

# GCCs and Development: A Conceptual and Empirical Review

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As a framework for analyzing the organization of the global economy and its implications for local development, the GCC approach is of significant theoretical and empirical relevance to GCC as a methodology. Thus far, it has had an important effect in interdisciplinary studies and has enriched substantially policy discussions about competitiveness in global chains and local upgrading. However, I argue that the GCC literature would benefit from a dialogue with other approaches to development, including schools such as dependency theory. My critique of the GCC literature is developed through an analysis of the yarn–textile–garment GCC in Mexico, which underscores its lack of territorial endogeneity, since Mexico’s participation in this chain remains concentrated in processes of temporary imports to be exported. In spite of Mexico’s success in the post-NAFTA period, since 2000 Asian, especially Chinese, products have massively displaced its exports of apparel to the US market.

KEY WORDS Commodity chain, Mexico, China, Yarn–textile–garment, Theory, Policy

## Introduction

Over the last two decades, a thoroughgoing discussion has emerged on the effects of structural adjustment in Latin America. This debate has generated an understanding of macroeconomic stability that extends beyond fiscal control and restrictive monetary policies, commercial and financial liberalization, and parallel privatization and deregulation processes (Williamson 1990) to include the creation and financing of institutions, the fight against corruption and poverty, and the strengthening of corporate and institutional governance (IMF 2003; World Bank 1998). In contrast to the extreme orthodoxy of macroeconomic policies as they were applied throughout much of the region during the 1980s and 1990s, there is increasing recognition of the need to seek and support policies that allow and promote economic growth in a context of sociopolitical and ecological sustainability (ECLAC 2004; Rodrik 2003; Stiglitz 2002).

It is in this new ‘Washington Confusion’ (Rodrik under review) that the debate on global commodity chains allows for fruitful conceptual insights and interaction with empirical findings of different schools of thought from an interdisciplinary perspective. This paper discusses the relevance of the global commodity chain framework (GCC) for development. In the first part, I offer a general conceptual assessment of the GCC approach,

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noting both its strengths and shortcomings. The second part of the paper focuses on Mexico's yarn–textile–garment (YTG) commodity chain and its evolution since the 1990s. The final part integrates the conceptual and empirical discussions of the previous sections and offers concluding thoughts on the status of the GCC framework for our understanding of contemporary development processes.

### **The GCC Approach: A Theory or a Methodology?**

The emergence of the export-oriented industrialization model (EOI) in Latin America – strongly promoted since the 1970s by critics of import-substituting industrialization (ISI) such as Balassa, Bhagwati and Krueger (Krueger 1997) – dovetailed nicely with the prevailing orthodoxy of the 1980s, which prescribed a categorical rejection of statist development strategies. Macroeconomic stabilization was an important ingredient of the EOI strategy insofar as it helped create a market-friendly environment capable of attracting foreign direct investment and allowing for specialization in tradable goods of the private sector.<sup>1</sup>

Since the 1970s and particularly the 1980s, researchers have also analyzed the processes by which multinational companies (MNCs) have relocated parts of their production operations abroad and how this interacts with the shift to EOI strategies in developing countries (Gereffi 1994; Piore & Sabel 1984; UNCTAD 2004). These changes were implemented as a response to the growing flexibility in demand, particularly and initially in sectors such as auto, electronics and garments. In a context marked by the opening of the industrialized as well as developing countries to increased flows of goods as well as capital and services, and substantial improvements in shipping and telecommunications, multinationals were increasingly able to transfer segments of the value added chain to geographically dispersed locations (Storper 1997). This is in contrast to the role played by MNCs during the post-Second World War experiment with import-substitution industrialization in Latin America, under which multinationals either exported finished products to the region or produced them locally in vertically-integrated manufacturing operations.

The process of globalization is linked to the rise of flexible production (Dussel Peters et al. 1997; Piore & Sabel 1984) and the international restructuring of commodity chains. This has been accompanied by a spectacular increase in outsourcing on a global level, initially led by the manufacturing sector and subsequently by distribution and marketing companies, and the service sector in general. These developments enabled some regions to specialize in productive processes in specific segments of the value chain, such as growing and supplying raw materials, producing parts and components, assembling final goods, research and development, marketing, after-sale services, etc. All these processes require different degrees of backward and forward linkages and various forms of international trade in order to integrate these segments into an end product or service.

Moreover, since the 1990s this situation also reflects the increasing requirement – which has become 'standard' in some chains – that suppliers become directly and fully responsible for an increasing range of tasks, functions or processes such as handling inventories, financing, quality control, procurement of inputs, packaging and shipping to distribution outlets or even to the final consumer. In other words, suppliers are being required to go far beyond traditional manufacturing activities, and assume new responsibilities and the costs that these entail. This process, which is known in several industries as 'full package production'

and which involves a different mix of tasks in each, potentially allows for greater appropriation of value-added on the part of the respective firms that become privileged suppliers, and the territories in which they are located. But it also generates enormous new challenges for contractors and the locations in which these processes take place.

