Economic Restructuring and Value chains

The search for regional competitiveness in Colombia

Alexander Blandón López

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ECONOMIC RESTRUCTURING AND VALUE CHAINS

The Search for Regional Competitiveness in Colombia

ECONOMISCHE HERSTRUCTURERING EN WAARDEKETENS

Op zoek naar regionaal concurrentievermogen in Colombia

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Alexander Blandón López
born in Ibague, Colombia

Doctoral Committee

Promotor

Prof.dr. A.H.J. Helmsing

Other members

Prof.dr. E.B. Zoomers, Utrecht University
Prof.dr. R. Ruben, Radboud University Nijmegen
Prof.dr. P. Knorringa

Co-promotor

Dr. A.C.M. van Westen, Utrecht University

In loving memory of the late Gilberto Blandon D., my father,
To John Alexander Blandon Castaño,
my beloved son who encouraged me all the way to the end,
And to God who gave me the strength to finish my dissertation.

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Acronyms

ASICHOC	Association of Chocolate and Coffee Industrialists (Asociación de Industriales del Chocolate y del Café)
ASOHOFRUCOL	Horticultural Association of Colombia (Asociación Hortofrutícola de Colombia)
BANCOLDEX	National Bank of Foreign Trade (Banco Nacional de Comercio Exterior)
CA	Agreement on Competitiveness (Acuerdo de Competitividad)
CADIAC	Chains and Dialogue for Action (Cadenas y Dialogo para la Accion)
CAF	Andean Promotion Corporation (Corporación Andina de Fomento)
CAN	Andean Community (Comunidad Andina de Naciones)
CARCE	Regional Advisory Committee of Foreign Trade (Comité Asesor Regional De Comercio Exterior)
CCI	Corporación Colombia Internacional
CIF	Forestry Incentive Certificate (Certificado de Incentivo Forestal)
CNC S.A	National Chocolates Company

	(Compañía Nacional de Chocolates
CNCC	Cotton National Council for Competitiveness (Consejo Nacional de Competitividad)
COLANTA	Antioquia Dairy Cooperative (Cooperativa Lechera de Antioquia)
CONALGODON	Colombian Cotton Confederation (Confederación Colombiana del Algodón)
CONPES	National Council of Social and Economic Policy (Consejo Nacional de Política Económica y Social)
CORANTIOQUIA	Corporación Autónoma Regional del Centro de Antioquia
CORNARE	Autonomous Regional Corporation Rionegro-Nare (Corporación Autónoma Regional Rionegro-Nare)
CORPOICA	Colombian Corporation for Agricultural Research (Corporación Colombiana de Investigación Agropecuaria)
CORPOURABA	Corporation for the Sustainable Development of Uraba (Corporación para el Desarrollo Sostenible del Uraba)
CPT	Regional Productivity Centre of Tolima (Centro de Productividad del Tolima)
CTGRCC	Cotton-Textile-Garments Regional Council for Competitiveness (Consejo Regional de Competitividad de la Cadena Algodón-Textil-Confecciones)
DESMOTOLIMA S.A	Desmotadora del Norte del Tolima S.A
DIAGONAL	National Cotton Distribution Company (Distribuidora Nacional de Algodón)

DNP	National Planning Department (Departamento Nacional de Planeación)
DPC	Direction of Productivity and Competitiveness
DPNCC	National Council for Competitiveness of the 'Dairy Products' Value Chain
DRI	Integrated Rural Development Fund (Fondo de Desarrollo Rural Integrado)
ECLAC	Economic Commission for Latin America and the Caribbean (Comisión Económica Para América Latina y el Caribe)
ECOPETROL	Colombian Petroleum Company (Empresa Colombiana de Petróleos)
FEDEARROZ	National Federation of Rice Growers (Federación Nacional de Arroceros)
FEDECACAO	National Federation of Cocoa Growers (Federación Nacional de Cacaoteros)
FEDECOLECHE	National Federation of Milk Producers' Cooperatives (Federación Colombiana de Productores de Leche)
FEDEGAN	National Federation of Cattle Growers (Federación Nacional de Ganaderos)
FINAGRO	Fund for the Funding of the Agricultural and Livestock Sector (Fondo para el Financiamiento del Sector Agropecuario)
GATT	General Agreement on Tariffs and Trade (Acuerdo General sobre Aranceles Aduaneros y Comercio)
GCC	Global Commodity Chain (Cadena Global de Mercancias)

GREMIO	Producer Organization, Business Interest Associations (Organización de Productores)
GVC	Global Value Chain (Cadena Global de Valor)
HIMAT	Colombian Institute of Hydrology, Meteorology and Land Development (Instituto Colombiano de Hidrología, Meteorología y Adecuación de Tierras)
ICA	Colombian Agricultural Institute (Instituto Colombiano Agropecuario)
ICR	Rural Capitalization Incentive (Incentivo de Capitalización Rural)
IDEMA	Institute for Agricultural and Livestock Marketing (Instituto para el Mercadeo Agropecuario)
IICA	Inter-American Institute for Agricultural Cooperation (Instituto Interamericano de Cooperación para la Agricultura)
INCORA	Colombian Institute of Agrarian Reform (Instituto Colombiano de la Reforma Agraria)
INDUARROZ	National Federation of Rice Industrialists (Federación Nacional de Industriales del Arroz)
ISI	Import Substitution Industrialization (Industrialización por substitución de importaciones)
MADR	Ministry of Agriculture and Rural Development (Ministerio de Agricultura y Desarrollo Rural)
MCIT	Ministry of Trade, Industry and Tourism (Ministerio de Comercio Industria Y Turismo)
MINCOMEX	Ministry of Foreign Trade (Ministerio de Comercio Exterior/Colombia)
NGO	Non-Governmental Organization

