Trade, Global Value Chains and Development – What Role for National Development Banks?[1]

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Summary: In this article we discuss the need for industrial policy and role of development banks for economic development. The catching-up of countries in the Global South to productivity levels and living standards of the Global North is the exception. There are two main economic explanations for this observation. First, developing countries are pushed to low-tech and labor-intensive productions and tasks in global value chains. This offers the advantage of easier industrialisation, but it does not automatically lead to productivity levels comparable with the Global North. Foreign direct investments only partially help to overcome this problem. Second, low trust in national currencies in the Global South leads to distorted financial markets which do not provide sufficient credit for investment. National development banks play a key role in facilitating the economic catching-up of the Global South as part of needed industrial policies. They can alleviate distortions in the financial system and at the same time support the transformation of the economy towards higher productivity and ecological transformation. We explain development bank policies by using the KfW as an example of an effective industrial policy.

Zusammenfassung: In diesem Artikel diskutieren wir die Notwendigkeit von Industriepolitik und die Rolle der Entwicklungsbanken für wirtschaftliche Entwicklung. Der Aufholprozess der Länder des globalen Südens auf das Produktivitätsniveau und den Lebensstandard des globalen Nordens ist die Ausnahme. Dafür gibt es im Wesentlichen zwei ökonomische Erklärungen. Erstens werden die Entwicklungsländer zu Low-Tech- und arbeitsintensiven Produktionen und Aufgaben in globalen Wertschöpfungsketten gedrängt. Dies bietet den Vorteil einer leichteren Industrialisierung, führt aber nicht automatisch zu Produktivitätsniveaus, die mit denen des globalen Nordens vergleichbar sind. Ausländische Direktinvestitionen tragen nur teilweise zur Überwindung dieses Problems bei. Zweitens führt das geringe Vertrauen in die nationalen Währungen im globalen Süden zu

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einer Störung der Finanzmärkte, die keine ausreichenden Kredite für Investitionen bereitstellen. Nationale Entwicklungsbanken spielen eine Schlüsselrolle bei der Erleichterung des wirtschaftlichen Aufholprozesses des globalen Südens als Teil der notwendigen Industriepolitik. Sie können Verzerrungen im Finanzsystem mildern und gleichzeitig die Transformation der Wirtschaft hin zu höherer Produktivität und ökologischer Transformation unterstützen. Am Beispiel der KfW erläutern wir die Entwicklungsbankpolitik als Beispiel für eine effektive Industriepolitik.

Introduction

In recent decades, until the emergence of the COVID-19 crisis, the number of people living in extreme poverty worldwide has fallen significantly. In 2015, 10 percent of the world's population or 734 million people were living on less than $1.90 a day. This number had decreased from nearly 36 percent of the world's population (1.9 billion people) in 1990. Asian countries in particular, such as China, Indonesia, India, and Vietnam have been able to significantly reduce the numbers (World Bank 2020).

Although countries in the Global South[2], particularly China, have experienced considerable growth rates and productivity increases, attaining the productivity levels and living standards of the countries of the Global North is still a distant reality. The wave of globalisation that began in the early 1970s has not brought c*onvergence* for most countries in the Global South. The massive wave of deregulation and liberalisation which started in the 1980s, driven by the structural adjustment programs of the IMF and World Bank within the framework of the Washington Consensus, promising the catching-up of countries in the Global South, was not able to narrow the gaps for the typical country in the Global South. This becomes apparent when looking at Figure 1, which displays real GDP per capita of BRICS countries in percent of real GDP per capita of the USA for the years 1970 until 2017.

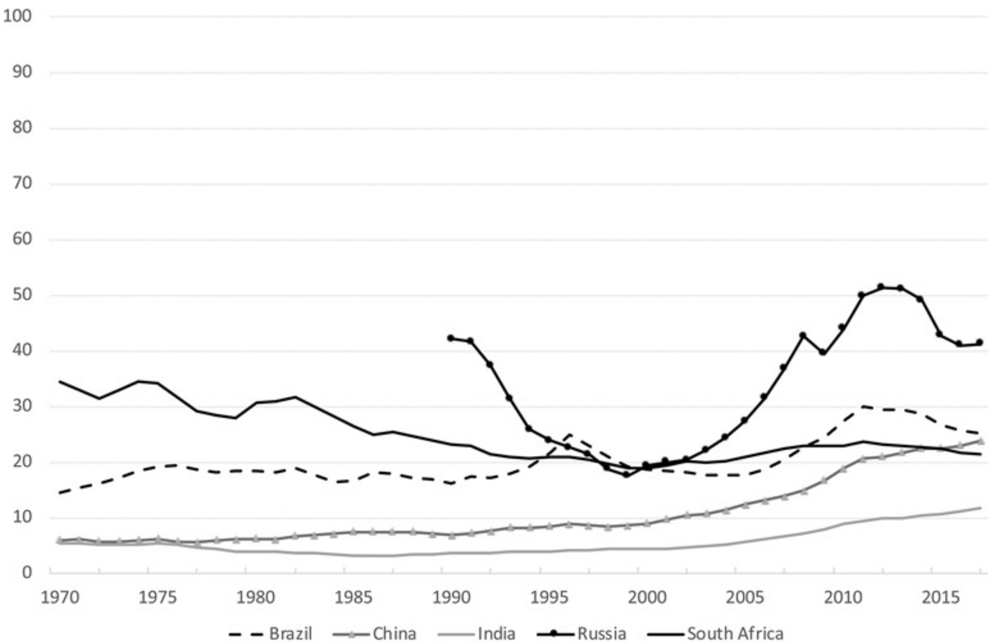
Even though there has been a slight increase in per capita income of these countries in relation to per capita income in the USA since the 2000s, the differences are striking. In fact, after World War II, only a small number of countries have been able to successfully catch up. These were Japan in the 1950s and 1960s, followed by South Korea, Taiwan, Singapore and Hong Kong (Stiglitz 1996). These countries were or still are characterised by comprehensively regulated markets and far-reaching government intervention. However, it would be mistaken to assume that these countries followed the logic of a planned economy which failed in the Soviet Union and its former satellites. Success seems to depend on a type of regulated market economy with fruitful interrelation of government regulations, interventions and institutions, *and* markets (Chang 2002). In these successful countries, a highly regulated financial system including development banks played a key role in implementing government interventions (Stiglitz / Uy 1996; UNCTAD 2017). Development banks are not only important in the Global South. The Germany state-owned KfW[3] is a good example of a successful development bank which contributed to productivity development in Germany, structural change and innovative power (Naqvi et al. 2018).

2 Here, Global South includes the heterogenous group of countries which does not belong to the developed industrial countries (OECD countries), called Global North.

3 Keditanstalt für Wiederaufbau.

Figure 1

Real GDP per capita in percent of VS real GDP per capita



Source: Feenstra et al. (2015); Penn World Table, version 9.1.

Certainly, international trade and international capital flows can increase the welfare of nations, as they raise consumption options and increase efficiency and productivity. However, completely unregulated trade and capital flows carry significant risks. Economic thinking has produced a number of valuable arguments which make clear that free trade and unregulated capital flows trigger market processes that reproduce underdevelopment. The analysis in this article shows the need for government intervention and the important role of development banks, particularly in developing countries. It emphasises that national development banks serve two purposes. First, they help to increase the innovative and productive power of countries as an integral part of industrial policy; second, they help to overcome problems which are caused by distorted financial systems typical in countries of the Global South.