It is in this context that the GCC framework is relevant and useful as a network-based *methodology* for analyzing new patterns of production, and the ways in which value is created and distributed in specific chains and appropriated by particular actors, drawing at least implicitly on the concept of forward and backward linkages in the production process analyzed decades earlier (Hirschman 1958). As an approach that highlights the global dimension of contemporary production networks, the GCC framework has several strengths.<sup>2</sup> First, it has stimulated a research agenda, which is consistently providing new empirical inputs, allowing for a continuous development and refinement of the framework in terms of learning about new GCCs and their implications for the overall approach. Second, while acknowledging the significant role of firm strategies in chains, it goes beyond narrower discussions of firm-level competitiveness (Porter 1990), macroeconomic stability and/or export-orientation. Third, it demonstrates that it is not sufficient to focus exclusively on factors of production (capital and labor) in understanding the role of countries in global markets and the benefits of international trade. Analyzing the final products, which appear in trade statistics as a set of processes or segments in a chain, allows a different perspective. For example, a country could be extremely successful in a particular segment of the GCC (as reflected in high total factor productivity in manufacturing, for example) but most of the value-added to the final commodity could be generated in other segments of the chain that take place elsewhere. Fourth and finally, because the GCC approach is capable of addressing issues such as upgrading and competitiveness at the firm level, it is relevant for policy making.

In spite of these benefits, the GCC approach also has a number of shortcomings and limitations, of which I identify four:

- While emphasizing the structure of GCCs and particularly their global dimensions, the approach as developed has not paid adequate attention to issues of space, and a territorial perspective is fundamental for understanding dynamics of socioeconomic development. While GCC analysis tends to focus on firm-level upgrading within a chain, the challenges for ‘upgrading’ from a territorial perspective are different. While also drawing on the GCC framework, several authors have attempted to discuss this question with reference to the concept of ‘territorial endogeneity’ (Dussel Peters 2000; Vázquez Barquero 1999, 2002) and the spatial dimension of globalization (Storper 1997) in order to focus issues on industrial development, intra- and interfirm networks, as well as integration to the world market from a territorial perspective.
- Since the second half of the 1990s, authors have analyzed the relevance of ‘collective efficiency’ – understood as the competitive advantage resulting from the externalities of local economies and joint activities – for particular regions or clusters. Schmitz (1997) argues that collective efficiency and the formation of inter-firm networks in specific territories are an important component of the competitiveness of successful clusters. Recent analyses (Humphrey & Schmitz 2001; Messner 2002) have also shown that integration into the world market through participation in a commodity chain will vary depending on the type of governance structure characterizing the chain. The greater the vertical nature and control of a reduced group of clients and/or buyers over the chain,

the fewer opportunities suppliers have in terms of learning and upgrading. On the contrary, the higher the number of clients and the more reduced the dependence on standards imposed by leading companies, the greater will be the options for integration, coordination, cooperation, diffusion, learning and upgrading – that is, the development of collective efficiency among firms in a region. In other words, collective efficiency does not automatically result from the incorporation of a set of firms or a cluster into *any* commodity chain.

- In the discussion of upgrading and learning processes, the GCC approach emphasizes the importance of products or sectors: garments, automobiles, electronics, etc. However, research on some of these sectors suggests that processes are more significant than products – i.e. territorial specialization in agricultural goods can potentially be as significant for upgrading, learning processes and development as ‘high tech’ products.<sup>3</sup> As a result, processes within GCCs are at least as important as the particular end product of the chain. Within electronics, for example, harnesses on the one hand and semiconductors on the other, imply extremely different production processes and have different implications with regard to employment and wages, R&D, financing requirements and policy options, among others. Rather than securing participation in a particular chain, one of the main challenges for territories (and for GCC analysis) is to develop strategies for avoiding the ‘commodification’ trap associated with particular links (e.g. simple assembly) in many different chains.
- There has been little dialogue and interaction between adherents of the GCC framework and other schools of thought with similar ‘points of entry’, particularly the ‘systemic competitiveness’ literature (Messner & Meyer Stamer 1994; Meyer-Stamer 2004) and the large body of work on ‘production networks’ (Ernst 2001, 2003) not identified explicitly as global commodity chains, but operating with a very similar perspective on the international dimension of inter-firm networks.

In recent years, dialogue between the GCC framework and other scholars interested in global industries, especially those affiliated with the Institute of Development Studies such as Kaplinsky, Humphrey and Schmitz, has resulted in renewed attention to the relationship between commodity chain participation and development outcomes. Most of this research has explored the question of how a chain’s governance structure affects the upgrading prospects of the developing country firms that participate in it.<sup>4</sup> Although increased attention to the developmental dynamics of chains is welcome, there are two problems with the commodity chain literature in this regard. First, most research on global commodity chains approaches the GCC framework as a ‘methodology’ and not a ‘theory’. The result of this is vast quantities of empirical work on particular chains and the experiences of particular firms and regions in them, and relatively little theoretical work attempting to account for these findings in a systematic and integrated way. Second, only very recently have authors started to discuss the broader implications of GCCs for development. However, to date the debate has been restricted almost exclusively to the issue of upgrading, leaving out some of the more macro-oriented concerns of ‘traditional’ development theory. In general, then, the current challenge for the GCC literature is to address a wider range of issues relevant to socioeconomic development. Another way to formulate this proposal is to suggest that we need to look beyond detailed empirical analyses of particular chains – i.e. to begin ‘looking at the forest’ as well as the characteristics of the individual trees which comprise it.

