ECONOMIC DEVELOPMENT AND GLOBAL VALUE CHAIN INSERTION:

A VIEW FROM **BRAZILIAN** AND **SOUTH KOREAN** LENSES

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Perspectives of Global Value Chain Insertion

The Brazilian and South Korean Models

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PERSPECTIVES OF GLOBAL VALUE CHAIN INSERTION:

THE BRAZILIAN AND SOUTH KOREAN MODELS

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Perspectives of Global Value Chain Insertion

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Comparative studies with South Korea were very common among Brazilian economists in the 1970s and 1980s. References to the Korean more open trade policy, to the continuity of its policies over time, to the commitment of the highest levels of policy-makers in monitoring each company's commitment to generating foreign currencies, to some specific trade promotion instruments, to the Korean experience with export processing zones, to the performance of the big business groups (Chaebols), to the long standing emphasis in education and several others aspects had become familiar issues to Brazilian economists.

Also frequent were the references to the difference in terms of per capita income between the two economies, and the different trajectories over time. The performance of the Korean economy in the last three/four decades has come as a big surprise to many observers. Indeed, Korea is one of the few examples of developing economy joining the set of rich countries. Meanwhile, the Brazilian economy has presented systematically low growth interrupted by a number of successive crises.

More recently, the Korean example is linked to its experience as an active participant in a number of value chains. As a matter of fact, the degree of involvement of the Korean economy with such chains is more intense than the average for the OECD members.

The Brazilian economy, on its turn, has become increasingly dependent upon domestic value-added for its exports. As will be shown, not even its membership to Mercosur has provided an alternative of a value chain at the regional level. This could have become a policy target, given the increasing regional dimension of value chains, as evidenced by East Asian economies, as well as the European Union and NAFTA members, but regional productive complementarity has seldom been seriously considered in the Southern Cone of South America.

It is conceived that from the viewpoint of a developing strategy participating in global value chains (GVCs) might provide a number of positive stimuli, as indicated in the following paragraphs. Hence this disparity of degrees of involvement with these chains comes out as an important issue, to the extent that this type of involvement with the offshoring of productive processes can be instrumental in fostering competitiveness, hence trade performance, at the same time that in principle it facilitates – to the country hosting investment - a reduction of the distance from the technological frontier, with potentially positive impact on the labor market.

The dawning of the XXIst century has brought three new features with significant impact.

In Europe, the convergence of Western and Eastern countries has provided the former with an additional supply of labor at lower cost, at the same time that the creation of the common currency adopted by several economies led to reducing transaction costs, thus contributing to foster productive complementarity.

In North America, the consolidation of NAFTA had similar effect, fostering the 'maquiladoras' model, thus reducing costs and stimulating productivity in shared productive processes.

Thirdly, China fostered the pattern of relationship among Asian countries (known as the 'flying geese' since the 1970s) and intensified it to unprecedented levels, in a modified model, via offshoring production.

Production chains in East Asia, North America and Western Europe (in this order of relative importance, according to their performance) have imposed a new model of (mainly, but not only) industrial production. Participating in global value chains became a policy issue, even if a controversial one. More often than not, it is seen as an important source of competitiveness.

Participation in value chains involves the easiness of movement of goods – final as well as intermediate. The more open an economy the bigger the chances that it might have access to production goods at low prices, hence participate in a value chain.

This type of production process allows countries to participate in the international market for some products when they lack the comparative advantage for doing so if, for instance, their geographic location in relation to the main markets contributes to reduce transportation costs. Furthermore, direct links with external producers should facilitate the access by domestic firms to state-of-the-art technology: value chains are often led by transnational companies, and it is expected that the requirements of productive sophistication correspond to the standard pattern at the technological frontier.

At the same time, being part of a GVC requires a good deal of specific domestic conditions. There is no 'application form' for a country to become a candidate. Potential investors have to consider a given country as a good opportunity to invest in, and this means free access to imported inputs, stability of rules for the free inflow and outflow of resources, good infrastructure, qualified labor, institutional, judicial and political stability, fluid money transfer mechanisms, plus a number of other conditions.

Participating in a CGV is not a universal attribute: it does not make sense for every productive sector. By definition, complementary production makes sense only for those processes that can be sliced in different stages. Hence, it does not apply for continuous processes. This is a fundamental characteristic, and a particularly important one for economies that are rich in natural resources: it is not possible to produce, say, steel or pulp as separate stages in different countries.

AT THE SAME TIME, BEING PART OF A GVC REQUIRES A GOOD DEAL OF SPECIFIC DOMESTIC CONDITIONS. THERE IS NO 'APPLICATION FORM' FOR A COUNTRY TO BECOME A CANDIDATE

As a consequence, economies like the ones in Latin America or Africa can hardly expect to present the same degree of participation in GVCs like, say, East Asian economies.