In the second section of this article we describe the development problems of global latecomer countries and why free trade does oftentimes not help to support, using the expression of Friedrich List (1841), to develop the productive power of countries. The third section explains why the financial system in a typical developing country is distorted and hampers development. How developing banks can help to support the productive powers of countries is discussed in section four. The last section concludes.

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International distribution of labour and underdevelopment

In this section, we examine three theoretical strands: traditional trade theory, new trade theory and global value chains (GVCs).

Traditional trade theory and underdevelopment

According to the traditional trade theory, based on comparative advantage, developing countries specialise on low-tech, low-skill and labour-intensive production of goods and services. In addition many developing countries have absolute advantages in exporting commodities, as for example oil, rare earths or coffee beans and oranges. In contrast, developed countries concentrate on high-tech, high-skill and capital-intensive productions. According to Ricardo (1817) comparative advantages result from different levels of productivity, whereas Heckscher (1919) and Ohlin (1933) stress different endowments of capital and labour. Under a number of strong assumptions, for example, the full use of all factors of production and constant returns to scale in all industries, a switch to free trade increases world output and the welfare of all nations. However, these assumptions are almost never fulfilled in the real world. The full use of all factors of production is historically an exception and in developing countries almost never realised. The assumption of constant returns to scale violates all empirical findings from most economic sectors.[4]

As early as the 1840s, Friedrich List stressed the problems of free trade between countries with different levels of development. He argued that the international division of labour by the market concentrates dynamic sectors in developed countries, which support each other in a prosperous development process, whereas "dull" (List 1841:159) sectors with low development potential are located in developing countries.

Traditional trade theory makes it very clear that free trade produces winners and losers. For example, a switch to free trade leads to lower wages of unskilled workers in developed countries as jobs with low skills are moved to developing countries and the demand for low-skilled workers decreases. At the same time in developed countries the demand for high-skilled workers increases. In developing countries the opposite effects can be expected. Following the basics of neoclassical welfare economics, a comparison of welfare between individuals is not possible (Pareto 1906). To prove the positive welfare effects of international trade, it is assumed that the winners in each country will completely compensate the losers:

> "Thus, the issue of whether globalisation is welfare enhancing comes back to the question ... is it possible to ensure, either through redistributive taxes or changes in institutions/rules, that workers are not made worse off." (Korinek und Stiglitz 2017: 17)

We can transfer the logic of winners and losers to the global level. The world as a whole may benefit from free trade, but not all countries:

> "The popular school has assumed as being actually in existence a state of things which has yet to come into existence. It assumes the existence of a universal union ..., and deduces therefrom the great benefits of free trade." (List 1841: 102)

If a world state were to exist, it would have at its disposal many potential instruments to help economically left-behind regions. Losing regions would be supported via transfers, education or infrastructure investment by the state centre or by prosperous regions. Also, labour would move

4 A further problem is that it may take a long time to solve structural changes caused by trade. For example, unskilled workers in the shrinking garment sector in developed countries may have problems to switch to the growing high-tech computer sector. The same may happen to capital; machines to produce clothing cannot be easily used to produce computers.

from underdeveloped to the more developed regions without any restrictions, creating a tendency for wages to adjust to the same level in the whole nation.[5] Between independent nations, such mechanisms do not exist. This implies that an underdeveloped nation must above all use its own power to develop. Development is, following List, primarily a national task – until today.

New trade theory and underdevelopment

Paul Krugman (1981) developed a model to explain international trade with external economies of scale, which were already analysed by Alfred Marshall (1920) and implicitly by List (1841). External economies of scale are based on the interrelation of specialised firms, a specialised and qualified workforce, joint research of firms and networks with research institutes and universities, good infrastructure, cooperation and trust among firms, personal contacts between researchers and managers, and so on. In short, there are economic clusters with positive external effects, synergy and network effects and possibilities to reduce information and transaction costs. Production costs in such clusters are lower and, more importantly, innovative power is higher than outside such clusters. Economic dynamism is concentrated in these clusters, and eventually, the market mechanism leaves regions and whole countries that lack such clusters behind.

Krugman assumed external economies of scale and at the same time constant returns of scale for individual firms. Such a model is attractive as it leads only to normal profits for firms and avoids the analysis of monopolies and oligopolies. Under the assumption that clusters first developed in developed countries, international trade leads to uneven development. Growth of GDP per capita in developed countries is systematically higher than in developing countries, which is based on different productivity paths in the two groups of countries. The disaster for latecomers is that, from a dynamic perspective, clusters are superior in creating innovations which lead to the development of new technologies and new products in cluster-rich developed countries.

In almost all important industries, additionally internal economies of scale exist. Thereby, many successful clusters consist of a combination of large and small firms. Internal economies of scale exist, for example, in the case of indivisibilities (an assembly belt cannot be used for a small volume of production), research (research institutes need to have a certain size to be efficient) or branding (TV marketing is only practical for large companies). For Facebook or Twitter, strong network effects lead to high internal economies of scale. In the case of internal economies of scale, low average costs and thus low selling prices can only be achieved if high volumes are sold. Incumbent firms in such markets are protected by high barriers to entry for new firms. Markets with internal economies of scale endogenously develop oligopolistic or even monopolistic structures. Firms in oligopolistic and monopolistic markets can and will use their market power to set prices at levels which maximises profits. Rent-seeking strategies include the creation of cartels, following the price leadership of one firm or competing with non-price measures (Chandler 1990).

5 Wolfgang Stolper and Paul Samuelson (1941) showed in the framework of the Heckscher-Ohlin model that free trade even without migration can lead to the same remuneration of the production factors in all countries. Let us take unskilled work as an example. According to the model the shift of labour intensive productions to developing countries increases the demand for unskilled workers in these countries and reduces it in developed countries. As a consequence, wages of unskilled workers would become the same in all countries. The Stolper-Samuelson theorem suffers especially from the unrealistic assumptions that in all countries the same technology exists and that international trade creates a shortage of unskilled workers in developing countries. Given the typical huge underemployment in developing countries increasing demand for unskilled labour does not increase wages (Lewis 1954).

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Compared with external economies of scale, internal economies of scale make it even more difficult to enter markets. The Global South can only develop if it manages to create clusters and large companies.

Global value chains

In GVCs, the production process is split into different tasks. These are allocated all over the world by lead firms, mainly multinational enterprises (MNEs). Today, more than two-thirds of world trade occurs through GVCs (Dollar 2019: 1).

The geographical distribution of tasks depends to a large extent on comparative advantages (Feenstra 2010). Firms outsource to specialised firms, which can perform tasks better than the own firm because of technological leadership or economies of scale. Besides motives such as market entry or closeness to the market, the main motivation to outsource to developing countries is to cut costs, especially wage costs, but also other expenses resulting from ecological, labour markets or other regulations. The distribution of tasks according to comparative advantages can be shown in the so-called "smile curve" developed by Stan Shih (1996). Typically, pre-fabrication tasks like research, design, logistics, finance and post-fabrication tasks like selling, marketing and high-quality after-sales services are taken over by developed countries. Developing countries have a comparative advantage in simple fabrication. More complicated fabrication, like in the precision metal industry or machinery industry, will stay in developed countries. Part of the services in all fabrication stages can be shifted to developing countries, such as part of bookkeeping or call centres.