Future work on GCCs should go beyond case studies and attempt to confront some general questions regarding development processes in space and time: does integration into specific segments of global commodity chains allow for progress ‘beyond underdevelopment’? If so, of what kind and under what circumstances? Or do the dynamics of global production networks deepen socioeconomic polarization in the periphery, creating new ‘islands’ of development for those locations that become incorporated into chains?<sup>5</sup>

In what follows I draw on some of the research I have conducted on a variety of commodity chains in Mexico and Central America. Recently, I have also been examining how the position of Latin American firms within these chains is affected by the entrance of competitors in China – a critical question for the sustainability of the export-oriented growth model throughout the region. In general, I have found that the intensity of competition between Chinese and Latin American exporters is increasing in segments of specific chains, particularly for assembly activities and even the more integrated full-package manufacturing role. The result is increasing overall polarization, between households, firms, branches, sectors and territories, both within and across regions. Thus, while integration into commodity chains is permitting peripheral countries to increase exports, productivity and technology absorption, these benefits have a limited impact at the aggregate and territorial level and thus, in general, the overall development potential of GCC participation is rather low.

In the next section, I offer reflections on Mexico’s role in one commodity chain to illustrate some of these points. A more systematic approach to GCCs and development would require that additional chains be studied, including those in agricultural and services (where relevant), to better understand how particular regions are incorporated into, and impacted by, a range of global chains. However in keeping with the theme of this special issue, I discuss the YTG chain in Mexico with the goal of highlighting how a country’s participation in GCCs must be analyzed both with respect to the particular configuration of the chain (i.e. to which segment of the chain are developing country suppliers linked) and the composition of the global industry (i.e. with whom are these exporters competing?) I conclude that this type of comprehensive analysis, even in the context of a single chain, produces a sobering appraisal of the link between GCC participation and development.

### **The Yarn–Textile–Garment GCC: Six Trends**

We can note six key issues with regard to the commodity chain for apparel (defined here as the yarn–textile–garment or YTG chain) that are relevant for understanding the position of Mexico, and Latin American countries more generally, within it. First, is the significant participation of Asia, as illustrated in Table 1. In 2005, Asia’s share of the world market reached 45.6 per cent in textiles and 47.7 per cent in garments. In both cases, China’s performance is remarkable since the 1990s and particularly since 2000.

Second, although China’s domination of the global market for textile products is expected to increase with the elimination of quotas in January 2005, it is important to note that other trade barriers will likely be maintained, especially tariffs, but also antidumping cases. Most studies of the post-MFA apparel industry expect China to benefit substantially from quota phase-out, while Latin America will lose world, and especially US, market share (Dussel Peters 2004, 2005). According to one WTO estimate (Kyvic 2004), China could increase its share of the US market from 16 per cent to 50 per cent with the elimination of

TABLE 1  
Textiles and clothing: exports from selected countries (1980–2005) (share over total exports)

	1980	1990	2000	2005
<b>Textiles</b>				
Central and South America	–	–	2.00	1.80
Mexico	0.16	0.68	1.64	1.10
United States	6.80	4.83	6.97	6.10
European Union (25)	–	53.20	35.90	33.50
Asia	–	35.30	44.92	45.57
China	4.60	6.92	10.27	20.20
World	100.00	100.00	100.00	100.00
<b>Clothing</b>				
Central and South America	–	–	5.50	4.70
Mexico	0.00	0.54	4.36	3.16
United States	6.83	2.37	4.36	2.38
European Union (25)	–	43.60	32.70	37.40
Asia	–	43.60	46.40	47.70
China	4.00	8.94	18.24	22.39
World	100.00	100.00	100.00	100.00

*Source:* own calculations based on WTO (2007).

quotas, with Mexico's share falling from 10 per cent to 3 per cent and the market share of the rest of Latin America declining from 16 per cent to 5 per cent (with Central America and the Dominican Republic being particularly affected).

Third, a critical aspect regarding preferential trade agreements such as the North American Free Trade Agreement (NAFTA) and the Central American Free Trade Agreement (CAFTA) has to do with whether or not the processes carried out in the region – from cutting to embroidery to the application of different kinds of washes and dyes – require the payment of tariffs. In 1994, NAFTA allowed all processes that were carried out in Mexico (from the spinning of yarn forward) to be considered 'regional'. This means that garments made in Mexico are not subject to tariffs when they are imported into Canada or the United States (the other NAFTA countries) as long as they are sewn from yarn spun in Mexico or one of the other two NAFTA countries (Bair & Dussel Peters 2006). However, the United States Tariff regime has not been very flexible in permitting inputs from other countries, such as cotton, yarn or fabrics produced in Asia, to benefit from this tariff arrangement, known as the 'yarn forward' rule of origin.

Fourth, the (YTG) chain is considered the typical 'buyer-driven' commodity chain due to the coordinating role played by branded companies. In brief, there are three major buyers, each with its respective networks: retailers, brand-name marketers and manufacturers of brand-name products. The final markets are characterized by a high degree of segmentation in Europe as well as in the United States and Asia, where they are broken down into distinct product segments (e.g. men's, women's or children's clothing; sportswear; casual or elegant apparel) and different types of retail outlets or market channels (mass discounters, department stores, specialty retailers, etc.) (CANAINTEX & Kurt Salmon 2002).

