At the beginning of the 21st century, the worldwide economic structure was modified considerably as compared with the structure of the 1980s. Its evolution over recent decades has been characterized by two profound and interrelated changes: the development of a new global system of production and the growing asymmetry between economic and financial reality, with a focus on the latter.

Within the global production system, geographical fragmentation of productive processes and their organization into global value chains (GVCs) determine the existence of an international division of tasks between countries according to their development status, reflecting the existing technological asymmetry between them. By radically modifying the organization of national production structures and the forms of corporate trade, the dynamics of the GVC modify market conditions of competitiveness and, consequently, the manner in which national economies participate in the global economy.

The first decades of the 21st century represent a historic period for Latin America, in which the governments of the countries it comprises adjusted their productive structures to the new realities of the global production system dominated by a limited number of transnational enterprises based in developed countries. This participation, driven by the states and dominated by the markets, occurred in line with the role that these countries have played since colonial times, based primarily—although not exclusively—on the economy’s primary sector. Most states took advantage of the resulting economic growth to reduce levels of poverty and marginalization, but were unable to adequately change productive structures or address increasing environmental impacts.
Economic Context in Latin America: Outlook and Trends for Social-Ecological Transformation

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Introduction

This essay explores the economic context necessary for the formulation, discussion, and implementation of proposals needed for a social-ecological transformation that improves upon the current unfair and unsustainable socioeconomic system. Therefore, the word context does not refer to a situational analysis of global economic circumstances and those of Latin America in particular, but rather utilizes the term’s literal meaning, referring to the circumstances that form the setting for an event in order to better understand and interpret said event. As a response to the economic, social, and environmental crises in which Latin America and the entire planet currently find themselves, social-ecological transformation requires a study of the evolution and future trends of the material conditions of production that have led to the economic changes described in this essay, as well as their more specific, but no less important consequences in terms of economic growth, or lack thereof, wealth distribution, trade, and investment.

This essay is therefore divided into two parts. The first part deals with changes to the global system of production, beginning in Section I with a description of the rise of global value chains (GVCs) and the new dynamics for worldwide production, trade, and investment under the control of a few large transnational enterprises. Section II provides a brief but complete description of GVCs and how they operate both internally and externally towards the market. Section III outlines the most significant changes that this new global system of production entails for other spheres of economic and social activity, changes that are part cause and part consequence of the same—specifically finance, services, labor relations, and social and environmental impacts. While Section IV addresses the role of technology in GVCs, Section V describes the new international division of labor that has been created by the new worldwide system of production and the roles countries play in this international division.

The second part of this essay focuses on the changes that have occurred in Latin America over the past three decades due to policies implemented by the region’s governments—often under pressure from transnational enterprises, the governments of developed countries, and international financial institutions—as well as an analysis of what can be expected in the near future. Section VI analyzes Latin America’s economic and productive evolution since the 1990s, as well as its current participation in global and regional value chains, according to its three main subregions (Central America, the Southern Cone, and the Andean countries). Section VII analyzes the economic environment of recent years after the end of the commodities cycle, providing a brief summary of the global situation and the main world powers, as well as an in-depth analysis of the Latin American region. Section VIII analyzes the negative policies that most of the current governments in the region are implementing within the context described in the previous sections, summarizing the challenges faced and outlining the possible economic, productive, and social strategies and courses of action for the social-ecological transformation of the region.

I. New worldwide dynamics: Capitalism reformulates itself

At the beginning of the 21st century, capitalism had reached all around the globe. The worldwide economic structure has changed considerably since the beginning of the 1980s, driven by the efforts of large multinational enterprises to regain profitability and economic growth in the system’s core countries following the collapse of the Bretton Woods system and the oil crises. Two profound and interrelated changes characterize its evolution over recent decades: the development of a new global system of production and, in particular, the growing asymmetry between economic and financial reality.

The new global model of production has implied the fragmentation of production processes and the relocation of these processes to different countries and regions, forming global value chains (GVCs) that take advantage of localization opportunities in accordance with the production characteristics of each “link” (production stage), respectively: cheap labor, access to abundant natural resources, financ-
ing, availability of technology with trained technical resources, and proximity to consumer markets, etc. GVCs have not only refined and multiplied the division of labor in companies, but also in local, national, and especially international spheres, utilizing economies of specialization and scale to a degree unimaginable by classical economists such as Smith, Ricardo, and Marx, who predicted the tendency towards subdivision of labor as a way of increasing productivity from the early phases of the development of the capitalist system.

On the one hand, scientific and technological breakthroughs in areas such as chemistry, transport, and information and communication technologies have facilitated this fragmentation of processes and their reconfiguration in GVCs. The number of transnationals investing abroad or subcontracting foreign producers to reduce costs and provide greater flexibility or better service to local markets undoubtedly received an important push from communications breakthroughs and the integration of computers into mass production, including in areas such as product design, supply chain management, and sales and distribution monitoring. These innovations have reduced the cost of coordinating operations internationally and have allowed a growing sophistication in fragmenting the value chain, with very specific goods production or service tasks performed in one location while other production components are made in other places.

On the other hand, free trade, financial liberalization, the weakening of workers’ organizations, privatization, outsourcing, offshoring, and subcontracting have been the tools used by governments and transnational enterprises. Politically, the entry of former communist countries and other closed economies into the worldwide capitalist economy represent an important development. The collapse of the Soviet Union and related governments in Eastern Europe, China’s change of economic plan, and the liberalization and opening of India’s economy have facilitated the expansion of global production capacity, international trade, foreign investment, and international subcontracting.

Coordination of globalized production and its corresponding consequences is important for economic development in general, and for workers in particular. The composition, volume, and nature of international trade are affected depending on the companies leading specific value chains and the structure and location of the links of each GVC. The organization of production into value chains has implied a strong increase in intra-firm and intra-industry international trade. A large part of world trade and production is carried out within regional or worldwide value chains. The growing importance of GVCs in the world economy is reflected in the increase in the ratio between trade and gross domestic product (GDP), due to the fact that intermediate goods can be transferred several times between countries before being assembled into a final product. Between 1980 and 2011, world trade (the sum of exports and imports) grew at an annual mean rate of double the average growth rate in global GDP (5.7 percent versus 2.8 percent), which led to the ratio between both variables rising from 27 percent to 65 percent during this period (Economic Commission for Latin America and the Caribbean [ECLAC], 2014a).

The main actors in this process are transnational enterprises, typically large corporations (which consequently have strong bargaining power with private enterprise and governments in both developed and developing countries) with productive goods and services activities in several countries. The quantitative growth in recent decades of value chains led by these transnational enterprises has meant a qualitative change towards a global system of production, with a sole focus and global overview of operations (Amador & Cabral, 2014). However, the vast majority of transnational companies that today control most of the globalized economy originated in and continue to have their headquarters in developed countries, with a high predominance of U.S. companies. Within this context, transnational companies have benefited enormously from subsidies in investment, tax incentives, and deregulated labor markets. Nowadays, they dominate the global economy, controlling around 80 percent of world trade through their global value chains, including their own operations and those of their business partners (United Nations Conference on Trade and Development [UNCTAD], 2013; Serfati, 2008).
In contrast with those who have emphasized the marginalization of the state in this process, the reality is that states are at the heart of the explanation of how global capitalism works. The role of the state has always been central to the operation of capitalism, including by maintaining the reproduction of class relations, property rights, and compliance with agreements, currency stabilization, and crisis containment. Far from finding the non-existence of the state more convenient, transnational corporations depend on the role of the state and encourage it—as well as the role of international organizations—for their own purposes.

II. Global value chains: The essence of outsourcing

In the years from the end of World War II to the end of the 1970s, international trade and finance expanded significantly. However, core economies and those of some developing countries operated by protecting their internal production: the internal market was the most important thing to companies. Industrial production was organized according to the Taylorism/Fordism model of organization and management of labor and production. Companies worked for a market that grew regularly and was predictable. Productivity growth was obtained not only through the introduction of new technologies, but also partly by operating at ever-larger scales of production. Companies tended to become giants. One of their expansion strategies was through vertical integration, but companies tended to not only verticalize, but to also integrate every type of service connected to their main production activities or that was necessary for their production and administration operations: transport, storage, maintenance, etc. Companies thus became large organizations—self-sufficient in multiple aspects—that were performing various internal activities beyond their main line of production. In some cases, this self-sufficiency was linked to the fact that companies could not find other companies in their internal market that were able to ensure supply under the conditions of quality, time, and quantity required. The existence of relatively closed economies and transportation and communication difficulties did not favor the search for suppliers from other countries. In the case of services, internalizing activities allowed the company to directly control the performance of everything that was important for the company’s operations (Stolovich, 1994).

The type of company that took shape under these conditions began to be questioned when the economic conditions changed. The long-lasting economic expansion in developed countries that began in the postwar period and was institutionally sustained with the Bretton Woods agreements came to an end in 1973, and the situation was exacerbated due to the oil crises. The international mobility of capital played an important role in the fall of the monetary system. Increasing inflation acted as a redistribution mechanism for income as it exceeded stagnant nominal salary increases and decreased real salaries, while companies’ investments profits were also reduced. The oil crises worsened problems and meant the point of no return for the dominant capitalist classes.