The governance of GVCs (Gereffi et al. 2005) depends mainly on the complexity of an activity, the extent to which information and knowledge can be codified and the capabilities of suppliers. *Market relationships* are most likely to exist when tasks are easily codified, product specifications are relatively simple, suppliers can take over the task with little input from buyers and asset specificity of production facilities is low. *Modular governance* exists when a supplier is able to deliver full packages and modules, for which an exchange of complex information with the buyer is needed. In *relational governance,* product specifications cannot be codified, transactions are complex and tacit knowledge must be exchanged. *Captive governance* dominates when the capabilities of suppliers are relatively low, and the intervention and control of lead firms are high. Captive suppliers usually take over a narrow range of tasks. Last but not least a lead firm can produce a task in a subsidiary. In such a case foreign direct investment (FDI) takes place. Depending on the industry and lead firms' strategies, one can usually find several governance types in the same GVC.

FDI flows have increased considerably during the last decades. Net FDI inflows in low- and middle-income countries were in the 1970s and 1980s below 0.8 percent of GDP, growing rapidly to 2.9 percent in 1999, a second peak in 2008 of 3.8 percent, and then dropping back down to 2 percent (World Bank 2020a).

If tasks are relatively simple, the technologies required to produce them are widespread and economies of scale are not particularly high, lead firms prefer subcontracting, as this shifts risks such as demand volatility to subcontractors (Milberg and Winkler 2013). The GVC for garments is a good example of how MNEs use the flexibility of subcontracting to their advantage. For example, during the COVID-19 crisis, a large number of MNEs cancelled their orders from Bangladesh and did not fulfil their contractual obligation to buy already-finished products. Suppliers in Bangladesh

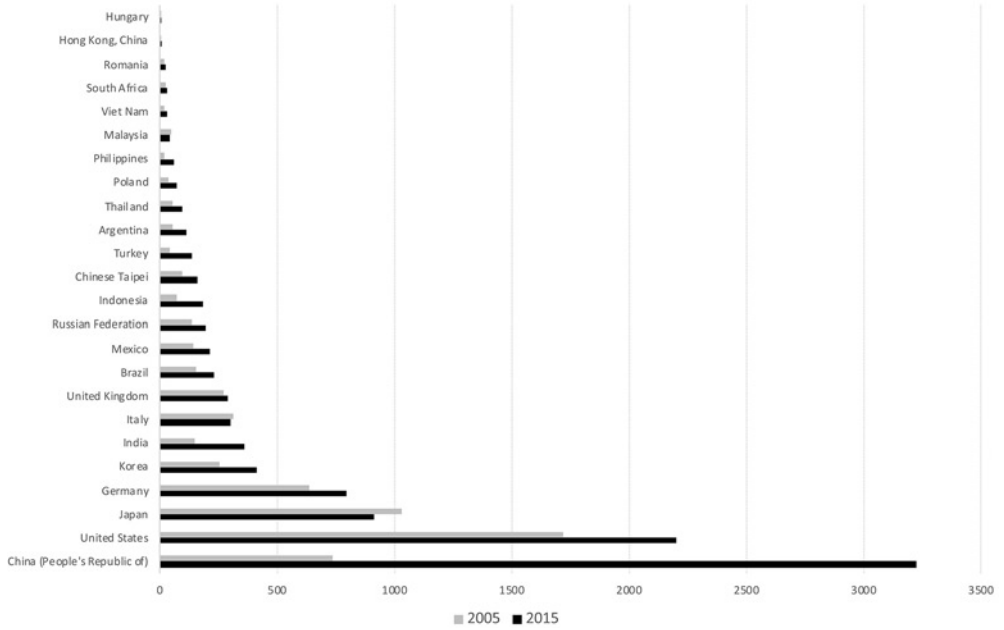
are now left to recover the costs of the finished goods, and millions of workers were sent home without income (Anner 2020).

Integration into GVCs helps countries in the Global South to industrialise. In GVCs countries do not need to build a complete industry; they can specialise in the manufacture of individual components and assembly activities and can exploit economies of scale (Baldwin 2011). GVCs lead to a higher industrialisation in the Global South than forecasted by economists like Hans Singer (1949) or Raúl Prebisch (1950), who expected that developing countries would be condemned to only export natural resources and simple agricultural products.

But development differs between countries and country groups. Figure 2 shows that between 2005 and 2015 countries like China, India, Vietnam and Mexico increased their manufacturing value-added. But the same is also true for countries like the USA or Germany. Industrial value-added decreased in Malaysia, Italy or Japan. The increase or decrease in manufacturing value-added is therefore not a phenomenon reserved for certain groups of countries.

Figure 2

Value added in manufacturing, selected economies, millions of US Dollar, 2005 and 2015



Source: OECD iLibrary (2020); Dataset Trade in Value Added.
Note: Here, value-added at basic prices reflects the value that is added by the manufacturing sector. It is equivalent to the difference between the country's manufacturing production (gross output) at basic prices and the sum of its intermediate inputs of goods and services in purchasers' prices.

There are three additional factors which make it difficult for countries in the Global South to catch up: a) power asymmetries in GVCs, b) extent of transfer of technologies and skills and c) employment effects (Herr et al. 2020).

a) Typically, GVCs in the Global South are characterised by monopsony or oligopsony structures (Milberg and Winkler 2013). Many suppliers act in an environment of hyper-competition and are confronted with oligopolistic or monopolistic MNEs. Lead or big intermediate firms set the price for tasks at a level which minimises profits of suppliers. It does not require much imagination to understand that in a typical developing country with weak institutions, GVCs easily lead to business practices which prevent social upgrading. For example, in the garment industry, the prices for tasks permanently decrease (Anner 2015).

In the case of FDI, a large part of foreign firms' profit will be transferred to headquarters abroad. To achieve this, lead firms can, for example, set the selling price of a transaction with their subsidiary to the level they want, and in this way transfer profits. Or they can openly transfer profits. Net primary income outflows[6] in percent of GDP in 2019 were in Brazil 3.1 percent, in South Africa 3.2 percent, in Vietnam 6.5 percent, in Mozambique 5.0 percent, in Thailand 4.8 percent or in Cambodia 6.3 percent (World Bank 2020a). Investment income which flows abroad reduces the equity basis of firms and the possibility to finance domestic investment. Due to power asymmetries, GVCs lead to value grabbing by MNEs. The OECD (2013: 36) summarises this succinctly:

> "When countries participate in global value chains mainly through affiliates of foreign MNEs, these firms continue to capture much of the value. They often own and control the knowledge-based assets that create value in the GVC: brands, designs and patents, but also organisational and distribution networks."

Profit transfers and low prices of exported tasks in the case of subcontracting demonstrate that value grabbing by lead firms from the Global North is a serious problem in the Global South.

b) To discuss the transfer of technologies and skills in GVCs it is helpful to follow Humphrey and Schmitz (2002) in their classification of economic upgrading. They distinguish between four types: product upgrading (producing a task with a higher quality), process upgrading (utilising a better technology to produce a task), functional upgrading (taking over higher value-creating functions) and inter-sectoral upgrading (starting production in related or new industries).