Fifth, ‘full package’ production has become more widespread. This production model – unlike the assembly networks associated with the traditional maquiladora that received previously cut fabrics from US clients – implies that buyers transfer all dimensions of the production process, including logistics, organization and sourcing of all inputs required for the manufacture of garments, to the supplier. While this type of contract manufacturing creates more opportunities for learning and linkages than the assembly model, it also generates significant financing costs that may be up to ten times greater than those associated with traditional assembly subcontracting (Dussel Peters 2004).

Sixth and finally, textiles can account for as much as 50 per cent of the costs of the final product, depending on the specific garment. The difference in price between fabrics made in China versus the US can also be as much as 50 per cent. Even including the costs of transport, quotas and higher tariffs for these garments, apparel made from Asian fabrics continue to be more cost competitive than those containing textiles made in Mexico and Central America, which often use US inputs in order to benefit from preferential tariffs (CANAINTEX & Werner International 2002; Dussel Peters 2004).

At least two important implications result. First, the increasing and massive integration of Asia and particularly China in most segments of the YTG chain is negatively impacting other exporters. Second, competitiveness in the garment segment is affected by the extent to which the chain is territorially vertically-integrated (locally or regionally), since access to inputs produced in the upstream links of the chain (fibers, yarns and fabrics) are critical for clothing manufacturers.

### **Mexico’s Role in the YTG Chain**

This section is divided in two parts. First I briefly examine the current condition of the apparel industry in Mexico, noting its post-NAFTA export dynamism, the period of crisis that began in 2000 as a result of dramatically slowed export growth, and the differential performance of the textile versus garment segments. In the second section, I look more closely at Mexico’s position in the US market, which is the destination for well over 90 per cent of Mexico’s clothing exports.

#### *Mexico’s YTG Sector: Employment and Trade Performance*

Table 2 provides data regarding the performance of Mexico’s textile products sector between 1988 and 2003 with regard to output, employment, labor productivity and trade. The recent history of this sector can be divided into three periods: the first period, 1988 to 1993, predates NAFTA and was characterized by modest growth in GDP and relatively stable employment; the second, 1994 to 2000, corresponds to the first years of NAFTA, during which employment, exports and GDP grew substantially; and the third, extending from 2000 to the present, has been marked by a decline in each of these variables. Through 2005, the sector remained troubled, with many firms regarding the situation as a veritable crisis.

The YTG sector was the most important manufacturing activity in Mexico in terms of employment during 1988–2004, accounting for around 20 per cent of total manufacturing employment during this 15-year period. Its share of Mexican GDP fell modestly from levels above 2.5 per cent before 1994 to 2.4 per cent in 1999. It then fell sharply to under 1.8 per

TABLE 2  
Selected variables of the YTG GCC in Mexico (1988–2004)\*

	1988	1994	2000	2002	2004
GDP YTG (1994 = 100)	85.74	100.00	166.64	150.80	142.88
GDP total economy (1994 = 100)	76.54	100.00	131.11	131.59	140.25
GDP YTG (percentage over total)	2.70	1.99	2.33	2.00	1.75
Employment in YTG	409,884	404,897	656,081	540,061	476,582
Employment in YTG (1994 = 100)	101.23	100.00	162.04	133.38	117.70
Employment in YTG (percentage over total)	1.70	1.44	2.05	1.71	1.48
Wages per employment in YTG (percentage over total)	118.80	99.76	86.92	88.93	87.72
Labor productivity in YTG (1994 = 100)	84.70	100.00	102.84	113.06	121.39
Labor productivity in YTG (percentage over total)	135.67	143.48	127.90	138.09	141.88
Exports – total economy (1994=100)	60.08	100.00	267.19	264.54	304.84
Exports – YTG (1994 = 100)	47.19	100.00	378.22	359.42	342.05
Exports – YTG (total = 100)	4.35	5.41	8.26	8.12	6.61
Imports – total economy (1994 = 100)	38.82	100.00	218.89	217.99	246.16
Imports – YTG (1994 = 100)	27.60	100.00	250.70	247.96	240.22
Imports – YTG (total = 100)	3.54	4.93	6.06	6.08	5.35
Trade balance/GDP, total economy (percentage over total)	0.48	–3.15	–1.47	–1.22	–1.40
Trade balance/GDP, YTG (percentage)	3.63	–5.61	12.94	12.34	8.34

\*Refers to branches 24 (soft yarn fabrics and textiles), 25 (hard yarn fabrics and textiles), 26 (other textile industries) and 27 (garments).

Source: own elaboration based on INEGI.

cent in 2004, the lowest level ever. Overall, employment performance has been similar: the apparel industry's share of total employment fell from 1.7 per cent in 1988 to 1.4 per cent in 1994, then increased to more than 2.0 per cent in 2000 before falling to just under 1.5 per cent in 2004. In the three years between 2000 and 2004, employment in the YTG sector fell by 27 per cent, the worst employment performance for any branch of the Mexican economy during that period.<sup>6</sup> More detailed data until 2006 reflects a continuation of this trend: during 2000–06 the chain had lost 35.9 per cent of its employment (Cárdenas Castro and Dussel Peters 2007).