Large companies found that internal markets were insufficient to absorb the output from their large-scale production, and the international market became the target for production. In any event, the capitalist crises modified the markets, which went from being stable, growing, and predictable to uncertain and erratic. The profitability of companies began to decrease. Companies required less rigidity and more flexibility to face an uncertain economic environment with unpredictable and increasingly competitive markets. Companies had to focus on what they knew how to do best and abandon non-essential activities. If they had verticalized before, they now had to reverse the process to be more flexible; if they had internalized activities before, they now had to externalize them. The ideal company had to be based on smaller production units that worked together harmoniously and in an integrated manner, and that had a greater capacity to both absorb and distribute setbacks from the crises and to adapt to fluctuating demand. Thus, the strategy of specialization was born, complementing outsourcing, subcontracting, and offshoring. From this initial outsourcing push to reduce costs, a complex network of production, business, and institutional relationships has been created in the space of a few decades.
A new division of labor is thus generated, with a greater number of specialized businesses linked by a dense network of cross-company relationships between purchasers and suppliers. Flexibility is at the core of this industrial infrastructure, and it is becoming increasingly more adaptable and effective at facing the rapid transformations of contemporary economies. These cross-company connections no longer only operate within domestic markets, but extend internationally. Technological revolutions in communication and transport, as well as the greater openness of economies, facilitate the construction of supply networks that extend beyond national borders. Thus, the new division of labor and the creation of networks that link companies is built on two variants: so-called “national outsourcing” (also known as subcontracting), which involves the contracting of products and services from companies established within the country; and global sourcing, which corresponds to the interconnection of this network of suppliers with those from other countries or from the company itself, fully or partially transferring the company’s output to third-party countries (offshoring). If a company’s sales market now consists of not only the domestic market, but also the entire globe, the purchasing market also becomes universal. In the capitalist economy’s worldwide integration, the GVC is a structure in a dynamic network that interconnects the set of companies, institutions, supplies, goods, and services that are required to generate a product or service from concept to final sale. In this way, it creates new conditions that characterize the current model of capitalism (Peña Castellanos, 2012).

Changes in management style have occurred in various areas of large companies, shifting towards:

- core competence in organizational and strategic areas;
- mass customization in product development areas;
- shareholder value in financial areas; and
- flexible specialization in industrial relations.

The changes have been different in each industrial sector, but offshoring and outsourcing have played an essential role in the corporate strategies across the board, facilitated by a combination of technological changes, political changes, and global capacities. A specific value chain is supported by two kinds of competitiveness: a) systemic competitiveness (the integrated competitiveness of the GVC in worldwide competition) and b) competitiveness at the level of each of the links in the chain (based on specialization or the use of a natural resource that is more available or cheaper in the chosen location).

This last point is critical; in addition to the pre-existing cost advantages of localizing specific links in a chain, the phenomenon of economies of agglomeration, where companies that participate in this link cluster together, even when their final products compete against each other. In many cases, this tends to create industrial or service poles and cities dedicated to a specific task. The economies of agglomeration that are obtained from placing companies in locations close to each other are important for scale and network purposes. Costs can be lowered significantly by offering the opportunity to develop and compete in terms of suppliers, human resources, development, and innovation, among others, with greater division and specialization of labor. These savings are significant and are added to those obtained by setting up in a site with cheaper labor.

To remain in a value chain, companies must undergo a learning process that enables them to have the capacity to respond to market volatility. This might be directly, due to changes in supply and demand, or indirectly, due to planning by the parent company that considers not only the variable profitability of the subsidiary company or local supplier, but also the optimization of the whole of the transnational (before the maximum of a specific place). In order to achieve economic results, meet standards of quality, and/or reduce delivery times, the company must be flexible in the face of change and the constantly evolving forms of foreign direct investment (FDI). It is essential for these companies to have the capacity to participate in collaboration and competition processes within the value chain; to participate in difficult negotiations on price, delivery, and financial conditions to determine how much of the generated value is appropriated; the capacity to adapt to the organizational shifts of the client company or parent company, if they are a subsidiary; and the ability to efficiently and rapidly manage the location and relocation of resources in response to or in
anticipation of changes driven by the competition (Gereffi & Fernández-Stark, 2016).

Control of the GVC by transnational enterprises has three main components: a) mechanisms for internal control of the GVC, whether through subsidiaries or power relations with suppliers, which tend to be maintained through bargaining power; b) control mechanisms for final markets, including increasing market share, research and development (R&D), brand, and scale; and c) control mechanisms for the global institutional system (the roles of the state and international, multinational, and multilateral organizations).

Internal control of the chain is fundamental both in terms of the final product’s competitiveness (price, quality, delivery) and in terms of the value appropriation by each of its participants. Governance of the chain includes the nature of contracts with suppliers, the degree to which technology is shared, and the firm’s capacity to improve its role in the value chain (upgrading) towards activities that generate more value per worker. Relationships between the lead firm and its suppliers may take a variety of forms, ranging from a subsidiary relationship to purchases under market conditions, and involving intermediate forms in which knowledge or regular extra-contractual relationships are shared through product certification, inventory techniques, controls via metrics, staff audits, and open-book policies, among others. The bargaining power of the companies that make up the value chain is differential, but variable over time. With the improvement of the system in its multiple dimensions (technology, management, information flow, labor, localization, etc.) by the large multinational companies, a constant trend has been the asymmetry of power between the lead multinational company, increasingly located in the initial and final stages of the value chain (development and design on the one side and commercialization on the other), while the rest of the chain’s members (sometimes other multinational companies, often large and small national companies) are located at intermediate stages (e.g. production and logistics).

In this sense, the multinational corporation that governs the chain achieves control of the two variables that for decades have been determining factors to achieving greater profitability for the company: a) vertical integration (mostly without making significant investments, on the contrary, divesting by externalizing and offshoring operations) and b) large market share, for which the systemic competitiveness of the chain is essential, as covered below.

In terms of market control, the barriers to entry are high in the high-end stages of the value chain and low or non-existent in the low-end stages. At all levels of the chain, the economies of scale of globalized transnationals are an effective barrier to entry for competitors, especially in the links occupied by lead firms and many first-level suppliers. In the companies that control the value chain, even so-called “fabless” ones that do not carry out the stages of production, access to markets is limited through branding, product design, and marketing activities.

The process of branding (brand construction and strengthening) is both a strategy for sales and market domination and a barrier to entry within the segment occupied by the chain’s lead multinational corporation for both new competitors and the possible expansion of any member of the chain (particularly the suppliers closest to the end of the chain, sometimes referred to as Tier 1). Branding tilts bargaining power in the production process towards the company that possesses the brand design. The branding process is costly and in some cases may be associated with a product or service’s technological content and in others with a considerable design, sales, and promotion effort. The appearance, particularly in China, of large contract manufacturers that produce multiple brands within their plants has not yet significantly reduced the power of brand in negotiations within the chain. Currently, as outlined below, the rise of electronic commerce platforms has increased the barrier to entry and the governance of value chains is now concentrated in even fewer companies.

The current centrality and internalization of transnational enterprise production is the result of a long, competitive, complex process. Foreign direct investment in the first decades following World War II was primarily motivated by the strategic decisions of multinational companies, chiefly from
the United States, to obtain access to foreign markets protected by high tariffs. The motivation and nature of investments began to change at the end of the 1970s, a transformation that deepened at the end of the 20th century and the beginning of the 21st. This occurred alongside the strategic change towards targeting, outsourcing, subcontracting, and offshoring and within the framework of intense competition between transnationals from Europe (chiefly Germany) and Asia (Japan for most of the period with the recent rise of some Chinese corporations).

One of the fundamental characteristics of the current global system is the close tie between international trade and FDI, the value of which has quadrupled in the past two decades, rising to an annual average of $1.050 billion dollars between 2001 and 2010. Transnational corporations from developed countries have sent a growing percentage of this FDI to developing countries, increasing from $23 billion dollars (21.6 percent of the total) in the 1980s, to $394 billion dollars in the first decade of this century (34.7 percent of the total). The advantages are clear: while the return on foreign assets reached 12.5 percent in 2007, a value high in itself, in China (which was the main recipient of foreign investment), the return on foreign assets reached 21 percent (Milberg & Winkler, 2013).

To understand the causes of these high levels of FDI, it is useful to distinguish between horizontal and vertical FDI:

- **Horizontal FDI** occurs when the company has plants in several countries due to the significant costs of transport, tariffs, and trade barriers (horizontal FDI with homogeneous product), or when there is an economy of scale at the production level of a variety of products (horizontal FDI with heterogeneous product). In both cases, horizontal FDI is associated with the search for markets and involves a replication of production capacity in a foreign location, presumably to promote better sales in that location.