The extent of economic upgrading depends on the different types of governance in GVCs explained above (Gereffi et al. 2005). In case of captive governance, product upgrading can be considered as frequent and, in some cases, even process upgrading can be expected. The explanation for this is that even in captive governance lead firms most likely share knowledge and transfer skills to their suppliers, because they have a high interest in the quality of the product and, in some cases, consumers demand the fulfilment of certain ecological or social standards.[7] In relational governance there is intensive information flow between lead firms and subcontractors. This increases the likelihood of technology spill-overs in the areas of product and process upgrading. In modular governance suppliers already possess a certain skill-level and technological knowledge. In many cases modular suppliers are themselves MNEs which have subsidiaries in developing countries, such as the contract manufacturer Foxconn as a supplier for Apple. In no governance type do lead firms have interest in functional or inter-sectoral upgrading of suppliers, as it would create competitors in their core competences.

6 Primary income flows cover profit, interest, dividends and other investment income and wage flows. Wage flows as primary income is absolutely insignificant and should not be confused with remittances, which are part of secondary income.

7 An example is when global shoe brands give detailed description and guidelines to suppliers in captive relationships for the fabrication of sneakers and also demand a certain technology and skills they help to introduce.

Independence of firms is an important precondition for functional and inter-sectoral upgrading. Completely dependent suppliers are in danger of being trapped in the production of a simple task. This implies that in the case of captive governance and production for only one MNE product and process upgrading is possible, but functional and inter-sectoral upgrading prospects are very limited (Humphrey and Schmitz 2002).

Great hopes for upgrading are in the area of FDI. It is very likely that a lead firm will transfer technology and skills to produce simple tasks to its subsidiaries in the Global South. Even the newest technology may be transferred for this purpose. However, a lead firm will have no incentive to transfer key competences to subsidiaries in the Global South. In addition, conditions for research in respect of funding and integration in efficient innovative clusters are usually much better in the home country of the MNE.

Alice Amsden found that MNEs invest virtually nothing in research and development in developing countries.

> "Foreign investors do not, and probably cannot be expected to, do their state-of-the-art research outside their corporate labs. If nationally owned companies want to be first with cutting-edge products, earn entrepreneurial rents, and accumulate engineering know-how, then like everyone else they must invest in their own R&D." (Amsden 2009: 419; see also Amsden 2001: 207)

The successful catching-up of Asian countries and the lack of substantial catching-up in Latin America can, to a large extent, be explained by the different ownership structure. In Latin America, big firms are usually owned by FDI firms, whereas in Asia, especially in Japan, South Korea, Taiwan, China or India, states supported domestically owned firms and tried to create national champions (Shapiro 2007).[8]

Jumps in productivity to produce simple tasks can become a double-edged sword for developing countries. If productivity to produce a task increases and most of the output is exported, the price of the task can decrease substantially and the terms of trade of the exporting country can deteriorate. In extreme cases the volume of imports which can be imported in exchange for the exported task shrinks, despite an increasing volume of exports (Bhagwati 1958).[9] This implies that all the positive effects of productivity increases are realised outside the exporting country. The productivity effect in the exporting country therefore either increases the profits of MNEs and/or the welfare of consumers in the Global North, if the price of the final product decreases.

A further problem is that for the production of tasks in a country in the Global South most material inputs are imported, processed and exported, without there being any backward and/or forward linkages created with the domestic economy. In this case the integration of the country in GVCs produces only very small advantages (Hirschman 1958). In many sectors tasks can be very quickly shifted to other countries if wages or other costs increase too much or if other negative developments for a lead firm take place. The OECD (2013: 35) speaks about the "increasingly footloose character of MNE activities. (...) The risk is particularly acute for small emerging and developing economies where access to the domestic market or local knowledge is of limited importance to MNEs' location decisions."

8 In a recent study, Gale Raj-Reichert (2019) found for the Malayan electronics industry that its excessive reliance on FDI, particularly contract manufacturers, is the reason for the industry's inability to upgrade, and this substantially contributed to the middle-income trap Malaysia seems to find itself in since the early 2000s.

9 Bhagwati speaks of immiserizing growth.

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c) Let us come to employment effects of GVCs. Dani Rodrik (2018a) reports that in Ethiopia, the Philippines and Thailand, the employment creation per 1 million US dollars of total exports, as well as for manufacturing exports, went in part sharply down in the medium-term. Rodrik judges this as typical for developing countries which is not surprising as some product and process upgrading can be expected. Additionally one would expect that with increasing importance of GVCs for a country the percentage of employed adult persons as share of adult population increases. But he shows that for a broad range of countries the employment share of the adult population slightly decreases with a country's participation in GVCs. When countries open up for GVCs, not only do exports increase, but usually also imports other than those used as inputs in GVCs. It is more the increasing export surpluses, as part of aggregate demand, that creates additional employment, rather than participating in international trade or in GVCs alone.

> "It appears that exports are creating fewer and fewer jobs, and GVCs are certainly not helping. This is disappointing from a number of perspectives. It puts a damper on the idea of trade as an engine of growth. [...]And since exports tend to be associated with better-paying jobs, it raises concerns about wage levels and inclusion." (Rodrik 2018a: 5)

To sum up, one can expect positive economic upgrading effects from GVCs. But the effects are obviously restricted to certain types of upgrading, limited and not sufficient to catch up with productivity levels of developed countries (see Figure 1).

Developing economies and financial market failures

In the section above it was shown that in the Global South the market mechanism alone does not lead to a transfer of technology and skills which is sufficient to reach GDP per capita levels comparable to the Global North. There is a second obstacle. Investment and therefore also upgrading in the Global South is hampered by distorted financial markets.

Joseph Schumpeter (1911:107) as no other economist stressed that investment and economic dynamics depends on credit.

> "In this sense, therefore, we define the kernel of the credit phenomenon in the following manner: credit is essentially the creation of purchasing power for the purpose of transferring it to the entrepreneur, but not simply the transfer of existing purchasing power (...). The creation of purchasing power characterises, in principle, the method by which development is carried out in a system with private property and division of labour. (...). Granting credit in this sense operates as an order on the economic system to accommodate itself to the purposes of the entrepreneur. As an order on the goods which he needs: it means entrusting with productive forces."

According to Schumpeter, central banks create credit ad hoc or out of nothing (see also Deutsche Bundesbank 2017). The capitalist dynamic is created when commercial banks give credits to firms and firms invest the money in productive processes. Commercial banks give credit to a firm by simply crediting the amount to the account of the firm, and the firm may use the deposit to pay workers who go to the cash machine to withdraw money. For the bank, each additional deposit is an extension of the balance sheet, and so giving credit creates demand for central bank money, since commercial banks have to keep minimum reserves for their deposits. Thus, credit expansion leads to an additional demand for central bank money. The central bank, usually by fixing the refinancing rate for banks, has to refinance the banks that have expanded their balance sheets with credit. Of course, the central bank may, for whatever reason, find the credit expansion and the concomitant increasing stock of central bank money undesirable. In this case, it will increase the refinancing rate. The central bank fixes the refinancing rate, but commercial banks are those who decide how much credit they give and therefore how much central bank money is created. Hence, money supply is endogenous (Herr 2014).