This is not to say that the natural resources-rich economies cannot aim at participating in GVCs. They can and should make efforts in this direction, for the potential benefits that such participation might provide, in terms of the efficiency gains for the domestic production. This is true in particular for those economies with the policy target of diversifying their export composition with a higher share of industrialized products.

Offshoring involves higher organizational costs than domestic sourcing due to the distance between productive units and the need to organize transactions in different environments. The cost of service links between remotely located productive units must not be high, and the cost of creating network must be small. These costs must be surpassed by the gains stemming from the access to cheaper parts and lower factor cost. The geographical dimension tends, therefore, to gain importance in this process. Productive value chains are increasingly more a regional than a global phenomenon.

Basic sources of gain for developing countries following from their participation in GVCs are the possibility of diversifying their export bill, the possibility of absorbing gains from scale, the corresponding increase in employment in the export sector and the access to more updated technology. Furthermore, exporting more elaborated goods with (presumably) higher income-elasticity of demand might provide also gains from improved terms of trade.

Also, the decision to produce offshore is a cross-border movement requiring a particular type of input and/or a specific kind of skilled labor. From the perspective of a developing economy this means an inflow of capital, coupled to the transfer of some segments of production processes, more skill-intensive than the average standard prevailing in the host country. The demand for labor becomes skewed towards higher skilled labor, thus raising the average wage.

As far as trade policies are concerned, therefore, the value chain framework implies a shift toward broader policy approach, and a change of emphasis from trade barriers to behind-the-border barriers and regulatory measures. Creating a friendly business environment is a precondition for an economy to be able to participate in a value chain.

This set of positive outcomes have led to the perception of participating in global value chains as an additional policy tool to foster economic and social development, thus stimulating a set of domestic policy reforms in a number of countries.

Notwithstanding these presumed positive links between GVCs and developing countries growth, McKinsey (2019) shows some recent empirical indicators that call for a cautious approach[1]:

a) Goods-producing global chains have become less trade-intensive between 2007 and 2017, at the same time that cross-border services are growing more than 60 percent faster than trade in goods.

b) GVCs are becoming more intensive in knowledge and high-skill labor, as well as more regionally concentrated, especially within Asia and Europe.

1. The study is based on 23 global value chains in both goods-producing and service industries, involving 43 countries that correspond to 96 percent of global trade, 69 percent of global output and 68 percent of global employment.

These trends seem to favor advanced economies, given their strengths in innovation and services, and their skilled workforces.

What these indicators suggest is that from the perspective of the set of developing economies the chances of maximizing gains from the participation in GVCs are not homogeneous. Not only geography matters; the role played by the degree of sophistication of domestic supply conditions is also a basic condition. This comes out clearly in the comparison between Brazil and Korea.

NOT ONLY GEOGRAPHY MATTERS; THE ROLE PLAYED BY THE DEGREE OF SOPHISTICATION OF DOMESTIC SUPPLY CONDITIONS IS ALSO A BASIC CONDITION

Keeping these reference issues in mind, this Note is focused on the recent experiences of Brazil and South Korea with regard to their insertion in GVCs, the basic characteristics and likely prospects.

According to the most recent OECD's TiVA data available, the foreign value-added content of Brazil's gross exports in 2016 was 10.2%, much lower than the G-20 average of 16.5%.

Between 2005 and 2015 the share of imported intermediate inputs embodied in exports fell from 23.5% to 19.3%, well below the OECD average of 45.5%.

Given the predominance of agricultural and mining products in total Brazilian exports these low indicators should not come as a surprise. The industries with the most foreign value-added content in their export were transport equipment, ICT and electronics and coke and refined petroleum products, sectors with rather limited weight in the Brazilian export bill.

Brazil is, of course, a member of Mercosur, an integration exercise with a common external tariff.

Customs unions shelter the domestic economy from external competition, via common external trade policy. This should allow for gains from scale to the domestic producers. At the same time, there is presumably free flow of products within the union. As an outcome from the perspective of productive chains, two of the basic conditions are met: bigger scale of production and free movement of goods among union partners.

The concept of regional trade creation is very much in line with the possibilities stemming from regional value chains: fostering existing activities or creating new ones for intra-regional trade is precisely the essence of promoting productive complementarity. If, additionally, production for the regional market - as is the case for the suppliers of intermediate goods - creates economies of scale, then the benefits of stimulating production on a regional basis become even more predictable.

A custom union should, in principle, provide a more friendly environment to regional productive chains and eventually also facilitate the participation in global value chains. The more intense the intra-group trade in intermediate products, the bigger the chance that the country group exports might have a higher component of products fabricated in a sliced manner, as reflected in the intra-group import flows.