- **Vertical FDI** seeks to optimize the value chain made up of different links, each one representing a production process of the company. Vertical FDI can first be identified by the search for efficiency, which supposes the movement of production resources abroad in order to reduce costs based on lower wages (main cause), a lower tax burden, and low or lax labor and environmental standards. These advantages must amply compensate for the transport and tariff costs incurred as a result of the international movement of raw materials, parts, components, and/or final products. Second, vertical backward FDI is motivated by companies’ strategies to control supplies of natural resources or primary commodities used in the production of other goods.

FDI inserts and links the firms that are integrated into the production and services value chain according to the criteria of systemic competitiveness and in accordance with the specific competitive potential that these firms offer the chain. FDI is part of financial capital, and its geographical distribution and mobility effectively contributes to the formation of the global value chain and to the polarized distribution of global income. If there is a problem for the competitive dynamics of one link in the chain, or to the general operation of the chain, the mobility of FDI can, almost always, solve or correct it. This mobility grants transnationals significant bargaining power with national governments, companies, and workers’ organizations, particularly smaller ones. The mobility of capital affects low-value links to a greater extent than high-value ones, thus creating strong competition between low-wage companies and locations (Peña Castellanos, 2012).

### III. Changes related to the new system: The concentration of power

Since Reagan’s presidency in the 1980s, the reduction of the state’s role in economic activity has been emphasized in both the United States and in the rest of the world under its influence. However, this has not meant the withdrawal of the state from its regulation of economic activity, nor from the active role it plays in managing and intervening in class relations and social conflicts. Rather, the state has...
increased its key role in defining the public policy and government regulations aimed at increasing the power of the dominant industrial and financial companies, thus determining the distribution of income between workers and capitalists. The so-called “financialization” of the economy does not only mean that credit markets play a more significant role in the capitalist economy, but also that economic activity is increasingly determined by the decisions of large corporations whose strategy has a strong financial component: maximizing shareholder value. Thus, the new formation of the production system into value chains interacts with and is interconnected with the financial sector, reinforcing the political alliance of capital and its influence on the state’s power structure (at the national level in developed countries and even more so in developing countries; and at the international level through the organizations that influence each of the national states), intervening decisively in the definition of government policy (Albo, Gindin, & Panitch, 2010).

The fundamental relationship between the state and the financial market is not a regulatory one, but rather one in which the state ensures that it provides guarantees to capital. This is seen in the enormous state contributions (financed by society as a whole and, specifically, by the workers) for private bailouts in the face of recurring, systemic crises in different countries. One example of this is the recent disbursements in the United States and Europe for the crisis that began in 2008, but we could also mention multiple cases of bailouts in developing countries, many under pressure from international financial institutions and the U.S. government itself. The leadership role that finance has assumed in the capitalist system, including the financialization of industrial corporations and the significant growth of profit-taking in the financial sector, is often seen (not without an interest in distorting the reality of how the capitalist system works) as the triumph of speculative capital over productive capital. The truth is that the interrelationship between finance and production is currently so significant that it is impossible to develop a new global system of capitalist production without the current financial intermediation and its sophisticated instruments to mitigate the risks derived from flexible exchange rates, variation in interest rates, mobility of capital, risk capital, etc.

One important characteristic in the creation of GVCs is that they reduce costs, as they reduce the need to reinvest profits in the lead firm, given that the firm has linked its previously integrated production processes and that a large part of those links are third-party companies that form part of the chain that the lead firm governs, leaving a greater portion of profits to distribute to shareholders or invest in financial markets. The most important channel at the beginning of this century has corporate buy-backs of their own shares, not to mention the important role played by the increase in dividend payments and cash mergers. In many developed countries, the portion of profit set aside for investment has decreased and the link between the movement in share price and real, productive investment in companies’ expansion and innovation has been broken (Lazonick, 2015; Milberg & Winkler, 2013).

The greater interdependence of the financial sector with the spheres of productive economic activity has complicated the relationship between real and financial activity. Aspects of the behavior of activities and variables previously considered to be determined by real factors are also due to financial factors, and, in certain circumstances, the financial sphere tends to take precedence over the real one. Over the past three decades, the financial sector has undergone unprecedented expansion. Between 1980 and 2014, worldwide assets expanded from $12 to $294 trillion dollars (1.1 and 3.7 times world GDP, respectively). For their part, in the same period, the value of derivatives contracts increased from $1 to $692 trillion dollars—i.e. they went from a value that was close to world GDP in 1980 to representing more than 10 times the value of world GDP in the second decade of this century.

The so-called “servicification” of the economy is another significant change that has accompanied, complemented, and strengthened the new global system of production. The trend at the macroeconomic level is evident in all the countries that are part of the Organisation for Economic Co-operation and Development (OECD), as well as at the microeconomic level, specifically in manufacturing.
industries (the proportion of services as a part of total inputs doubled from 1975-2005) (Boddin & Henze, 2014). Excluding the logistics services mentioned below, it is possible to distinguish three groups of services:

- The first group consists of traditional services, including wholesale and retail trade, as well as public administration, and has fallen over time as part of GDP.
- The second group, including education, health, and tourism, has grown slowly over time, maintaining its share of GDP.
- The third group is more directly related to the changes in the global system of production: information and communications technology, financial, business, engineering and design, environmental, and legal services, among others. These types of services present the greatest added value and have grown very rapidly in recent decades, increasing, in addition, the content of services in exports and, with it, the added value of the same (Elms & Low, 2013; Lanz & Maurer, 2015).

The fragmentation of production and the creation of GVCs have generated a strong increase in logistics in general, and in freight volume in particular, an analysis of which deserves special consideration. The number of logistics companies in the world has increased at an accelerated rate since the 1970s. Between 1970 and 2011, supply chain management companies and transport companies multiplied by factors of three and eight, respectively. These logistics companies offer a broad range of services, from preparing documents such as commercial invoices and bills of lading, to supporting activities such as load consolidation, storage, shipping, and distribution. All of these services facilitate the movement of goods from one country to another. The rise of logistics companies has also been accompanied by the attempts of several of these companies to become truly global in nature. The creation of these global logistics companies and the increasingly extensive network of countries they cover around the world have, to a large extent, helped companies implement their global supply chains. In recent years, the creation of specialized logistics services and platforms has increased to satisfy the demand of numerous companies for the creation of synchronized supply chains.

In the area of labor, the dissemination of GVCs has implied geographical relocation, subcontracting, and offshoring, which has increased precarious employment and decreased local and national union bargaining power. At the same time, globalization of labor markets, combined with instant communication and low-cost transport, has improved the flexibility of corporations to make short-term decisions, undermine wage levels and working conditions, and increase the use of flexible-contract workers and companies that provide outsourced labor. Outsourcing, subcontracting, and offshoring, whether of services or productive sectors, offer the additional attraction of reducing costs for companies. Dispersing workers by fragmenting production weakens union organization, independent of whether those workers come from productive or service areas. Once this fragmentation has occurred, it becomes costly to defend what was already gained by workers in terms of income and rights, and even more difficult to obtain new gains. Conversely, it is easier for the company to impose its objectives. Moreover, externalization of activities is often linked to the attempt to avoid union gains.

A key factor over time is the growth of global excess capacity in many industries. The entry of China, India, and Eastern Europe to the worldwide capitalist economy has doubled the global workforce, on the one hand increasing the global reserve army of labor created by the system (not by its mobility) and on the other, decreasing the capital-labor ratio. Both factors directly imply an increase in the profitability of transnationals, while workers suffer the consequences described above. This competitive pressure on suppliers translates into pressure on direct and indirect labor costs (wages and social benefits) and on labor standards. The lead company in the chain reduces its responsibility to comply with standards when the supplier is independent from the lead firm.

Thus, the increase in wealth appropriated by capital and the increase in inequality have developed in parallel. This evolution was relatively stable from 1947 to the beginning of the 1980s, but has been
constantly on the rise since then, a consequence of the change in global production systems correlating to technology, trade, finance, and the reduction in direct and indirect wages (Giovannoni, 2014). Economic growth is apparent through the increase in wealth of the highest income sectors, a decrease in the proportion of earned income, and an increase in inequality in current societies. Economic inequality is not only expressed in the proportion of wealth appropriated by each of the social classes, although this is an essential basis for its explanation. Currently, the wealthiest one percent of the world’s population possesses more wealth than the rest of the world’s population combined. Since the beginning of this century, the poorest half of the world’s population has received only one percent of the total increase in global wealth, while half of this increase has gone to the top one percent.

But the crisis in the current development model is not only social. The environmental impact of the current production system in correlation with the dominant style of society puts the survival of humanity and other living beings at risk. The environmental crisis feeds on the type of relationship capitalism constructs with the ecological system, under a functionalist, technocratic approach that is reinforced and extended to all spheres by the current global production system. Nature is privatized, commercialized, and monetized, and the goal of its utilization is to earn profits through an intensive use of capital and energy and low labor input. The utilization of natural resources by value chains tends towards monoculture, intensive extraction, the expansion of the geographic borders of agricultural and mining exploitation, and of predominance over other land uses. Within the context of urbanization, the lifestyle maximizes the excessive consumption of material goods in a shockingly wasteful manner that has isolating and individualistic social effects.