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The entrepreneur, following Schumpeter, uses the credit to employ workers and to buy means of production. New products are produced, and in the case of investment, production capacities are increased. During this process, income is created. Part of the income is saved, by which the ex-post accounting identity of *saving equals net investment* is realised. Both Schumpeter and John Maynard Keynes (1936) argue that investment via income creation leads to savings and not the other way around.[10] What we have described is a credit-investment-production-income-saving process which is one of the key pillars of economic prosperity. It is self-explanatory that the analysed mechanism is obstructed when credit is used for non-productive purposes such as speculation in the financial system. It is also obvious that economic development is not possible when a central bank decides to supress credit expansion.

Money – in our context, short-term monetary wealth – has different functions. It functions as a unit of account, as a means of payment and as a store of value. In the latter function, it is held to make future transactions easier, as a buffer for unexpected expenditure and, most importantly, as a means of safely storing wealth to protect against the uncertainties of a market economy like recessions and the risks of life. Keynes (1937: 316) describes this in the following way:

> "Because, partly on reasonable and partly on instinctive grounds, our desire to hold Money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions concerning the future. ... The possession of actual money lulls our disquietude."

It is obvious that only stable money can serve the function of lulling our disquietude. Money must have a high asset-protecting quality[11], as Riese (1986) calls it.

Especially in economies with an open capital account, domestic currencies have to compete with the world-leading currencies such as the US dollar, the euro, or the Swiss franc. The asset-protecting quality of a currency depends on a whole set of factors. Of key importance is the stability of the currency, measured in the domestic price level and the exchange rate. But other factors also play a role, as for example, the political stability of the country issuing the currency, trust in its institutions – especially the central bank's ability to keep the currency stable – and the size of the currency area. Typically a country issuing a currency with a high asset-protecting quality serves as a safe haven for wealth holders. This shows that also military power of a country plays a role for the asset-protecting quality of a currency. A small country with no political and military power will not be able to issue an internationally dominant currency – simply because wealth holders cannot be sure that a strong country forces the small country to policies which violate the interests of wealth owners.

There is a currency hierarchy which is given by the asset-protecting qualities of different currencies.[12] At the top of the hierarchy, there is usually a small group of currencies (at present, the US dollar followed by the euro and far behind the yen) which take over all domestic monetary functions of these countries, international functions, and oftentimes also the domestic functions of countries

10 The Keynesian-Schumpeterian approach criticises the idea that there is a credit market in the economy between savings and investment and that money supply is exogenous. Even if banks do not exist, a credit market is not between the flows of savings and investment. In point of fact, households keep a stock of wealth and decide how much of the stock they supply for credit. Savings only in a marginal way increase the stock of wealth of households.

11 Vermögenssicherungsqualität.

12 In a Keynesian approach the asset-protecting quality of currencies can be expressed in the level of the liquidity premium they have (Riese 1986). The liquidity premium is a non-pecuniary rate of return based on the judgement of the wealth owner. The liquidity premium decreases with the stock of monetary wealth. We can assume that for a representative wealth owner, the liquidity premium of monetary wealth in currencies of developing countries quickly decreases with increasing holdings of monetary wealth.

at the very bottom of the currency hierarchy. Below the top currencies is a rather small group of currencies which take over all domestic functions, but no international functions (at present currencies like the Australian or Canadian dollar or Swedish krona). At the bottom are currencies of the Global South, with a low asset-protecting quality. These currencies do not take over all domestic monetary functions; depending on the asset-protecting quality and financial openness, these are taken over by foreign currencies that belong to the top of the currency hierarchy (Cohen 1998; Herr 1992).

A clear indicator for the penetration of currency areas in the Global South by foreign currencies is deposit dollarisation, which is measured by the percentage of all domestic foreign currency deposits (this means deposits inside a country dominated in foreign currency) as share of total domestic deposits (see Table 1).[13] There are very big differences between individual countries. In Cambodia

Table 1

Deposit dollarisation of households and firms, various countries, 2001 – 2016, in percent

Country	2001	2004	2007	2010	2013	2016
Armenia	72	63	28	50	47	56
Firms	87	84	45	72	65	66
Households						
Bangladesh	10	2	2	2	3	2
Firms	1	2	3	2	2	2
Households						
Brazil	0	0	0	0	0	0
Firms	0	0	0	0	0	0
Households						
Cambodia	99	99	99	98	97	96
Firms		97	98	97	97	94
Households						
Croatia	33	37	29	46	41	40
Firms	87	77	67	75	79	64
Households						
Nicaragua	90	90	83	77	77	76
Firms	97	96	96	97	97	97
Households						
Turkey	n/a	50	42	35	43	51
Firms	n/a	43	31	25	31	37
Households						

n/a: not available

Source: Corrales and Imam (2019).

Note: Deposit dollarisation is calculated as share of (firms'/households') domestic foreign currency deposits as a percent of (firms'/households') total domestic deposits.

and Nicaragua, the value is around 90 percent. In China, Brazil and Bangladesh, for example, deposit dollarisation is restricted or forbidden by national regulations and is almost non-existent. Regions are affected by deposit dollarisation to varying degrees. Apart from countries with full dollarisation like Panama or San Salvador, deposit dollarisation is particularly widespread in Latin

13 The US dollar dominates in domestic foreign currency deposits, followed by the euro.

America (in 2015, the average was 33 percent) and the European transition countries (average 50 percent). Asia (average 23 percent), Sub-Sahara African countries (19 percent) and Middle East and North Africa (average 15 percent) are less dollarised (Bannister et al. 2018).

The penetration of domestic financial systems by foreign currencies is often higher than shown by deposit dollarisation. First, in many countries foreign banknotes are hoarded. In 2016 it is estimated that around half of the US-dollar banknotes held by the public circulated outside the USA, 4 percent of the US-GDP worth around 700 billion US dollars, 80 percent in 100-US-dollar banknotes (Judson 2017). This is a sum equal to around 130 percent the nominal US-dollar GDP of the group of low-income countries (World Bank 2020a). Second, deposit dollarisation repesents the capital flight of the small wealth owner. Larger wealth owners in developing countries keep significant parts of their wealth outside their country, likely in New York, London, Frankfurt or offshore centres. It is estimated that between 2000 and 2012 on average the annual outflow of capital from developing countries was 6.1 percent of the GDP of the country group, from 1980 to 2012 it was 5.5 percent (Global Financial Integrity 2015: Table 5). Taking into account deposit dollarisation, foreign cash holding, and wealth of large wealth owners held abroad, we can conclude that in many countries of the Global South substantial parts of monetary wealth are held in foreign currency.

According to the weakness of the asset-protecting quality of the national currency and financial openness, countries in the Global South lose a number of advantages afforded to other countries. Besides losing a stable symbol of national identity, they lose the power for domestic-oriented macroeconomic management and the possibility to use seigniorage as revenue of last resort in crisis situations.

> "Not only is the government shorn of its capacity for effective macroeconomic management on its own. Deprived of seigniorage, it also loses the single most flexible instrument of taxation available for mobilising resources in an emergency, leaving the country more vulnerable for political coercion from abroad." (Cohen 1998: 165)

In the Covid-19 crisis, this again became clear as countries in the Global South have much less room for central bank financing of public households than the US or the euro area.

Barry Eichengreen, Ricardo Hausmann and Ugo Panizza (2007) speak about the original sin of currencies of countries in the Global South. They mean that foreign debt in developing countries is denominated in foreign currency – in contract for example to the USA. Undoubtedly, many currencies in the Global South suffered from high inflation and macroeconomic mismanagement, but even a long period of a stable currency and good macroeconomic management can in most cases not overcome the problem of original sin.

