and so on. In some developing countries like China, independent labor unions are illegal and freedom of the press is unavailable. Multinationals could take advantage of the situation by not applying the same standards as in their home countries.

The campaign organizers believe that MNEs may respond to public pressure by incorporating labor and other social priorities into the protocols by which they manage production in their supply chains. Many multinationals now have codes of conduct, in-house assessment, and assistance from third parties to monitor supplier compliance with these codes.

References

Aitken, B., A. Harrison and R.E. Lipsey (1996), “Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela and the United States,” *Journal of International Economics*, vol. 40, pp. 345–371.

Ando, M. and F. Kimura (2003), “The Formation of International Production and Distribution Networks in East Asia.” *NBER Working Paper*, 10167.

Antweiler, W., B. Copeland and M.S. Taylor (2001), “Is free trade good for the environment?” *American Economic Review*, vol. 91, pp. 877–908.

Bagwell, K. and R. W. Staiger (2001), “The WTO as a Mechanism for Securing Market Access Property Rights: Implications for Global Labor and Environmental Issues,” *Journal of Economic Perspectives*, vol. 15, pp. 69–88.

Basu, K. (1999), “International Labor Standards and Child Labor,” *Challenge*, vol. 42(5), pp. 80–93.

Bhagwati, J.N. (2003), “Free Trade and Labor”, *Financial Times*, August 29.

Brown, D.K., A.V. Deardorff and R.M. Stern (2001), “U.S. Trade and Other Policy Options and Programs to Deter Foreign Exploitation of Child Labor,” in B. Blomstrom and L.S. Goldberg, eds., *Topics in Empirical International Economics*. Chicago and London: The University of Chicago Press.

Copeland, B.R. and M.S. Taylor (2004), “Trade, growth and the environment,” *Journal of Economic Literature*, vol. 42, pp. 7–71.

Dinopoulos, E. and L. Zhao (2007), “Child labor and globalization,” *Journal of Labor Economics*, 2007, vol. 25 (3), pp. 553–579.

Deardorff, A.V. and J.H. Park (2010), “A story of trade induced industrialization,” Discussion Paper No. 608, Ford School of Public Policy, University of Michigan.

4) “Increasing domestic pressures on labor matters will lead to a new set of grey-area-protectionist measures because there are no internationally agreed rules to channel these pressures into less harmful directions. If that happens, the consequences will be more damaging to developing-country interests than those of a social-safeguards clause negotiated multilaterally.” Rodrik (1996, p68) Elliot (2000) examines the US Generalized System of Preferences, and finds that external pressure can be helpful in improving treatment of workers and that linkage of trade and worker rights need not develop into protectionism.
Elliot, K.A. (2000), Preferences for Workers? Worker Rights and the US Generalized System of Preference.
Eskeland, G. and A. Harrison (2003), “Moving to greener pastures? Multinationals and the pollution haven hypothesis,” *Journal of Development Economics*, vol. 70, pp. 1–23.
Feenstra, R.C. and G.H. Hanson (1995), “Foreign Direct Investment and Relative Wages: Evidence from Mexico’s Maquiladoras,” *NBER Working Paper*, W5152.
Glass, A.J. and K. Saggi (1999), “FDI policies under shared factor markets,” *Journal of International Economics*, vol. 49, pp. 309–332.
Levinson, A. (1996), “Environmental regulations and manufacturers’ location choices: evidence from the census of manufactures,” *Journal of Public Economics*, vol. 62, pp. 5–29.
Levinson, A. and S. Taylor (2004), “Unmasking the pollution effect,” *NBER working paper*, #10629.
Lipsey, R. (2002), “Effects of Multinational Company Investments,” *NBER Working Paper*, W9293.
Markusen, J.R., E.R. Morey and N.D. Olewiler (1993), “Environmental policy when market structure and plant locations are endogenous,” *Journal of Environmental Economics and Management*, vol. 24, pp. 69–86.
Rodrik, D. (1996), “Labor Standards in International Trade: Do They Matter and What Do We Do About Them?” in R. Lawrence et al., *Emerging Agenda for Global Trade: High Stakes for Developing Countries*, Overseas Development Council, Washington, DC.
Skaksen, M.Y. and J.R. Sorensen (2001), “Should Trade Unions Appreciate Foreign Direct Investment,” *Journal of International Economics*, vol. 55(2), pp. 379–390.
Wagner, U.J. and C. Timmins (2009), “Agglomeration effects in foreign direct investment and the Pollution Havens Hypothesis,” *Environmental and Resource Economics*, vol. 43, pp. 231–256.
Zeng, D. and L. Zhao (2009), “Pollution Havens and Industrial Agglomeration,” *Journal of Environmental Economics and Management*, vol. 58, pp. 141–153.
Zhao, L. (1995), “Unionized Oligopoly and Cross-Hauling Direct Foreign Investment,” *European Economic Review*, vol. 39, pp. 1237–1253.
Zhao, L. (2001), “Unionization, Vertical Markets and the Outsourcing of Multinationals,” *Journal of International Economics*, vol. 55, pp. 187–202.
Zhao, L. and M. Okamura (2010), “Competing to Invest in the Foreign Market,” *Review of International Economics*, vol. 18(3), pp. 427–442.