The globalized system of production extends to multiple areas (all of human life and all the animal and plant species that inhabit the planet), with an exponential impact never before seen in terms of the pressure on the environmental limits of the planet, giving rise to dramatic consequences in both the present and future. It is important to note, especially now, the severe effects of climate change, loss of biodiversity, soil erosion, and changes in the oceans.

IV. The role of science and technology: New areas of business

Just as capitalism concluded its task of spanning the globe at the beginning of the 21st century, the scientific community has been an objectively salaried workforce for a while, completing the transformation of the output of scientific activity into goods. The ongoing process of division of labor was transferred to the intellectual area, which gradually formalized the creation of specializations and the classification of scientists into separate hierarchical areas according to the historical development levels of the sciences. Within the capitalist conditions of knowledge production, science and technology are a formidable productive social force that has been determined and controlled, to a large extent, by the economy and politics, with an increasing influence from the largest companies (Cheroni, 1994).

With the current global production system, due to the complexity inherent in transactions, the degree of codification in specifications of products and processes, and suppliers’ technological capacities, chains determine the transfer of technology towards local suppliers only in terms of productive, trade, and technological links between the companies within the GVC. However, the vital element of this form of transfer is that the centers of productive and technological decision-making, often the sole sources of the technology used by subsidiaries and suppliers, are determined by the parent companies of transnational enterprises. This implies that the technological decisions that make global networks work are made in terms of a transnational enterprise’s production, commercialization, and profitability strategy. These decisions do not stem from considerations related to the productive and social needs of the country that receives the FDI, which might mean that national industries stagnate technologically. The insertion of high-technology goods into global production systems, together with the arrival of FDI inflows associated with these productive activities, has a negative technological feedback effect on developing countries, as it inhibits local re-
search, development, and production of goods that the investing enterprise prefers to import, whether due to its existing relationships with suppliers or its wish to standardize equipment in the plants it has in different countries. Furthermore, most Latin American countries grant a tax exemption on the importing of capital goods, among other benefits to investors.

The heterogeneity of productive structures within countries and the differences between developed and developing countries are magnified by the dynamics of innovation and the dissemination of technology. Within the framework of current technological trends, the gap between core countries and developing economies tends to become wider. The combination of technological conditions (automation and digitalization) with forms of production organization (outsourcing, subcontracting, and offshoring) generates fragmentation and corporate concentration. On the one hand, there are numerous micro and small enterprises that access niche markets by attending to local requirements or by customizing products and services. On the other, there is an increase in the concentration of markets, characterized by economies of scale in the hands of large enterprises from developed countries and, to a lesser extent, from some emerging Asian countries with a global presence. In particular, enterprises that develop platform-based business models have grown dramatically in the past decade, spanning several business areas (from books and travel to transport, finance, and even health and energy). Platforms utilize value chains made up of production and service links in which logistics plays a fundamental role, consolidating the new global production system. Different types of platforms exist: transactional, innovative, investment, and integrated, with the latter being fewer in number, although they are beginning to dominate. A central element of their operation and recent explosion is the network effect generated by a self-reinforcing cycle of growth (more users attract more users), generating a scale that increases concentration (ECLAC, 2016b; Evans & Gawer, 2016).

On the one hand, the process of technological change under capitalism maintains its basic characteristics of increasing capital intensity and bias towards labor savings. Between 2010 and 2013, 5.1 million productive labor positions were lost, and it is estimated that the loss of jobs will accelerate hand-in-hand with automation and digitalization (Vega, 2017). On the other hand, technological change has acquired distinctive characteristics in recent decades with the globalized system of production. Technology has become a special field of business, chiefly of large corporations. This does not exclude either the state or innovative small and medium enterprises from playing a crucial role in technological development, but this role is complementary and, in many countries, subordinate to the interests of transnational companies. Large companies have not been, and are not, the only organizations involved in the search for new technologies. Research and development collaboration with different branches of the state in advanced countries of the capitalist system has been a constant. For example, most of the technology-intensive private sector in the United States has been cutting investment in basic technologies in order to focus on “value extraction” and applied technology, relying on public agencies for basic research. In recent decades, many government agencies at national, state, and local level have joined the Department of Defense’s well-documented use of public procurement for many years to develop warfare technology (which in many cases has found important civilian applications) to finance R&D in select sectors, using control of funding to build and sustain links between enterprises, universities, and venture capitalists (Wade, 2014).

The new generation of free trade agreements, as well as the negotiations that are currently under way for the mega-regional trade and services agreements, seek to change the global rules of the game, particularly for the high-tech sector. These mega-regional agreements drive the creation of integrated economic spaces with an extremely broad scope – beyond the reach of multilateral, universal membership agencies – and present a much broader and more complex agenda than what these bodies have historically negotiated. These negotiations seek to align the rules under which these value chains operate, minimizing operational costs and maximizing access to markets for transnational corporations. These agreements are predicated on the liberalization, privatization, and deregulation of activities
essential to humanity and society. In addition to their impact on the flow of trade and investment, the agreements that result from these negotiations will influence the degree of liberty that countries enjoy in implementing public policies across various spheres. These agreements have the potential to impact sectors as important and diverse as education, health, financial regulation, public procurement, telecommunications, labor rights, and environmental protection, among others.

The new trade agreements incorporate rules on intellectual property, capital flows, and the protection of investments that are designed, above all, to generate and preserve the profits of financial institutions and transnational enterprises at the expense of other legitimate political objectives. These rules establish special protection measures for foreign investors that often come into conflict with public health or environmental regulations, and make it more difficult for countries to gain access to technology, manage volatile capital flows for development, and diversify their economies.

Should the rules established in these mega-regional agreements be implemented, any possibility for a national development agenda will be undermined, except for the agendas of the system’s dominant powers. They would represent a global institutionalization of “kicking away the ladder” for developing countries, using this tactic to prevent these countries from eventually competing at the technological level that the wealthy countries have reached. Both in the past and the present, developed countries have resorted to this tactic as a way to expand their market dominance and perpetuate an international division of labor that benefits the interests of their transnational companies (Chang, 2002).

V. The role of countries: A new international division of labor

The geographic fragmentation of productive processes and their subsequent organization into GVCs contributes to the existence of an international division of labor among countries that corresponds to their level of development and reflects the technological asymmetries that exist between them. This organization of production and commercialization lends peculiar characteristics to contemporary globalization and sets it apart from other periods of international expansion of capital, in which the goal was to replicate the productive units and infrastructures of the core countries in peripheral countries. By radically modifying the organization of national production structures and the forms of commercial exchange, the dynamics of the chain modify market conditions of competitiveness and, consequently, the manner in which national economies participate in the global economy. This allows the international division of labor to be redefined.

While activities with greater relative added value (concept, design, R&D, marketing, and post-sale service) are maintained in advanced economies, manufacturing processes are externalized to developing countries with comparatively low wages. Thus, the benefits that developing countries can obtain from participating in GVCs depend on their location within the chain, the stage of production performed in the country, and the technology and training of labor required for production tasks.

The international division of labor diverges from the traditional dichotomy between industrialized and developing countries to become a true taxonomy of complementary roles based on the degree of technology intensity of the productive structure and the capacities of each country. The production stages range from producing primary goods with no added value to mastering advanced technologies and constantly creating innovative products and business models, from industrialization based on foreign investment in the form of export enclaves to the stage in which local support industries and services begin to flesh out the domestic industrial structure in conjunction with production that draws on foreign technology.

According to data published in 2013 (UNCTAD, 2013), 67 percent of total global value created from GVCs ended up in OECD countries, while the share that ended up in newly industrialized countries (NICs) and the BRICS (Brazil, Russia, Indonesia, China, and South Africa) was a mere 25 percent. Only eight percent of total global value is shared between the other developing countries and
the least developed countries. Contribution of services in value-added exports is almost 50 percent for OECD countries. A similar panorama arises from an analysis of added value for industrial sectors. In comparison with low-technology industries, high-technology industries tend to have a much greater fragmentation of production processes due to the existence of a greater proportion of GVCs. Added value for high-technology industries in developing countries tends to be low.

According to UNCTAD:

In low-tech industries, like textiles and leather, although comparative advantage of developing countries is higher by definition as they involve large-scale, low-wage employment, the backward linkages with developed countries in terms of foreign value-added used in exports is higher as compared to developing countries. The gains of exports are therefore being fragmented along the global value chains with the balance of power favoring developed countries. (p. 27)

The processes of insertion and improvement within the chain are generally very restrictive, which is why the global production system implies a polarization of growth and a widening of the social inequality gap worldwide. Under current conditions of global competition, market control constitutes one of the essential strengths of global chains. Firms and countries that wish to compete on the international stage are obligated to accept the conditions imposed by the systemic competition of global chains; there have been exceptions, but they have been rare and primarily due to occasional specific and temporary geopolitical reasons. For some countries, regions, and locations, globalization is an opportunity, even though it is almost always costly in terms of social justice and environmental degradation (Peña Castellanos, 2012).