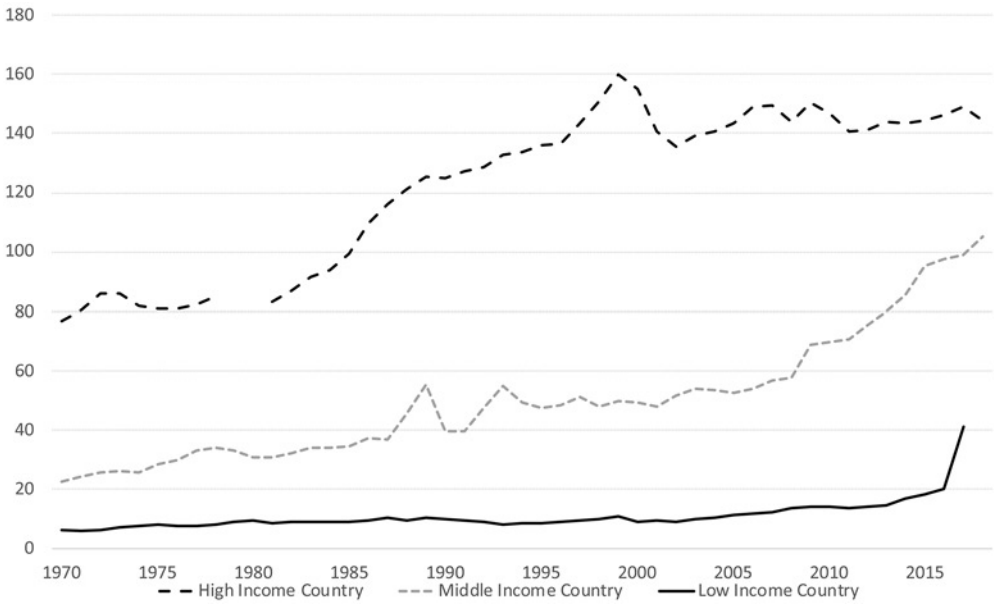
When a central bank in a typical country of the Global South finances a healthy credit-investment-production-income process, monetary wealth in domestic currency is created, but a large part of the new monetary wealth is then exchanged into foreign currency according to the preferences of domestic wealth owners. This causes depreciation pressure. Central banks in developing countries cannot accept permanent depreciations, because of the danger of inflationary processes, as import prices increase and a wage-price spiral can be triggered. If a real depreciation can be achieved, the consequence is a reduction of domestic living standards, which is probably not politically acceptable. Also, elasticities may mean that real deprecations do not (quickly) improve the current account, because many goods must still be imported. Last but not least, permanent depreciations further reduce the asset-protecting quality of the currency.

In short: Central banks in the typical country of the Global South are commonly forced *to stop the credit-investment process and the accompanying growth process at an early stage* because of high depreciation pressure, even if credit expansion is used in a very productive way. Theoretically this can be avoided if the country is willing and able to enforce strict capital controls. But such controls are difficult to implement and enforce in the existing globalisation model.

We can expect from this analysis that a low asset-protecting quality of a currency leads to a combination of a low stock of credit in relation to GDP and a relatively high interest rate. In Figure 3 it is shown that credit to the private sector in percent of GDP is substantially lower in low- and middle-income countries than in high-income countries. The increase of domestic credit to GDP in middle-income countries is most likely related to the crisis situation in the Global North after the Great Depression in 2009. Also, it must be taken into account that in many dollarised countries a substantial part of domestic credit is given in foreign currency (Table 2). Finally, real interest rates in developing countries are relatively high compared to the real interest rate in developed countries, for example in the USA (Figure 4). Particularly high real interest rates are found in Brazil, which results from the prohibition of deposit dollarisation (compare Table 1).

Figure 3

Domestic credit to private sector in per cent of GDP; different countries groups, 1970 – 2018



Source: World Bank (2020): World Development Indicators.

The problems associated with high interest rates in developing countries becomes also obvious when microfinance is analysed. In developing countries, microfinance institutions provide firms and households – in many cases, the two cannot be distinguished clearly – with short-term credit with the aim of stimulating growth or smoothing consumption. The interest rates hardly allow for triggering investment and economic dynamics. In a broad survey, Rosenberg et al. (2013) found out

Table 2

Loan dollarisation of households and firms, various countries, 2001 – 2016, in percent

Country	2001	2004	2007	2010	2013	2016
Armenia	29	37	69	66	73	74
Firms	49	48	38	30	26	28
Households						
Bangladesh	0	28	24	23	21	19
Firms	n/a	n/a	n/a	n/a	n/a	n/a
Households						
Brazil	31	35	40	42	45	55
Firms	n/a	n/a	n/a	n/a	n/a	n/a
Households						
Cambodia	0	2	3	1	1	18
Firms	0	4	20	18	21	28
Households						
Croatia	50	61	62	64	53	61
Firms	1	4	4	2	59	56
Households						
Nicaragua	n/a	n/a	n/a	n/a	n/a	n/a
Firms	52	57	69	61	59	62
Households						
Turkey	n/a	41	45	47	45	38
Firms	n/a	0	0	0	0	0
Households						

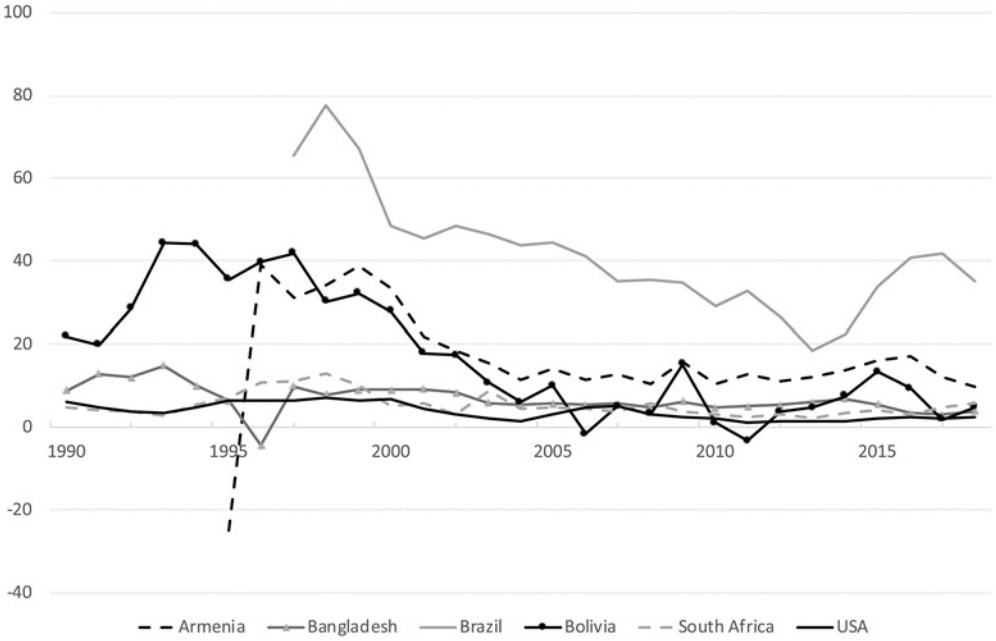
n/a: not available
Source: Corrales and Imam (2019).
Note: Loan dollarisation is calculated as share of (firms'/households') domestic foreign exchange loans as a percent of (firms'/households') total domestic loans.

that in 2011, the worldwide nominal interest rates for microfinance credits were around 30 percent and real interest rates around 20 percent, with some variations between the continents. In Africa, interest rates for microfinance credits were the highest, in South Asia the lowest. Whatever the reason may be for the high costs of these types of credits – high administration costs, high default rates, high share of profit-making institutions, oligopolistic structure – a Schumpeterian-Keynesian credit-investment dynamic cannot be triggered. Whether microfinance can realise the promise of poverty reduction and bring down interest rates compared with immoral private money lenders, is another relevant topic that needs to be discussed separately (Ströh de Martínez 2011).