The relevant variable for that matter are the producer goods. These comprise capital goods, parts, equipment and raw material[2]. Since we are dealing with intraregional trade, call them RPG goods (regional producer goods). They can be traded with neighboring countries participating in a given integration exercise, as well as with the Rest of the World.

The intensity of the involvement with production in value chain can be visualized as the ratio between the amount of intra-regional imports of these products and the total value exported by the countries in the group (Total Goods: TG). The higher the indicator (RPG/TG), that is, the ratio of intra-regional imports of production goods to total exports by a given country group, the higher the intensity of regional value-added production in that group.

For Mercosur the share of production goods in total regional imports[3] was 45% in 2000 and 47% in 2017 (relatively constant during almost two decades), whereas the share of production goods in total imports from the Rest of the World was 71% in 2000 and 57% in 2017, mirroring the increase of domestic value-added in this set of countries.

As for the relevant indicator of a possible regional value chain, for Mercosur the ratio of imports of regional production goods to total exports fell from 12% in 2000 to 7% in 2017, very much in line with the TiVA data for Brazil alone.

These figures compare poorly with the corresponding indicators for other regional groupings. In the European Union this ratio was 83% in 2000 and 82% in 2016, whereas for NAFTA the figures are 38% in 2000 and 46% in 2016.

This means that as far as the involvement of the Brazilian economy with GVCs is concerned not only the foreign content of its exports is low and has decreased, but there has been no alternative in creating a value chain at the regional level in Mercosur.

The figures for Korea tell a totally different story. According to the OECD's TiVA data the foreign value of Korea's exports ranged from 42.4% in 2011 to 30.4% in 2016, mirroring the overall decrease of this indicator at the global level. Yet, this is still much higher than the average OECD level of 25.3% in 2016.

Between 2005 and 2015 the share of intermediate inputs embodied in Korean exports rose across manufacturing sectors, reaching 55%, indicating an intensification of Korea's integration with GVCs, both on the export as well as on the import side.

As different from Brazil, Korea is not a member of any regional integration process. It has, of course, signed several preferential trade agreements with a number of countries, one of the most important being the so-called ASEAN+3, together with China and Japan. This agreement is relevant because it comprises two of Korea's three most important trading partners, China and Japan, plus a number of neighboring countries.

The second most important partner of Korea is the United States. Yet, in 2015 more Korean value-added content went to the United States than gross exports sent directly from Korea: this is the outcome of Korean value-added being exported via third countries, mainly China. A clear additional indicator of the intensity of Korean involvement with GVCs.

2. Baumann/Ng (2012) have identified a set of 1919 Production Goods, from SITC ver. 3, at the 5-digit classification level, used here, using data from UN/COMTRADE.

3. Author calculation.

Of the total value of Korea's imports of intermediate goods and services in 2015, 50.6% was embodied in exports. This is above the OECD average of 45.5%.

The industries with the highest shares of intermediate imports used in Korea's exports were ICT and electronics, motor vehicles and electrical equipment, predominant sectors in the Korean export bill.

Comparing the indicators of the two countries as per their insertion in GVCs, it turns out that the difference between these indicators are clearly a mirror image of the comparative advantages in each case.

The Brazilian economy is rather rich in natural resources, hence in productive processes that can hardly be sliced in different locations. Korea, on its turn, has a huge advantage in qualified labor force, hence being competitive in technologically sophisticated products, whose production processes can be geographically spread out.

In any case, the basic conditions to participate in GVCs hold everywhere. There is no shortcut leading an economy to participate in value chains. The requirements are diversified and comprise favorable conditions at the micro and the macro levels. The former means a suitable business environment, with conditions that make benefits stemming from offshoring surpass the costs. It comprises also the creation or strengthening of the domestic conditions to scaling up the value-added ladder.

At the macro level a precondition – notwithstanding the high value of price stabilization, low capital cost and other elements, such as stable political and juridical environment - is to allow for the free movement of inputs and final goods. Hence, the adoption of trade barriers looks incompatible with value-added production. Furthermore, public policies must not impair the attraction of the relevant agents involved in this process, and this means a friendly environment to investors and to the movement of technical staff.

The Brazilian economy does not stand high in any international ranking of such indicators.

So far for an overall appraisal. What are the likely perspectives that might be identified in terms of the future insertion of Korea and Brazil into global value chains?

It has already become a jargon to refer to the world conditions before and after the pandemic. The changes that have taken place in the overall scenario in these last six or so months are so intense that it seems reasonable to expect new features in a number of aspects.

It is not only consumer behavior and interpersonal relationships that are bound to change. The impact on the productive sectors has also been so intense that a number of changes are expected.