With the expansion of value chains, countries’ participation and the role occupied by their enterprises has become the focus of contemporary economic development strategies (Cattaneo, Gereffi, & Staritz, 2010). Many of the institutions and efforts that affect development are not determined at the level of GVCs; however, the channels for achieving greater value and employment, as well as for generating innovation in products and processes, increasingly occur within GVCs. Although the presence of GVC links implies international trade and, therefore, increased exports for a country, given the great degree of vertical specialization and import of inputs that the new system of production implies, the presence of GVC links alone does not guarantee improvements in the generation of value, nor does it translate automatically into higher employment. The duo of international trade and FDI also expresses a hegemonic relationship that is highly contradictory, discretionary, and mercurial. The relationship presupposes an inclusion/exclusion paradox that correlates to a specific group of enterprises and emerging countries within the universe of firms and territories that are not included in GVCs, nor do they participate in the lower-value or more commoditized links, therefore facing enormous productive and commercial restrictions.

VI. Latin America in the new global dynamics: Progress and setbacks

After the 1990s, dominant national sectors and multilateral organizations promoted trade liberalization of the economy as a necessary step to visualize the change towards the new global system of production; this implied the restructuring of the productive apparatus in Latin American countries, reinforcing its economic trajectory based on natural resources and low-skilled labor. In previous decades, under the import substitution industrialization policies, a weak process of industrialization based on textiles, footwear, machines, tools, and cars had been developed. As these productive sectors began to lose competitiveness in global markets due to the emergence of new firms from countries such as Korea and Taiwan, and eventually China, protections began to be eliminated as industries based on natural resources, soy or palm oil, mining, gas and oil, aquaculture, meat and dairy, and forestry industries began to grow, reaching new markets and expanding existing ones.

As mentioned above, between 1980 and 2011, global trade grew at an annual mean rate double the
rate of average GDP growth (5.7 percent versus 2.8 percent), which led an increase in the ratio between international trade and global production from 27 percent to 65 percent during this same period. Latin America has also experienced an increase in this ratio in recent decades; however, the level achieved is far from that observed in the European Union or in East Asia, where it exceeds 80 percent. Within the region, the situation varies: the Central American Common Market (CACM) stands out with values higher than 80 percent, while the Andean Community of Nations (CAN) and the Southern Common Market (Mercosur) have values lower than the global average. Mexico, included within North America through the North American Free Trade Agreement (NAFTA), has experienced a strong increase in the ratio between trade and GDP, which went from 24 percent before the agreement came into effect to 65 percent in 2011. This increase is chiefly due to the new system of production, which increases the import of inputs and the export of assembled products (ECLAC, 2014c).

An analysis by destination of the structure of exports shows that nearly 80 percent of sales of intermediate goods from Latin America in the first decade of this century were sent outside the region. In particular, nearly 70 percent went to the value chains of North America, Europe, and Asia, a proportion that drops to around 60 percent when Mexico is removed.

With reference to extra-regional exports, the unprecedented expansion of trade between China and Latin America from 2001-2010 stands out, an expansion that has been maintained at lower rates in recent years. China is both an industrial powerhouse and a considerable consumer of products, which is why Chinese demand for commodities, characteristic of this stage, constituted a source of external funds for primary exporters. The Asian giant also made significant investments in several of the region's countries in order to ensure the supply of minerals, energy, and agricultural products (especially food) and reduce its logistics costs. During the first decade of this century, exports of minerals and fuel from Latin America to China grew at an annual rate of 16 percent, while exports of agricultural products grew at a rate of 12 percent. These commercial ties resulted in strong, but asymmetric, CGV linkages between China and Latin America. From 2000-2011, Latin America's total participation in GVCs grew, but stayed below the global average, while China's participation was comparable to the global average. However, backward linkages from China to Latin America grew from one percent to 11 percent of participation. Inversely, growth in forward linkages was also strong, from five percent to 16 percent. In other words, China's role for GVCs in Latin America has become even more important than intra-regional linkages. This asymmetry in trade reveals the different role of countries in GVCs: in 2013, commodities accounted for 73 percent of exports from Latin America to China (the greatest contributors: iron, copper, oil, soy), while imports from China were 91 percent low, medium, and high-technology industrial goods (OECD, ECLAC, & CAF, 2015).

There is considerable diversity in Latin America in terms of participation in regional and global production networks, and a distinction should be made between Mexico and Central America, on the one hand, and South America on the other. Certain countries that fall between the two zones can be considered as part of a third group due to their particular characteristics, which will be analyzed below. The first group of countries participates extensively in several value chains centered in the United States, both for goods (automotive, electronics, and clothing sectors, among others) and services (call centers, information and communications technology, and other remote services). With some exceptions, the management of production networks is still in its infancy in the second group, with the automotive sector representing the most significant exception. It is important for this group to increase its insertion in GVCs as suppliers of raw materials, minerals, food, and fuels. What both groups have in common is that income for workers is low and inequalities are high, as a result of low value generated and appropriated due to the poor productive structure (Blyde, 2014).

The relatively significant presence of Mexico and Central America in international value chains is due to several factors, including their proximity to the United States and lower labor costs, which has been an incentive for U.S. multinational enterprises
to move manufacturing processes and activities that require an intensive labor use to these locations or subcontract them there. This pattern has been reinforced by various incentive structures implemented by these countries, such as maquila zones and export processing zones. The trade agreements that link Mexico and Central America with the United States (NAFTA and the Dominican Republic-Central America Free Trade Agreement [CAFTA-DR], respectively) have strengthened and consolidated this mode of productive integration. In the case of Mexico, there is greater vertical specialization and, as a result, lower domestic value-added content in exports when compared with Brazil and other countries from the Southern Cone subregion. This reflects Mexico’s greater integration into the links of the productive chain involving activities of final product assembly that incorporate little added value.

If a given bilateral trade relationship of intermediate goods is chiefly intra-industrial, it is interpreted as evidence of a greater degree of productive linkage between the countries involved. The most intensive intra-industry trade relationships of intermediate goods can be observed in the relationships between the United States and Mexico, Brazil, and Costa Rica, respectively. Most of the sales of these industrial intermediate goods correspond to industries characterized by intra-industry trade (94 percent versus 59 percent for semi-assembled goods). Of the 20 groups of intermediate products with the greatest intra-industry connection exported by Mexico to the United States, 19 correspond to industrial goods, especially medium and low-technology products (ECLAC, 2014a).

A sector analysis shows that the main Mexican export chains to the United States are linked to the automotive industry, especially those associated with motor vehicle parts and accessories, which represented 19 percent of total exports of intermediate goods to the United States during the 2011-2012 period. Next in terms of importance are those associated with electricity distribution material, electrical connection devices, and internal combustion engines. Combined, these four industries accounted for 43 percent of total exports of intermediate goods made in Mexico to the United States during the 2011-2012 period. Also of note are industries that produce capital goods, such as non-electrical machinery, medical equipment, heating and refrigeration equipment, pumps and compressors, civil engineering machinery and equipment, etc., which essentially supply pieces and parts to enterprises in North America, above all in the United States. Worthy of special mention are groups of intermediate products that correspond to high-technology capital goods industries, such as telecommunications equipment, electrical devices and machinery, measuring instruments and devices, and electrical and electricity devices, which are also integrated into North American value chains.

After Mexico, Costa Rica is the Latin American country with the greatest degree of trade integration with the United States. In 2012, 38 percent of Costa Rica’s exports ended up in the United States. A large proportion of intra-industry trade in the industrial intermediate goods segment characterizes Costa Rica’s export pattern to the United States, 46 percent of which consists of intermediate goods. Standing out among the 20 main groups of intermediate products with the greatest intra-industry intensity exported by Costa Rica to the United States are industries that are suppliers of medical, electrical and electronic instruments and devices, vehicle parts and accessories, chemicals and pharmaceuticals, agroindustry, and other interdisciplinary industries, such as plastic items. In 65 percent of cases, the associated products correspond to medium and high-technology industrial goods (ECLAC, 2014a).

The connection of the other CACM countries to the United States is stronger in sectors such as textiles and clothing, with the participation of El Salvador, Guatemala, Honduras, and (to a lesser extent) Nicaragua. A breakdown of exports from these countries to the U.S. market by categories of goods shows that 60 percent corresponds to final consumer products, followed by basic products at

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1 TN: A maquiladora in Mexico is a factory that operates under preferential tariff programs established and administered by the United States and Mexico.
almost 30 percent, while intermediate goods represent less than 10 percent. An analysis of the export pattern of intermediate goods shows 57 percent of industrial goods sold by these countries to the United States fall within an intra-industry relationship. In the case of semi-finished intermediate goods, the proportion of intra-industry trade is significantly lower. The reduced presence of intermediate goods in the export totals of these countries establishes a predominantly inter-industry relationship with the United States (ECLAC, 2016b).