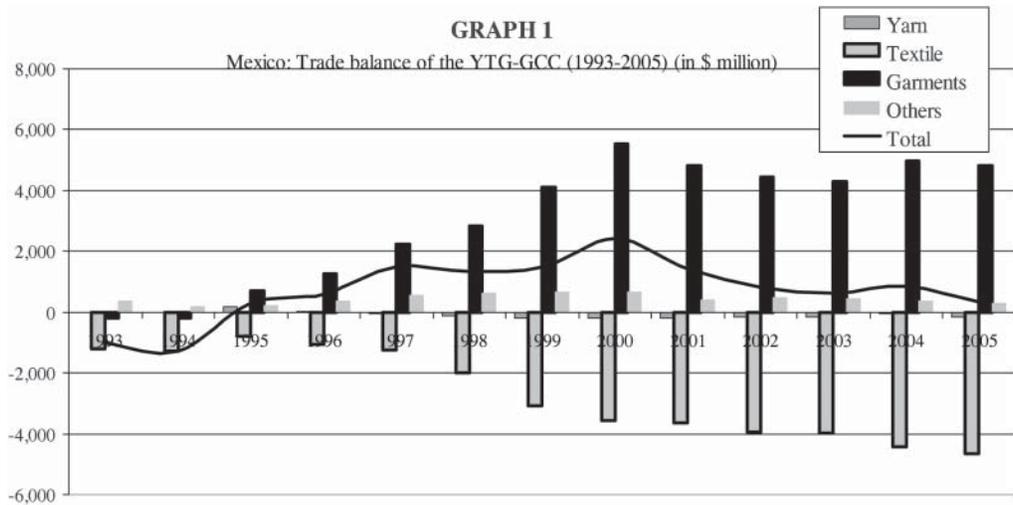
Wages per worker have fallen continuously between 1988 and 2003, both in absolute terms and in respect to average wages. Before NAFTA, wages in the YTG sector were significantly above average, but have declined continuously since then, to levels below 90

per cent of the average. Thus, both in quantitative (number of jobs) and qualitative terms (as indicated by wage trends), employment has declined between 2000 and 2004, and with regard to the latter, this decline extends throughout the entire post-NAFTA period. Labor productivity remained relatively stable until 2000 in the context of growing GDP and employment, and has increased substantially with respect to the economy-wide average as a result of negative GDP growth and even more negative employment growth in the apparel industry since 2000. Thus, the gap between labor productivity and wage growth has increased substantially for the period, particularly since NAFTA and the crisis of 2000–04.

These substantial changes in employment, GDP and productivity are closely linked to Mexico's overall integration with the world market through an export-oriented industrialization strategy (Dussel Peters 2000). The apparel industry has been one of Mexico's export success stories. Since the 1994 implementation of NAFTA, the export/GDP coefficient tripled (including maquiladora exports) from 22 per cent in 1993 to levels above 60 per cent since 2000. Thus, it is clear that exports have been the main motor of growth in this sector. These exports, however, are sustained by high import levels, reaching 58 per cent of this sector's GDP in 2004. One of the most significant changes in the YTG sector is the change in the trade balance: while trade produced a large deficit until 1994, post-NAFTA export dynamism has allowed for a trade balance/GDP surplus of up to 13 per cent of GDP in 2000, with a falling tendency since that year.

Three final issues are relevant for understanding Mexico's apparel industry. First, Mexico's exports in this sector have been overwhelmingly concentrated in the garment link of the YTG chain. Garments accounted for 46.8 per cent of this sector's exports in 1993, but for more than 75 per cent since 2001 (with an average annual growth rate, or AAGR, of 19.8 per cent for clothing exports over the 1993–2004 period). Second, and considering that more than 95 per cent of Mexico's clothing exports go to the US market, most exports in this sector depend on temporary imports to be re-exported (i.e. the classic model of assembly subcontracting using imported components – in this case, mostly US-manufactured yarn and textiles – under different programs such as the maquila and PITEX regimes). On average for the period 1993 through 2006, nearly 96 per cent of Mexico's YTG exports (which, as noted above, consisted almost entirely of clothing) featured temporary imports. The third and related issue returns to the theme of import dependence: in spite of Mexico's large trade surplus in the garment sector, Mexico is massively importing through the upstream links in the chain. As a result, Mexico could be achieving a trade deficit in the short run when the full YTG sector is taken into account, as shown in Figure 1.

Despite Mexico's important trade surplus in the garment segment of the YTG chain, it presents a growing trade deficit in the textile segment. For the 1993–2005 period, Mexico's trade surplus rose to \$39.6 billion dollars in garments, while the deficit in textiles reached \$34.9 billion dollars. As a result, the trade surplus in the chain has gradually decreased to a low of \$329 million dollars in 2005 from a high of \$2.4 billion in 2000. As noted above, if this tendency continues, Mexico's YTG balance could soon become negative. This is rather surprising for a country like Mexico, which has substantially increased its exports and has actively participated in the global garment trade via integration in buyer-driven apparel chains coordinated by leading US brands and retailers. It can only be understood when one appreciates Mexico's high dependence on temporary imports. The consequence is that domestic value-added, as well as learning processes and potential spin-off effects for the rest of the economy, are minimal (Dussel Peters et al. 2002).