To start with, the more intense use of the Internet for most transactions is one aspect that seems to have come to stay. Be it for the easiness of processes or even the very caution with regard to contamination, it seems inevitable that the share of transactions at a distance is bound to remain high.

It is also expected that some sectors will gain importance in the priority agenda or production plans; natural candidates are the pharmaceutical industry and the medical instruments, equipment and material, given the pressing situations experienced by several countries during the health crisis.

As per the global value chains in other sectors it is also expected that quite a few significant changes might take place.

To start with, several productive sectors in many countries have experienced rather traumatic experiences when, at the beginning of the health crisis, early this year, China isolated a number of domestic regions. These were the origin of many products used as inputs for production in several sectors. This has led to temporarily closing several lines of production for the very lack of inputs. Also, when things got back to almost normal, there was a restriction in the availability of means of transport, which actually meant a longer constrained period.

This experience has led a number of policy makers and entrepreneurs to reasonably worry about the supply of inputs being excessively dependent upon a single origin. As expected, the alternative being mentioned is to bring a number of production lines back home or, at least, to relocate them elsewhere, but closer to the domestic market.

This added a new dimension to the very logic of the GVCs. If thus far the decision to produce offshore was based predominantly on the differential of costs in the access to inputs, in the governance of several productive plants and transportation costs, the experience with the coronavirus crisis has added a new, geopolitical component to the decision process. Now, on top of all those calculations in terms of relative costs, it should be added the guarantee and the easiness of access to inputs.

This is, of course, easier said than done. Not only there are differences in this flexibility among sectors. The process of selecting productive partners comprise not only the information on costs. It involves also a number of other dimensions, such as reliability, technical capacity, access to patents and others.

This means that it is very likely that we will see some rearrangement in a number of GVCs in coming months and years, but probably not in all of them.

Some countries have already provided fiscal and financial stimuli to companies that relocate their productive processes, reducing the dependence of foreign (mainly Chinese) productive stages. It is to be seen the degree of success of such policy.

Be it as it may, for the two countries considered here it is likely that the perspectives are bound to be different.

THIS ADDED A NEW DIMENSION TO THE VERY LOGIC OF THE GVCS. IF THUS FAR THE DECISION TO PRODUCE OFFSHORE WAS BASED PREDOMINANTLY ON THE DIFFERENTIAL OF COSTS IN THE ACCESS TO INPUTS, IN THE GOVERNANCE OF SEVERAL PRODUCTIVE PLANTS AND TRANSPORTATION COSTS, THE EXPERIENCE WITH THE CORONAVIRUS CRISIS HAS ADDED A NEW, GEOPOLITICAL COMPONENT TO THE DECISION PROCESS.

As indicated, Korea has a now longstanding insertion in GVCs, and a good deal of its exports is linked to these chains. Its 'China-dependency' is not a minor issue. Yet the sectors where its chain-dependency is most intense are technically sophisticated products. This raises the question of the degrees of freedom to moving production to somewhere else, without affecting significantly the competitiveness of Korean exports. This is not to say that there cannot be some productive activities that might migrate back home or eventually move to other, neighboring countries. But the margins for that kind of movement are still to be seen.

The perspectives on the Brazilian side are quite different.

Brazil's participation in GVCs is not zero, but extremely low. The country participates in GVCs 'by the back door', essentially providing raw material to production elsewhere. The degree of transformation of the inputs it provides is quite low. And it hardly participates as an assembly locus. Not even at the regional level.

Now the coronavirus crisis has signaled with a potentially significant opportunity. To the extent that, say, North American (or European) producers want to maintain access to cheaper labor and other inputs, and at the same time reduce their dependency upon Chinese suppliers, this might lead to a process of searching for opportunities closer to the home market.

To the extent that the Brazilian policy makers realize that this is a unique potential opportunity and provide the policy adjustments required to make the economy attractive to foreign investment aiming at installing complementary productive units, we could eventually see a new approach of the Brazilian economy towards GVCs.

Whatever the movements involving the two economies, they are hardly taking place in the short term. Most if not all forecasts point to a negative growth of most economies. In such scenario the margins for significant movements and big investment are limited. There seems to be, therefore, a trade-off between the concerns with reducing the dependency of a single provider of inputs and the reality of market conditions to allow for significant movements by firms.

Last but not least, Brazilian diplomacy has been dealing with the intention to negotiate bilateral preferential trade agreement with South Korea. The scope of the negotiating agenda is still being defined.

One possibility is, therefore, that such agreement brings initiatives that facilitate the interaction of the two economies in joint activities in GVCs in some sectors. Geographical proximity to important consumer markets might eventually be considered by Korea in terms or relocating some productive stages in Brazil.

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