Production networks are less developed in South America. This subregion’s abundance of natural resources is reflected in the strong primary export specialization of all South American economies. This specialization has been underscored in the previous decade, largely due to China’s strong demand for these products and the high prices of raw materials such as iron ore, copper, oil, and soy. On the other hand, South America is an extensive subregion with large geographical barriers (such as the Amazon and the Andes) that both hinder communication and a spatially balanced distribution of people and economic activity. These elements, added to important infrastructure problems, make it difficult for South America to reproduce the type of productive integration seen in certain regions of Asia, which are characterized by dense industrial production networks. The main exception is Argentina and Brazil’s participation in the automotive sector, which generates heavy trade in parts and components. South American participation schemes have tended to focus on the elimination of tariffs and other border obstacles to the trade in goods, and less on the development of topics such as trade in services, investment, competition policy, and public procurement.

In the case of Brazil, the size of its economy partly explains the greater domestic value-added content of its exports, but the decisive factor is the increasing concentration of primary goods in its export basket, to the extent that production of these goods is less susceptible to being geographically fragmented. On the other hand, the greater relative importance of indirect domestic value added in Brazil’s exports reflects a greater integration of export sectors with the rest of the economy, although intensification of primary export specialization is leading to a fall in this component’s share of added value due to fewer domestic cross-sector backward linkages than those from primary sectors. Brazil’s participation in international production networks is therefore chiefly as supplier of inputs and raw materials that are used in the production of other goods and services abroad, thus generating forward linkages in the chain (Castillo & Martins, 2016).

Keeping in mind the size of its economy and its domestic market, as well as its important technological capacities, Brazil has the potential to play a crucial role in any initiative aimed at developing South American value chains. Currently, the productive linkages between Brazil and other South American economies are relatively weak, except in the case of Argentina. In 2011, 30 percent of total exports of industrial intermediate goods from Brazil went to South America, mainly to Argentina, but only five percent of its imports of these goods came from the subregion—one percent if Mercosur is excluded. This difference between the export and import patterns of industrial intermediate goods reflects the low regionalization of Brazil’s imports.

Trade between Argentina and Brazil represents 64 percent of Mercosur’s total commercial exchanges, as they are the two largest countries in the group and have a greater degree of productive integration. A markedly intra-industrial pattern and a high proportion of intermediate products (around 30 percent of exports from Argentina to Brazil and 50 percent of those from Brazil to Argentina) characterize the trade relationship; there is a large amount of integration in the case of automotive products, vehicles, and auto parts. Another group of industries worth mentioning is chemicals and petrochemicals, which consist of oil derivatives, perfume products, cosmetics, disinfectants, insecticides, fungicides, various chemical products, and plastic items. The petrochemical industry is currently one of the largest in the world, and most of the impulse for other Mercosur industries (agroindustry, textiles, automotive, plastics) comes from products in this regional chain. Main industries also include steel and metalworking, with products such as aluminum, bars, rods, angle brackets, sections, and base metal articles. Within the chain, Argentinian products are
mostly semi-finished intermediate goods, whereas the Brazilian products are mostly industrial intermediate goods (ECLAC, 2016b; Giordano, 2016).

Another important hub for trade relations with developed industrial links can be found in the exchanges between Colombia, Ecuador, and Peru, countries whose trade in manufactured goods has grown in the past 15 years, translating into an intensification of intra-industry trade along a Colombian axis. 40 percent of exports from Colombia to the Andean Community of Nations (CAN) are focused on intermediate products, especially industrial intermediate goods. Next in line of importance are consumer goods and basic products. Fifty percent of exports of industrial intermediate goods from Colombia fall within intra-industry trade, while inter-industry trade predominates in exports of semi-finished intermediate goods. Seven industries stand out among the 20 main groups with an elevated level of intra-industry intensity exported by Colombia to CAN region: petrochemicals, chemicals, paper and cardboard, agroindustry, textiles and clothing, vehicles, and metalworking. Together, these industries generate slightly more than 70 percent of the Colombian economy’s total manufacturing value added, including low, medium, and high-technology manufactured goods and some manufactured goods based on natural resources.

VII. The global and regional situation: Consequences of the changing economic cycle

An analysis of the evolution of worldwide trade in recent years produces two different visions: in real terms, the growth of global trade has slowed down since the end of 2011; in nominal terms (U.S. dollars), growth has collapsed since the second half of 2014—the value of trade in goods and services fell 10.5 percent in 2015. For advanced economies, the slowdown was clear in the period after the Eurozone debt crisis. For so-called emerging economies and developing economies, the slowdown was initially much gentler, but it has become more severe over the past two years. As occurred during the worldwide financial crisis, trade in services has been more resilient than trade in goods. For example, while trade in services went from an annual growth rate of 9.5 percent in the first decade of this century to 5.5 percent from 2012-2015, international trade in goods decreased from nine percent to three percent during the same periods. The severity of the slowdown in growth of trade varied according to the type of product; trade in non-durable consumer goods maintained relatively stable, while growth of trade in capital goods decreased the most, followed by primary intermediate goods, durable consumer goods, and processed intermediate products (Constantinescu, Mattoo, & Ruta, 2015).

In turn, the global growth rate appears to be stabilizing around three percent, although with differences between regions. The recovery experienced by developed economies is still fragile, while most emerging economies are experiencing a slowdown. Notwithstanding, emerging markets still represent the bulk of global growth. The worldwide economy’s slowdown trend is associated firstly with the reduction in the growth rate of gross fixed capital formation (GFCF). The rate of growth in global investment went from four percent at the beginning of the 1970s to 3.2 percent in the 1980s and 1990s.; the recovery at the beginning of the first decade of this century was temporary, and its rate of growth was lower than three percent after the worldwide financial crisis. The corporate strategies of transnational enterprises are a key factor in investment decisions. Since 2000, FDI has accelerated in absolute value, and the composition between developed and developing countries has changed. The objectives of FDI have changed, also, as vertical investment has gained importance compared with horizontal investment. In other words, in the decades prior to 2012, the shape and expansion of global value chains implied a strong increase in FDI and local investment, thus multiplying internal trade. The available evidence suggests that an explanation for the downturn in trade can be found in the slowdown in the specialization implied by value chains, as shall be explored more in depth below (Evenett & Fritz, 2016; ECLAC, 2016a; UNCTAD, 2016).

Since 2012, GVCs have achieved a state of maturity. With GVCs now spanning 80 percent of global trade, few chains remain to be formed, and there
are few subregions or countries that still have not been integrated into the new system of production. A slower rate of expansion in global chains is a determining factor in the slowdown of trade. The maturity of GVCs implies the beginning of a phase of structural adjustment in which the competitive struggle between large companies shifts from forming production networks to optimizing their operations; in both cases, the primary purpose is to maximize the companies’ profits. Optimization also implies changes, but smaller ones than those in the previous period of formation. These changes include decreasing FDI to achieve greater competitiveness (lower costs and greater flexibility) in the links that form the GVC, in some cases moving operations within the developing countries themselves or, less commonly, returning operations to their original location in a developed country to take advantage of automation and digitalization of industrial operations.

Within this framework, the United States economy continues to grow at a moderate rate, supported by an increased demand for labor, the recovery of the real estate sector, and the availability of credit to the private sector. Growth is expected to reach around two percent in 2017. Despite the market’s recent volatility, it is predicted that the U.S. Federal Reserve will continue with its cycle of gradual adjustment by increasing its benchmark interest rates over the next two years, although the new administration, with its announcements after the inauguration and previous promises from the electoral campaign, has introduced a factor of uncertainty into the projections (OECD, ECLAC, & CAF, 2016).

It is expected that activity in the European Union will continue with its slow rate of recovery, with the continued softening of credit conditions and a few strengthened labor markets supporting internal demand, which will partly compensate for weakened external demand. The uncertainty created by the United Kingdom’s decision to abandon the European Union (Brexit) discouraged growth predictions for both the United Kingdom and the European Union, in addition to increasing risk aversion in global markets.

In Japan, the strengthening of the yen, combined with a weakening of exports, provides a panorama of moderate growth. On the other hand, internal demand will be responsible for sustaining economic activity, thanks to monetary and fiscal stimuli and low energy prices.

Activity in China decreased according to official projections, with the annual growth of GDP around six percent after decades of results close to 10 percent. Industrial production and retail sales have regained momentum after their fall in growth of recent years, marking a certain stabilization. The rate of capital outflows began to decrease in 2016 as confidence in the economy improved, although capital outflows remain at significant levels. Reactivation of China’s real estate market has played an important role in the country’s recovery. Total investment is also beginning to stabilize, driven by strong investment in the public sector, while private investment continues to decrease (UNCTAD, 2016).

The situation varies in other emerging economies. India’s economic expansion is regaining momentum, while the Russian Federation and Brazil have suffered deep and persistent recessions, worsening the outlooks for emerging Europe and Latin America, respectively. In general terms, net raw material-exporting countries are showing lower results in GDP growth when compared with exporters of manufactured products. China’s stabilization should provide a floor for raw material prices. However, even taking recent trends into account, the loss of income associated with the fall in prices of raw materials from peak levels will continue to affect public and private expenditure, weakening the possibilities of solid global recovery. Capital inflows to emerging markets are decreasing, reaching a multi-year low in 2015.