Source: Cárdenas Castro and Dussel Peters (2007).

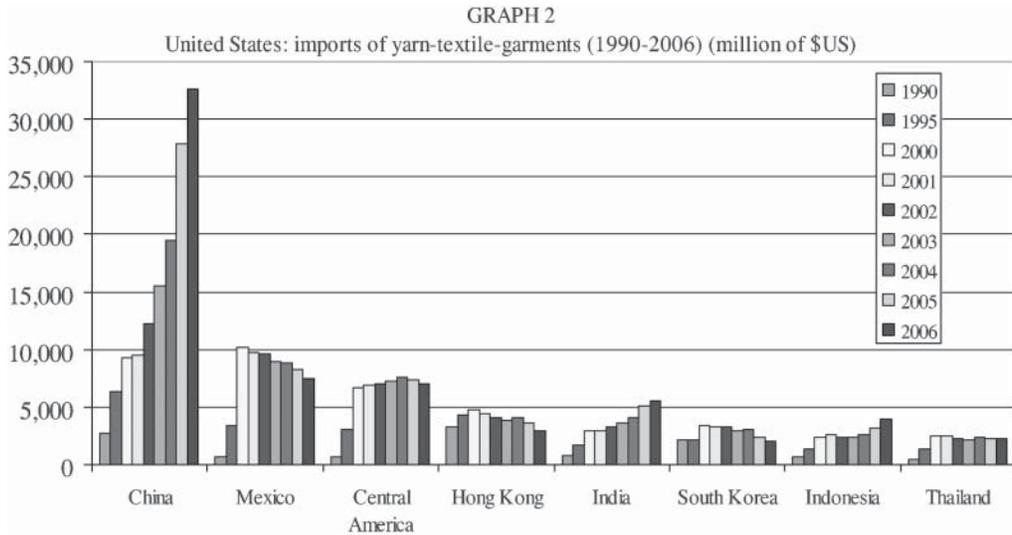
Fig. 1. Mexico: trade balance of the yarn–garment–Textile GCC, 1993–2005 (in \$ million).

The information presented above, however, fails to capture accurately the true performance of the YTG sector in terms of its trade balance. This is because according to recent estimates, 58 per cent (or around \$9.5 billion dollars) of Mexico’s domestic garment consumption is now illegal, with most of the goods coming from Asia and China. These same sources (Canaintex 2006; CNIV 2004) estimate that only 20 per cent of all domestic consumption is locally supplied, while around 22 per cent is legally imported. These illegal imports may enter via the triangulation of merchandise, through changes in tariffs (in other words, new clothing is imported as used clothing under another tariff fraction), aided by the lack of inspection by US customs agents,<sup>7</sup> and/or due to robberies and illegal and/or informal sales. Antidumping measures generate powerful incentives for this process, particularly for products from Asia and China.

#### *Mexico in the YTG Chain: Apparel Exports to the US Market*

The United States market is far and away the most important for Mexican exporters in every manufacturing industry, and textiles and apparel is no exception. In 2004, just less than 94 per cent of Mexico’s YTG exports went to the US. Figure 2 shows the exports of the United States’ leading YTG suppliers for selected years between 1990 and 2006. On one hand, it shows that Central America, China and Mexico were the principal exporters to the US market during this period, with an average annual growth rate for exports of 16.1 per cent, 16.9 per cent and 15.9 per cent, respectively. In 2006, these suppliers represented 43.95 per cent of total US YTG imports. Over the 1990–2006 time span, one can distinguish between two periods: (a) 1990–2000, when US imports grew strongly, with an AAGR of 12.6 per cent, and (b) 2001–06, when import growth slowed substantially to 5.2 per cent.

During the first period, exports from Central America and Mexico grew, with these regional exporters increasing their share of the US market to 8.7 per cent and 13.2 per cent in 2000; since then, however, they have fallen to 6.7 per cent and 7.1 per cent in 2006, respectively. With an AAGR of 13.2 per cent, China’s growth dynamic was lower than that of the



Source: Cárdenas Castro and Dussel Peters (2007).

Fig. 2. United States: imports of YTG, 1990–2006 (US\$ million).

Latin American exporters' during the first period, but in the 2001–06 period, this increased sharply to almost 23.3 per cent. Since 2001 China has displaced Mexico and Central America, becoming the United States' principal supplier of textile products. In 2006 its market share of nearly 31.2 per cent (with Hong Kong's exports added, 34 per cent), was much higher than that of its competitors. In sum, growth in China's exports since 2004 and its dominance of the US import market has had a substantially negative impact on its competitors, in particular on Mexico.