There are more distortions of financial markets in developing countries. Stiglitz and Weiss (1981) made clear that credit rationing is typical for credit markets. The degree of credit rationing can be made dependent on the state of confidence (Keynes 1936: 148), or in other words, on the judgement of the level of uncertainty. In a situation of a low state of confidence, credit rationing will be very strict (Wolfson 1996). Many factors in developing countries make it very likely that credit rationing is high. These countries typically suffer more from economic shocks than developed countries, and so the level of uncertainty is relatively high. Institutions are also relatively weak. For example, the creation of collateral is difficult if land register and the legal system do not work in a good way. We can expect a close relation between a low asset-protecting quality of a currency and a low state of confidence of wealth owners, including banks.

Figure 4

Real Interest Rates, various countries, 1990–2018



Source: World Bank (2020), World Development Indicators

Last but not least, if wealth owners keep monetary wealth in currencies with a low asset-protecting quality, they will keep it in short-term liquidity. Banks and private wealth owners will also be reluctant to give out long-term credits. Countries in the Global South suffer systematically from a lack of long-term credit not only in microfinance, but in general. This makes the financing of investment extremely difficult (Shimada 2017).

One way out of the problem of a low asset-protecting quality of the national currency is to borrow in foreign currency. Credit expansion in foreign currency does not lead to depreciation pressure and can continue without immediate economic problems. First, banks use domestic deposits in foreign currency to give domestic credit in foreign currency. For the past decades, Bannister et al. (2018: 11) have calculated that around 82 percent of domestic foreign currency deposits are transformed into domestic foreign currency credit. Second, foreign credit can be used as a source of finance for domestic expansion. Foreign credit increases foreign debt. Following the World Bank classification foreign debt to gross domestic income increased between 2010 and 2018 in low income countries from 24.8 percent to 27.8 percent and in middle income countries from 22.3 percent to 25.5 percent (World Bank 2020b). However, financing domestic investment or even consumption with foreign credit involves playing with fire. The original sin debate is especially concerned with the problem that a large part of foreign debt in the Global South is denominated in foreign currency, which creates a dangerous currency mismatch. Any substantial real depreciation of the domestic currency increases the real debt burden and – given a high stock of debt in foreign currency – this might lead to financial crisis.

During the past decades, many financial systems were deregulated, and foreign banks opened subsidiaries in developing countries. In some countries, the financial system is largely owned by foreign banks. This may increase the efficiency of the financial system, but in addition to the original sin argument, it most likely also has negative effects on the domestic credit-investment mechanism. Stiglitz and Greenwald (2002:234) argue:

> "Foreign banks lend disproportionally to foreign firms, where they are likely to have an informational advantage (that is, they are likely to be better informed about such firms than are domestic banks, which are likely to be better informed about small- and medium-sized domestic firms)."

The overall effect of a high share of foreign banks in a developing country is shrinking credit supply for domestic small- and medium-sized firms and probably a shrinking overall domestic credit expansion (Stiglitz / Geenwald 2003: 234 ff.).[14]

To sum up: in a typical developing country, the unregulated market mechanism leads to a financial system which is hostile for credit expansion, investment and thus development. To overcome these problems development banks can play an important role. This will be explained in the following section.

Role of development banks to increase the productive powers of countries

Development banks have the great power to tackle failures in the financial system and at the same time failures of the market mechanism in order to significantly increase productivity and the innovative power of countries. They are therefore a key element of industrial policy, especially, but not only, in the Global South.

Development banks can help to implement long-term industrial policy goals and strategies especially in areas that are subject to great uncertainty. For private financial institutions, expected returns are important and projects with uncertain outcomes and long-term horizons are hence avoided. "Development banks represent a socialisation of risk, where the risks associated with financing industrialisation in its early stages are borne by society rather than by individuals" (Nayyar 2017: 197). In addition, development banks can provide countercyclical and long-term stable finance. Since the private financial system gives credit generously in periods of prosperity and reduces credits in times of crises, development banks can stabilise credit expansion (Griffith-Jones / Cozzi 2017; UNCTAD 2017).

Critics argue that because of rent-seeking, corruption and crowding out of private credits, development banks are subject to government failures. Further, it is argued that development banks make the financial sector inefficient, e. g. through charging lower interest rates than under competitive markets (Shimada 2017). These problems exist, but as Nayyar (2017: 195) suggests:

> "Industrial policy is no panacea: there are benefits and there are costs. ... the risks associated with industrial policy must be balanced against the risks associated with no industrial policy. After all, both government failure and market failure are facts of life".

If market failure and government failure come together, development is almost impossible. Hence, there is no alternative other than to implement industrial policy which is as effective as possible.

14 Stiglitz and Greenwald (2003:234 ff.) stress that domestic banks which lose market share may enter risky and speculative activities for example in the real estate sector.

For example, in the rise of the East Asian miracle countries, development banks played a key role. They followed an active policy to give long-term credits with low interest rates for productive purposes. The most common criteria for credits or even equity holding by development banks were the presence of large backward and forward linkages, high market potential, high technology intensity and high value-added. Financing through development banks in East Asian countries was usually conditional on the fulfilment of firm-specific requirements, such as local content rules of supported firms and export performance. From a historical perspective, industrial policy in East Asian countries was more successful than in Latin American countries, as the latter did concentrate less on national champions, had laxer government controls, and had more problems with corruption (Stiglitz and Uy 1996; Amsden 2001; Di Maio 2009).

In the debate on the strategic role of development banks, the positive example of the German development bank KfW is repeatedly emphasised (Griffith-Jones and Cozzi 2017). In contrast to the worldwide trend of the 1980s to privatise financial systems, Germany stuck with its recipe for success. The KfW is today the third-largest German bank and is still state-owned. It is exempted from paying taxes on its profits, it pays no dividends to shareholders and benefits from government guarantees (Naqvi et al. 2018). But most importantly, its long-standing role in financing strategic investment provides a good example of successful industrial policy.