The behavior of supply and demand, the reductions in return on assets, and doubts over the Chinese economy explain the strong fall in prices of raw materials in recent years. Within a context of fragile economic growth, the prices of raw materials fell due to the increase in United States shale oil production, the increase in oil production from Iran and Iraq, and the decision of countries from the Organization of the Petroleum Exporting Countries (OPEC) not to support an increase in oil prices.
According to data from the International Energy Agency (IEA), the increase in production, together with reduced demand, generated a surplus of approximately 3.5 million barrels a day in 2015, pulling prices down to their lowest point in 12 years. Raw materials have a growing presence in futures markets (including their derivatives), creating greater synchronization between their price movements and between their prices and stock exchanges, potentially increasing the volatility of product and raw material prices. As surplus supply is sold, raw material prices could begin to stabilize. Prices are expected to reach $45 to $55 dollars per barrel in 2017.

Prices of non-energy raw materials descended in 2016, although at a more moderate rate than those of energy prices. Metal prices also went down, due to surplus supply from new production capacity and lower demand from emerging economies, particularly in terms of industrial metals. Moreover, agricultural product prices were weakened by favorable harvests and the moderate effects related to the El Niño weather pattern, which were less damaging than expected. On the other hand, precious metal prices increased in response to greater demand for safe-haven investments during episodes of volatility on financial markets.

The period of strong growth that Latin America has experienced since the beginning of this century until practically halfway through this decade—chiefly driven by the formation of GVCs based on the incorporation and expansion of China, India, and other Asian countries into the global production system—has reached its end. Despite some advances achieved in certain countries, the expectations that the region’s countries would improve their productive structure and significantly develop their domestic technological capacity were not met, and environmental deterioration in several forms has been significant.

Currently, Latin America is experiencing a strong slowdown in activity, while global growth is stabilizing at lower rates. Although only four countries recorded negative GDP growth in 2016 (Argentina, Brazil, Ecuador, and Venezuela), the rest of the region, with few exceptions, has experienced a general reduction of activity. Product had contracted again in 2016, between -0.5 percent and -1 percent; a slight upturn is expected in 2017, although this upturn will not be uniform across the region, as the expectation is that Latin American economies with greater links to the United States and greater GVC integration will exceed the net raw material exporters from South America. It is estimated that Mexico and Central American economies will reflect growth rates of between 2.3 percent and six percent in 2016, depending on the country. For their part, the Andean countries are expected to grow between 0.5 and 4.5 percent, except for Ecuador (in recession) and Venezuela (whose economy is still suffering a sharp contraction). In Argentina, activity contracted strongly in 2016, while Brazil remains stagnant in its worst recession in three decades. An upturn is expected for most economies in 2017, although Venezuela will continue to contract (ECLAC, 2016a; Giordano, 2016).

Slow growth and economic contraction impact Latin American labor markets, reversing some of the positive trends of the past decade. During the commodities boom years, high levels of economic growth improved the labor market, reducing unemployment levels, increasing the participation rate, and achieving higher levels of formal work and employment for young people and women. However, since the start of the slowdown, the progress achieved in the labor market has been interrupted and, in some cases, has almost been reversed. Although still at relatively low levels, unemployment rates increased for the first time since the financial crisis. In 2015, urban unemployment affected 6.5 percent of the total workforce, 0.5 percentage points higher than the figure for 2014. Despite this increase, urban unemployment continues below levels recorded halfway through the first decade of this century, with a mean unemployment rate of 8.2 percent between 2005 and 2008. Regional mean unemployment does not reflect the significant diversity that exists among the region’s countries. In Latin America, mean unemployment ranges from 9.8 percent in Colombia to 4.3 percent in Mexico. Similarly, the impact of the 2015 economic crisis varied within the region, resulting in an increase in unemployment in Brazil, Costa Rica, Ecuador, Honduras, Peru, Panama, and Uruguay. Economies with growth rates higher than the mean for
the region, such as Mexico and Chile, experienced reductions in their unemployment rates (ECLAC, 2016b; Giordano, 2016).

Similarly, the rapid increase in exports at the start of this century, both in physical volume and price, were under the best trade terms in almost a century. There was a recovery of 20 percent at the height of 2012, after a secular deterioration and before the later fall, complemented by increasing foreign capital flows, induced by the low or nonexistent interest rate in developed countries’ capital markets and the favorable conditions created by economic circumstances and/or policy decisions of the governments of many developing countries. This led to years of fiscal possibilities to reduce, via public subsidies, the extreme poverty prevalent in Latin American societies, notably Brazil, Chile, Argentina, and many other countries in the region. Currently, poverty has started to significantly increase again in several of the countries in the region, among which Argentina and Brazil stand out.

This situation may be worsened by possible policies announced by the new U.S. administration (The Economist Intelligence Unit, 2017). In general, Central America and the Caribbean are Latin America’s two most vulnerable subregions, particularly in trade, remittances, and immigration. In 2015, remittances from the United States represented more than 15 percent of GDP in El Salvador, Honduras, and Haiti, and trade dependence was also high, with exports to the United States comprising more than 10 percent of GDP in El Salvador, Haiti, and Nicaragua. The equivalent of about one percent of the labor force from Guatemala and Honduras, and nearly two percent from El Salvador, immigrated illegally to the United States in 2015. Mexican trade dependence with the United States is very high, with exports representing 26.9 percent of GDP in 2015. Mexico has lower, although still significant, remittances, which represented 2.1 percent of GDP in 2015, and immigration to the United States has decreased drastically in the past decade. In the macroeconomic arena, the entirety of Latin America is susceptible to the policies of the new U.S. government, in particular to tariffs on import taxes, the appreciation of the dollar, and higher interest rates for financing.

VIII. Conclusion: The starting point for and challenges to social-ecological transformation

The first decades of the 21st century represent a historic period for Latin America, in which the governments of the countries it comprises adjusted their productive structures to the new realities of the global production system dominated by a limited number of transnational enterprises based in developed countries. This participation, driven by the states and dominated by the markets, occurred in line with the role that these countries have played since colonial times, based primarily—although not exclusively—on the economy’s primary sector. Most states took advantage of the resulting economic growth to reduce levels of poverty and marginalization; but they did not address inequality, and the greatest percentage of wealth generated remained in the hands of the companies that invested in economies that had sold out to foreign interests and local economic powers, the majority of which were partners in these investments, either explicitly or implicitly.

In general, the region has returned to orthodox economic policies, although beyond certain unorthodox measures that were attempted—more in discourse than in action—by some of the region’s governments, most of the Latin American countries never abandoned these policies to begin with. With similar, although not identical approaches, the macroeconomic policy of Latin American countries is focused on resolving the fiscal deficit and inflation. Some argue that the priority must be attacking the fiscal deficit because a country can lose its investment grade or see its credit rating lowered as a result of pressure from the rating agencies that represent the interests of financial creditors. Others note that it is especially important to deal with inflation to ensure the economic calculations of future investors, despite the rapid reduction in the flow of investments to the region, a product of the cycle change and of the increased attraction of investments in developed countries. Discourse focuses free trade, opening of the economy, eliminating any type of protection, and signing new bilateral and multilateral trade agreements; encouraging FDI through free trade zones and tax exemptions for business
income is also considered a central element. At a practical level, these orthodox policies can be clearly seen in the region’s restrictive monetary policy, which seeks to address inflation, although in fact it deals more with expectations than with the price increases themselves. Several countries in the region have sought to address inflation through their exchange-rate regime, appreciating the domestic currency and maintaining a high exchange rate lag. The programs currently being implemented by several of the region’s governments (with support from international organizations) have few innovations, as they attempt to return to and strengthen the policies that have become widespread as a result of the financial globalization of the 1990s (Couriel, 2016; Gomes & Silva da Cruz, 2016).

Five pillars support these programs:

First, the reduction of labor costs as a mechanism to increase profit margins, competitiveness, and attractiveness for foreign capital, in many cases accompanied by the “modernization” of the labor market with legislative and labor relations reforms aimed at reducing workers’ bargaining power and decreasing employment protection mechanisms.

Second, the reversal of the expansive trend in public social expenditure that has been so important in recent years as part of a reduction of social inequality policies through the institutionalization of a selective fiscal austerity policy, including the freezing and eventual reduction of expenditure on health and education; the “rationing” of expenditure for income transfer programs for the most vulnerable sectors of the population; the reduction of the public supply of basic services in education, health, and sanitation, with the creation of conditions to strengthen and expand the privatization of these segments; and pension reform, consisting of cuts to pensioner benefits, decoupling from the minimum wage and increasing the contribution of beneficiaries and retirees, raising the age and contribution requirements for retirement, etc.

Third, the strengthening of the hegemony of monetary authorities and pro-market policies, accompanied by the reduction of the state’s role in economic coordination and development, thus limiting its ability to minimize imbalances and asymmetries in income and wealth distribution. In addition to reducing social expenditure and state supply of essential goods and services, this implies strengthening the regressive nature of national tax systems; the reversal of progress (generally minimal) in public procurement, local content, and public funding policies, abandoning the centrality of development and employment in economic policy design; dismantling state enterprises and, in several countries, privatizing what remains of public property; and continuing and reinforcing the exploitation of natural resources.