In which segments of the chain do the countries in question participate? Table 3 contains information on the composition of imports when disaggregated into the three segments of the YTG chain. While Central America and Mexico have specialized in garment exports – with 99.1 per cent and 73.8 per cent of their exports in this segment of the chain in 2006 – China has a considerably more diversified profile. In fact, garment exports as a share of the sector's total exports fell from 75 per cent to 64.6 per cent between 1990 and 2006, and the exports of other goods, particularly accessories and inputs required for making clothes and other products (e.g. rugs) has increased. With an AAGR of 27.9 per cent in 2001–06, this category ('others' in Table 3) comprises 30.5 per cent of China's exports to the US in the sector. Perhaps even more impressive, over the 2001–06 period, which was one of stagnation in terms of US import growth, China almost increased its AAGR fivefold with respect to the previous ten-year period (1990–2000) for total exports in the chain. During this five-year period China's AAGR for garments was 26.5 per cent, while that of Mexico and Central America was –8.4 per cent and 0.9 per cent, respectively. Overall, China quickly surpassed Mexico's and Central America's exports since 2002, after they were 'tied' in the prior period with regard to US import market share in the garment segment of the chain, i.e. Central America's garment exports stagnated in 2001–06, those of Mexico declined, and those of China increased substantially.<sup>8</sup> Since 2000 Mexico's exports to the US market have dropped

TABLE 3  
United States: imports of products in YTG chain (1990–2006)

	Value (millions of dollars)				Percentage (US segment – 100)				Percentage (respective country total)				Growth rate		
	1990	2000	2006		1990	2000	2006		1990	2000	2006		1990–2000	2001–2006	
<b>Total</b>															
Yarn	901	2,615	3,799	100.00	100.00	100.00	100.00	100.00	3.83	3.39	3.63	11.2	11.2	7.8	
Textiles	2,394	6,612	7,167	100.00	100.00	100.00	100.00	10.16	8.57	6.84	10.7	8.57	10.7	1.6	
Garments	18,390	59,365	75,187	100.00	100.00	100.00	100.00	78.07	76.98	71.79	12.4	76.98	12.4	4.8	
Others	1,870	8,521	18,573	100.00	100.00	100.00	100.00	7.94	11.05	17.73	16.4	11.05	16.4	16.9	
Total imported by US	23,555	77,112	104,726	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	12.6	100.00	12.6	6.3
<b>Central America</b>															
Yarn	17	19	13	4.09	0.79	0.70	0.70	1.85	0.72	0.33	0.33	1.2	0.72	–7.7	
Textiles	10	11	11	0.47	0.17	0.10	0.10	0.44	0.17	0.15	0.15	0.7	0.17	–0.9	
Garments	601	6,617	6,937	3.39	11.66	11.25	11.25	3.27	11.15	9.23	9.23	27.1	11.15	0.9	
Others	14	42	58	1.00	0.55	0.40	0.40	0.75	0.49	0.31	0.31	11.5	0.49	6.8	
Total exported to US	643	6,689	6,999	2.97	9.43	8.81	8.81	2.73	8.67	6.68	6.68	26.4	8.67	0.9	
<b>China</b>															
Yarn	17	47	390	1.56	0.95	1.43	1.43	1.90	1.80	10.27	10.27	10.7	1.80	52.6	
Textiles	187	444	1,209	8.77	5.95	9.80	9.80	7.81	6.71	16.87	16.87	9.0	6.71	22.2	
Garments	2,020	6,503	21,075	10.05	7.96	13.69	13.69	10.98	10.95	28.03	28.03	12.4	10.95	26.5	
Others	469	2,277	9,954	22.93	22.77	44.58	44.58	25.11	26.72	53.60	53.60	17.1	26.72	34.3	
Total exported to US	2,694	9,271	32,628	10.62	9.17	17.36	17.36	11.44	12.02	31.16	31.16	13.2	12.02	28.6	
<b>Mexico</b>															
Yarn	54	361	479	9.19	17.79	13.25	13.25	5.99	13.82	12.60	12.60	20.9	13.82	5.8	
Textiles	47	466	530	1.95	7.30	7.74	7.74	1.98	7.05	7.39	7.39	25.7	7.05	2.6	
Garments	486	8,519	5,484	2.30	14.68	10.40	10.40	2.64	14.35	7.29	7.29	33.2	14.35	–8.4	
Others	114	850	936	4.29	7.97	4.06	4.06	6.09	9.97	5.04	5.04	22.3	9.97	1.9	
Total exported to US	701	10,196	7,428	2.51	13.49	9.41	9.41	2.98	13.22	7.09	7.09	30.7	13.22	–6.1	

Source: self-compiled, based on Cárdenas Castro and Dussel Peters (2007).

in absolute terms. These results contrast with a more positive perspective of Mexico's integration into the apparel commodity chain and the upgrading prospects associated with its participation in the world market.<sup>9</sup>