> "While specific sectors targeted have changed over time, the focus remains on high value adding or technology intensive sectors with a high degree of linkages and spillover effects with the rest of the economy." (Naqvi et al. 2018: 25)

In the 1960s /1970s, the KfW mainly supported investment in areas such as industrial plants and machinery, aircraft, ships, capital goods, engineering, coal and steel. In past decades, renewable energy plants and ecological housing-efficiency were also added. Main instruments were the provision of credit on preferential terms, subsidised directed credit programs, and subsidised project and export finance. An example of the success of the KfW can be found in the growth of renewable energy production in Germany. When the sector was an infant industry, especially in the 2000s, it is estimated that KfW financed 80 percent of wind energy plants and 40 percent of total renewable energy production in Germany (Naqvi et al. 2018: 25 ff). This financing was a huge success. In 2019, renewable energy production in Germany had a share of 40.1 percent (wind 20.9 percent) followed by lignite (18.8 percent) and nuclear power (12.4 percent) (Appunn et al. 2020). An important function of KfW was and still is the financing of export loans.[15]

The KfW teaches an additional point. It does not only lend to private *and* public units, but in many cases, it also co-finances together with other banks or even via other private and public banks (Giffith-Jones 2016:15). For example, for innovation in the field of digitalisation, loan applications can be made via the commercial bank that holds the account of a firm. For such projects, the KfW offers 10-years credits with low and fixed interest rates and takes over 70 percent of the total sum, which can be anywhere between 25,000 and 25M euro per project. Local enterprises with public ownership, such as transport, utility and waste disposal companies, can also be supported with credits of up to 50M euro, with maturity up to 30 years and fixes interest rates up to 20 years. Such credits can be combined with subsidies (KfW 2020).

15 Under WTO law, the agreement on Subsidies and Countervailing Measures prohibits export subsidies. But industrialised countries have negotiated a special rule. As far back as 1978, member countries of OECD established a "gentlemen's arrangement" (Arrangement on Guidelines for Officially Supported Export Credits Arrangement) for regulating the use of export credits. The agreement classifies borrowing countries according to their income and country risk and, on this basis, specifies the minimum interest rates, minimum risk premium rates and repayment terms to be charged (OECD, 2019; Dünhaupt/Herr 2020a). Since the KfW raises finance on capital markets, it can lend at "market rates", which in its case are extremely favourable.

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However, in the typical developing country, promising small- and medium-sized enterprises (SMEs) do not have access to sufficient credit. It is in this area that development banks can perform an important function. There are different types of SMEs. There are innovative SMEs with entrepreneurs in the understanding of Schumpeter (1911) that means entrepreneurs who develop for the country new products, new productions or use new technologies. Innovative Schumpeterian SMEs contribute to economic upgrading. Normal SMEs are not especially innovative, no entrepreneurs in the definition of Schumpeter, but follow the general technological trend, create jobs and are an quantitatively important sector in many economies. Poverty SMEs are mainly microenterprises, such as most street vendors or home workers, and only exist because there is no alternative to survive. Development banks should above all support innovative Schumpeterian SMEs. To support poverty SMEs, governments should use other support mechanisms, for example microfinance or basic income schemes (Herr / Nettekoven 2018).

Besides development banks for financing SMEs, but also local public investment projects, local banks can play an important role. These banks are considered to be of key importance for the dynamic German SME sector. Local banks have extensive knowledge of local customers and successful investment projects. In Germany, for example, the local banking business is dominated by banks owned by local communities and collectively owned banks. These banks are forced to follow a regional principle, which means that they are only allowed to collect deposits and give credit in their region. Surplus liquidity of some regional institutions can be transferred to the central institutions of these banks, and regional institutions with more need of loanable means can get more funds (Detzer et al. 2017). Of course, the German banking infrastructure cannot be transferred as it is for example to developing countries. But the German example shows that non-profit oriented segments of financial systems can be very efficient for economic development. And it also shows that knowledge of the local situation by financial institutions and their willingness to support local entrepreneurs and companies are important.

Conclusion

The above analysis has shown that markets do not lead to economic convergence between the Global South and the Global North. Free trade (including GVCs) and FDI transfer new technology and trigger economic upgrading only to a limited extent. At the same time, countries of the Global South typically have currencies which are at the bottom of the currency hierarchy, with relatively low asset-protecting quality, and distorted financial markets. Development banks have the large advantage that they can help to solve both problems at the same time. They can provide long-term and cheap finance for private and public investment and support sectors and firms which implement new promising technologies and skills.

Comparative advantages push developing countries to low-tech-labour intensive productions of good and services. This is the case for tasks in GVCs as well as the export of unprocessed natural resources, including agricultural goods. Moreover, internal and external economies of scale and the existing strong economic clusters in developed countries prevent a catching-up process from materialising. Power asymmetries in GVCs lead to value grabbing and dampen domestic investment and consumption demand. FDI firms, especially in GVCs, are in many cases not sufficiently integrated in forward- and backward linkages and also follow the logic of comparative advantages. In GVCs, product and process upgrading are supported by lead firms, but functional and inter-

sectoral upgrading are not. The lack of large national firms and national champions makes catching-up more difficult.

For development, it is important that countries not only support their comparative advantages but that they also create *new* comparative advantages via industrial policy. Cimoli, Dosi and Stiglitz (2009: 544) argued that emulation, as an important element of catching up,

> "is the purposeful effort of imitation of 'frontier' technologies and production activities irrespectively of the incumbent profile of 'comparative advantages'. It often involves explicit public policies aimed at 'doing what rich countries are doing' in terms of production profile of the economy."[16]

Specific problems arise from economies of scale. In such a case, comparative advantages in a developing country can even exist, but market entry for a local firm is difficult.

The private financial system in developing countries is neither willing nor able to finance long-term investment projects in new tasks in GVCs or in new sectors. Here, development banks have a vital role. They can give cheap and long-term finance with fixed interest rates in domestic currency and at the same time influence the direction and level of investment.

For economic upgrading, a "package" of coherent measures is needed, and these can be made compliant to WTO and other rules (Dünhaupt and Herr 2020a). A coherent package to support a specific type of production or task in a GVC should combine specific education and training, policies to transfer specific technology, the provision of specific infrastructure, elements of ecological transformation, the coordination of cooperation between firms, research institutes and universities, and the creation of sufficient demand for the output of the supported production, for example, through government demand or supporting joint marketing activities abroad. For all of these, financing is needed. Therefore, in many respects, a development bank is at the centre of cluster policy. In the case of internal economies of scale, development banks also have to support single companies to grow until they can sufficiently exploit economies of scale. Selected FDI can also be integrated in an industrial policy strategy.

Last but not least, to be successful industrial policy should also include focus on social upgrading which does not automatically follow economic upgrading. In the case of education and training, economic and social upgrading are two sides of the same coin. But there are also many areas in which social upgrading supports economic upgrading. For example, sectoral bargaining and the law of one price for the same type of work stimulate higher productivity, as they punish low productivity firms and rewards high productivity firms. Social upgrading also increases productivity because employees can invest more in recreation or education for themselves and families.

As finance and resources are scarce, the key challenges for industrial policy and also development banks are to select good projects, supervise their implementation and adjust policies in the cases of mistakes. The best way to achieve this is to have intensive information flows between responsible government agencies, employers' association and all stakeholders, including trade unions and civil society organisations. Decision and control of industrial policy should be managed from a high political level, for example, the head of ministry or government, to ensure cooperation among government departments and efficient implementation and control (Rodrik 2004).

16 See for similar arguments for example Chang (2002), Rodrik (2008) and (2018), Herr (2019) and Dünhaupt / Herr (2020b).

However, while development banks can gain privileged access to finance from central banks and then channel long-term credit to the most productive and innovative use, they cannot overcome a low asset-protecting quality of the domestic currency. This means that credit expansion in domestic currency is restricted in a typical developing country, even for development banks. The solution is a certain financial de-globalisation, which would then allow for a higher degree of domestic credit expansion. Also, policy is needed which keeps inflation rates low, prevents any dangerous currency mismatches and also avoids current account deficits.

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