Fourth, the region’s reintegration, over the past two decades, into the international division of labor and its adaptation to the new global production system meant strengthening the model of Latin America as a provider of commodities (energy, mineral, and agricultural); this model has had very negative ecological consequences in multiple countries, to such a point that Latin America is exceeding at least two of the planet’s environmental limits, as previously mentioned. As this occurred during the high-price phase of the commodities cycle (and in a large part, due to it), Latin American countries experienced extraordinary income, which mostly increased the earnings of national capitalists and transnational corporations operating in the region, and to a lesser extent, increased the real wages of workers and decreased poverty and marginalization. However, in the current low-price phase, the way to compensate for the decrease in income from companies is to maintain, and even increase, the agricultural and extractive intensification characteristic of the previous phase, exacerbating harmful ecological effects and worsening rather than improving the situation of low-income social classes.

Finally, and this is fundamental, the strengthening of the region’s passive integration process into the world order in general, and into the globalized production system in particular, through the intensification of the commercial and financial liberalization of the economy; adherence to international investment agreements that prioritize the interests of transnational enterprises; and the adjustment of national legal frameworks to U.S. law. The intensification of passive integration into the process of
globalization exposes countries to the predominant trends in the worldwide economy previously mentioned, as well as the following: the concentration of cutting-edge technical progress in scientific and technological development hubs, such as the United States and Germany, which then shape the economy of the future; the deindustrialization of countries with lesser technological development due to the impact that offshoring the industrial base of core countries has on prices and production scales and the consequent strengthening of the Chinese economy’s production capacity and competitiveness; the dismantling of the capacity of the region’s governments to implement autonomous economic and social development policies at the national level.

The social-ecological transformation that is necessary for Latin America thus faces a significant number of challenges to its implementation. The interaction of three concurrent factors can be identified at the root of this complexity: a) the internal laws the system itself generates and reproduces, including the concentration of capital and the increase of inequality; b) the considerable difficulty of challenging the economic powers and politicians that benefit from the status quo in Latin America. It is clear that powerful groups have taken advantage of recent changes, described here and in other background study documents, to substantially increase their income and wealth, allying themselves with transnational enterprises supported by multilateral financial institutions and the core countries where the transnational companies are headquartered. Finally, c) the recent political events, of a profoundly economic nature, that have shaken the developed world and may have a profound impact on the economy and international relations, such as the inauguration of the new U.S. administration and Great Britain's exit from the Eurozone.

Within the context of the three factors mentioned above is the no less worrying observation that the region’s countries are experiencing an economic downturn, with governments that implement programs that go against workers’ rights, decrease public social spending, reduce the role of the state, and exacerbate the primarization of the economy, thus intensifying the exploitation of natural resources, promoting participation in the low-value links of the GVCs, and intensifying environmental damage—approaching or exceeding the planet’s limits—through a process of passive integration that implies a loss of regional autonomy and the reinforcement of economic and technological dependence.

Faced with these challenges, it is worth briefly mentioning the alternative social-ecological transformation programs that need to be set in motion, acknowledging the fact that achieving alternative paths requires prolonged periods of time, as well as recognizing in order for any alternative development strategy to be viable, it must consider the new global system of production and the economic context described in this essay. The programs outlined below stand in clear contrast with the initiatives that are currently being applied by the region’s governments, which are anchored in orthodox policies and largely promoted by international organizations and the dominant powers of the new world order.

1. A different type of integration of the region into the world order and the globalized production system is needed. The region should not be at the tail end of the value chains, with a role as a producer of raw materials or supplier of cheap labor, nor should it be on the lowest rungs of technological development, as it currently is. As an initial condition, this requires breaking with the free trade and investment agreements and mega-agreements. In addition to reproducing the low value added role mentioned before, increasingly extracting the wealth generated in these countries can result in negative consequences for all humanity, impacting health, education, the environment, and labor regulations. Nor should the national laws of Latin American countries continue to be adapted to regulations dictated by core capitalist corporations and institutions for the purposes mentioned above—thus, the importance of strengthening, transforming, and deepening first the integration between the countries of Latin America's subregions and then the region as a whole. This integration should not be merely commercial, as advocated by conservative sectors, but rather should span political, productive, social, scientific, and technological
aspects to address the determining variables of the current stage, including bargaining power, economies of scale, market control, and knowledge generation.

2. The transformation of productive structures to achieve diversified economies with low carbon emissions and minimal, controlled ecological consequences. This transformation implies the rise of new clean industrial sectors, as well as a variety of service enterprises, all supported by a sustainable, inclusive, and clean energy model, in addition to production sectors of goods and services based on new technologies and the transformation of existing traditional sectors. The objective is not to create productive export enclaves, but rather a dense productive infrastructure. One fairly significant point in this regard is the radical transformation of agriculture, today technologically dominated by large corporations that overexploit land resources, leading to damaging consequences for ecosystems, land, and water. Another aspect requires the transformation of the region's transportation systems, considering the growing importance of logistics in productive systems and their contribution to environmental pollution.

At national level, it is increasingly difficult for developing countries within the system structured by GVCs to change towards a productive structure with increasing levels of technological intensity, linked to capacity building and the creation of higher-value activities that are socially fairer and nondestructive to the environment. Hence the importance of the previous point: the subregional and regional integration of Latin America.

3. Changing the productive structure will not automatically occur as a result of international integration based on promoting foreign investment and indiscriminate liberalization at any cost. Nor will improving the productive structure automatically lead to social improvement and environmental sustainability, although it is an indispensable step. Reinstateing and strengthening the role of the state in coordinating and promoting development is key, as is ensuring that the state is not considered the executive office of the capitalist class, not the source of clientelist income for certain officials and politicians. In this capitalist stage of global production systems, marked by the interweaving of services and finance, economic power is enormous and concentrated. It is essential to proactively define policies in coordination with distinct social groups, especially workers, to protect and extend the democratic framework and drive social-ecological transformation. Productive development policies are fundamental to provide direction, coordination, and structure to this transformation; a productive policy with national and regional dimensions in each country to adequately address the essential differences between each subregion, as addressed in previous sections of this essay. Trade policy complements productive policy and should be utilized to achieve technology transfer, the creation of R&D facilities, and an increase in local content, while also increasing the number of national firms that participate in productive processes. Moreover, given the role of technology mentioned above, a fundamental role should be assigned to science and technology policy in connection with productive policy to generate local technological capacities that provide alternatives to the current model of production through research, development, innovation, and technology transfer. Productive policy should include specific tools to reduce the structural heterogeneity of the region; recover the role of the public sector; foster a just social economy that provides a real alternative to the capitalist-style enterprise in terms of quantity and quality of enterprises; and promote local development.

4. Financing the social-ecological transformation, which consists of two aspects: the productive and the social. In terms of the productive aspect, Latin American countries have low levels of investment in science and technology, both in absolute figures and relative to GDP, which not only keeps them in a situation of technological dependence, but also widens the development gap with core countries. This is not about preserving the current development model, which is resulting in the dire consequences analyzed...
here, but about implementing an alternative, transformational development model. At the same time, it is about generating knowledge and supporting new sectors for the production of goods and services and the clean transformation of traditional sectors, complemented by a change in current consumption patterns, which are unsuited to a socially and ecologically transformed society. Public funding for new infrastructure is also necessary, both nationally and regionally. In terms of social expenditure, there significant improvements have been made in certain countries in recent decades as regards the reduction of poverty and marginalization and access to essential services for the population, among others. A significant number of current governments are reversing this trend of expansion, while others maintain in their discourse the intention to “make adjustments” without affecting public social expenditure (in reality, they do reduce it, but to a lesser extent than the first group). Considering Latin America’s social indicators and the technological and productive changes analyzed in this essay, it is increasingly necessary to increase public expenditure on health, education, and attention for the most vulnerable sectors. Funding these two aspects of the social-ecological transformation requires a fiscal reform that, besides capturing the necessary resources, introduces fairer and more progressive tax systems. It is important to remember that Latin America has the highest levels of inequality on the planet, and its current fiscal systems do not significantly modify wealth distribution as they do in countries from other regions.

5. Finally, social-ecological transformation in Latin America has the objective to increase the quality of life of low-income sectors and eliminate social inequalities, poverty, and marginalization. Based on this, there should be a necessary and substantial increase in the income appropriated by workers through an increase to real wages, increased social benefits, reduction of unemployment, and reinforcement of employment protection mechanisms. These are also necessary steps to expand internal national and regional markets, a necessary, although insufficient, condition for the development of this new production system in which economy of scale and market control are determining factors that should be accompanied by greater bargaining power for the region and generation of local, national, and regional knowledge. However, these changes cannot be achieved within the framework of a primarized and dependent productive structure, which is why the transition towards a new clean, inclusive, and diversified productive structure is essential. As previously stated, an improved productive structure does not automatically imply these necessary social changes, although it sets the stage. These changes are only possible by strengthening the organization and action of the working class as active actors in the transformation, allies that are negatively impacted by the current development model and are aware of the economic, social, and ecological crisis facing humanity.
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