## Conclusions

As a method for analyzing current international trade and production networks, the global commodity chains approach is an extremely useful tool for overcoming a simplistic perspective on microeconomic and macroeconomic structural changes in Latin America. Specifically, it has facilitated detailed field research and the study of the production and distribution of value in specific commodity chains and segments. The critique of the GCC approach which I have offered in this chapter is intended to invite further conceptual and empirical work to address several of its shortcomings. In particular, I noted earlier that the GCC framework lacks an emphasis on the territorial perspective of development, of territorial endogeneity and of the specificity of the periphery, which are critical to the current debate on the integration of Southern countries into world markets, i.e. the increasing competitiveness of a GCC does not imply that all segments and territories will effectively benefit from this process. In addition, little progress has been made in linking research on GCCs to the broader literature on development, and perhaps specifically with alternative theoretical traditions such as regulation theory and dependency theory, among others. A wider dialogue may help shed light on the relationship between the organizational dynamics of global chains and processes of development in particular regions. Among the critical issues with which the GCC literature needs to more systematically engage is the question of how contemporary capitalism affects the relationship between different territories that become incorporated into global chains. For example, have the gaps between them increased or decreased, and what role do chains play as mechanisms of convergence or divergence? Do GCCs effectively allow for a learning process – in general terms, but specifically in terms of upgrading in segments, technological development, R&D, a higher quality of employment, etc. – in territories involved in lower segments of the value-added chain? Are there specific patterns of territorial development in light of multiple GCC examples?

In the context of the YTG commodity chain, empirical evidence indicates that we should reject an 'equal opportunity' perspective which suggests that all participants face similar challenges and have the same possibilities to upgrade via participation in the chain. For the case of Mexico, successful export performance has not translated into benefits for a broader segment of firms or workers, and recent years have brought intensified competition for whatever limited upgrading prospects are available. In Mexico – as in most of Central America – the specific YTG commodity chain has, since its origins, specialized in processes via temporary imports to be exported and, in general, with low value-added, particularly in garments. Contrary to Asian experiences, and particularly Chinese, Mexico's development and upgrading potential in inputs for the chain – such as textiles and other inputs – has been poor. My analysis suggests that any study of Mexico's role in the YTG chain must be comparative, because competition between leading exporters including China and Central America has implications for Mexico, especially since competitive pressure among these countries is only likely to increase in the near future.

From this perspective, a renewed debate and discussion with other schools of thought, such as the dependency theory (Dos Santos 2003), seems appropriate: what does GGC

analysis tell us about the contemporary development process and, in particular, about competition between countries within the periphery? Can all territories secure access to chains and processes within them that allow them to realize their upgrading objectives? Are territories within periphery effectively closing gaps in terms of learning processes, suppliers, productivity, real wages and technological development, among other variables? Clearly, one's perspective on the efficiency-enhancing and welfare-increasing benefits of competition among chain participants looks different from that of the Northern consumer than it does from that of the Southern producer. In this sense, Mexico is a 'good bad example' in which export-oriented industrialization (EOI) has primarily fostered specialization in segments of commodity chains reliant on cheap labor power and imported inputs. In the case of the yarn–textile–garment GCC, the Mexican case shows that even successful and dynamic export performance is not sufficient for sustainable growth and more generalized development. In addition, the Mexican experience showcases how rapidly the geography of commodity chains can shift and how quickly market position can erode. While Mexico's export performance in the second half of the 1990s led it to be viewed as a success story in the context of NAFTA and regarded as one of the countries to emerge as a 'winner' from the restructuring of global production and trade networks in textiles and apparel, it has been in deep crisis since 2000. The implications of intense competition between developing countries for a finite world export market and the pace with which winners can become losers shows the limitations of upgrading and development via commodity chains in the periphery.

## Notes

- 1 For a discussion of EOI and its effects, see Bair and Dussel Peters (2006) and Dussel Peters (2000).
- 2 For a fuller discussion, see Appelbaum and Gereffi (1994), Bair (2005), Bair and Gereffi (2002), Gereffi (1999) and the introduction to this special issue.
- 3 The technological complexity of a chain's final product does not necessarily coincide with the processes that are required for their production. Products based on high-technology, such as personal computers, do not include technologically advanced processes in all their segments (e.g. assembling parts and components) (Dussel Peters 2003).
- 4 The analysis of Bair (2005) establishes how global commodity chains morphed into global value chains, and how this shift is reflected in research on chain dynamics as they impact development and upgrading.
- 5 There has been, of course, work of the main authors of GCC attempting to discuss broader development issues (Bair and Gereffi 2003; Gereffi 2007). But these efforts, after several decades of GCC work, have been rather limited and not effectively structured, so far.
- 6 The issue is very relevant since employment in manufacturing, including apparel production, achieves relatively high levels of formality (e.g. being subscribed to Social Security). During the 1990s, manufacturing accounted for around 10 per cent of total employment, but more than 30 per cent of formal employment (Monitor de la Manufactura Mexicana 2006).
- 7 The USGAO (2004) recognizes the existence of massive illegal imports of textiles that are not dealt with by the United States Customs service, which is a cause for concern in view of the inauguration of quota free trade in 2005. The Office highlights the lack of an automated system, the lack of inspections and incoherent practices at different entry points, the legal possibility for temporary importers to change the destination of the merchandise without informing customs agents, and the long periods of time taken for the goods to arrive at their legal destination, all of which particularly affects Mexico.

- 8 During the first half of 2005, the rate of China's exports to the US surpassed 60 per cent in each segment of the YTG chain, and for some products. This led to the negotiation of a 'Memorandum of Understanding Concerning Trade in Textile and Apparel Products', which substantially restrains China's exports of textile products to the US market for the period 2006–08.
- 9 For a discussion of these issues, see Bair and Gereffi (2001, 2002), Dussel Peters et al. (2002) and Mortimore (2002).

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