	(OrganizacionNo Gubernamental, ONG)
OBM	Original Brand Manufacturing (Fabricacion de Marca Original)
OEM	Original Equipment Manufacturing
PROAGRO	Program of Agro and Livestock Supply (Programa de Oferta Agropecuaria) Colombia
PROEXPORT	Tourism, Foreign Investment and Exports Promotion (Promocion de Turismo, Comercio y Exportaciones)
SENA	National Service Learning (Servicio Nacional de Aprendizaje)
SVCG	Saligna Value Chain Group
UMATAS	Municipal Units for Agriculture and Livestock Technical Management (Unidades de Manejo Técnico Agropecuario Municipal)
VC	Value Chain (Cadena de Valor)
WTO	World Trade Organization (Organización Mundial del Comercio)

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Abstract

During the 1990s, the changing nature of industrial policy, the endogenous development needs, and the devastating outcomes of the economic restructuring on several regions and key sectors such as the agriculture and livestock prompted countries such as Colombia to undertake an aggressive programme of value chain based development policies and partnerships including its decentralization to the regions. The agreement on competitiveness of several value chains at the regional level became a proactive response at the meso-level to the new challenges that firms and nations faced in the context of globalization.

This research develops a framework for the analysis of value chain policies particularly of the effectiveness of multi-stakeholder development partnerships at the value chain level. It is composed by four main elements: value chain factors, regional characteristics, competitiveness agreements for value chains, and effectiveness of competitiveness agreement. The empirical data that support this thesis comes from a set of five value chains, from three different regions across Colombia, with a signed competitiveness agreement during the period (2000-2004).

The thesis encompassed a particular type of sector/region comparison and basically approached the interaction between value chain factors and regional factors in the context of multi-stakeholder agreements at the value chain level. The selected cases included the value chain 'cocoa-chocolate' in the Northeastern region, the value chains 'cocoa-chocolate', and 'dairy products' in Antioquia and finally, the value chains 'cotton-textile- garments' and 'rice-threshing' in Tolima. Two specific types of analyses were developed. First, same sector and value chain problematique but different regional settings. The second analysis was based on a

comparison of two value chain agreements in the same region with a favorable industrial policy setting.

The main findings and lessons derived from this study will enhance the available theory of value chain and industrial policy and promote a shift towards local-regional studies in the value chain domain. A key contribution is the scaling down of the global value chain analytical framework to the analysis of local-regional value chain based development policies. In fact, this research did not carry out a conventional study on global value chain analysis focused on the complex global context, as occurs in many cases documented by global value chain researchers. Conversely, it adapted this frame to national-regional levels, though taking into account the functioning of national agro-industrial value chains and their regional nuclei where they are embedded. The study expands and disaggregates Gereffi's Global Commodity Chain framework and applies some of its analytical categories (input output structure-and governance amongst others) to the study of regional value chains. In addition, it includes regional factors and their interplay with value chain factors in the analysis of effectiveness of value chain based development policies.

The findings reveal fundamental lessons for policymakers in this field. On one hand, value chains have typical features in terms of economic structure (input out composition, and barriers to entry and rents) and governance that characterize their functioning and influence the outcome of meso-level policies. On the other, the specific regional characteristics (economic and non-economic factors, e.g. socio economic and political conditions) where the value chains are embedded play a complementary role in these interventions. In short, the analysis of the interaction of value chain and regional factors shows that the value chain factors are more influential than the regional factors in the implementation and outcomes of value chain-based development policies. In spite of the regional policy environment where a competitiveness agreement of a value chain is implemented, the governance and economic structure of the value chain, lastly can support or obstruct its adequate functioning.

Finally, a competitiveness agreement embodies for a regional government a potential instrument for social and economic policy interventions. First, governments can participate in this scheme, having in mind the promotion of social policies (employment generation and smallholder income improvements), particularly in depressed areas with a tradition

or a potential for raw material production. Second, competitiveness agreements offer to the public sector a scope of action to deal with regional economic restructuring processes and to promote endogenous development policies with active involvement and contribution of several regional stakeholders. Equally, a competitiveness agreement has the potential to be used to promote substitution of illicit crops for licit agro and livestock activities and to foster peace and prosperity in rural areas affected by the armed conflict in Colombia.

Economische Herstructurering en Waarderketens:
Op zoek naar regionaal concurrentievermogen in Colombia

Samenvatting

Landen als Colombia begonnen in de jaren negentig met een agressief programma van ontwikkelingsbeleid en samenwerkingsverbanden gebaseerd op waardeketens, dat ook decentralisatie naar de regio's omvatte. Dit gebeurde onder druk van veranderingen in het industriebeleid, de endogene ontwikkelingsbehoeften en het verwoestende resultaat van de economische herstructurering in een aantal regio's en belangrijke sectoren zoals de landbouw en veeteelt. De overeenkomst over het concurrentievermogen van een aantal waardeketens op regionaal niveau werd een proactief antwoord op meso-niveau op de nieuwe uitdagingen die de globalisering met zich meebracht voor bedrijven en landen.

In dit onderzoek wordt een analysekader voor waardeketenbeleid ontwikkeld, vooral voor de effectiviteit van samenwerkingsverbanden van meerdere belanghebbenden op het niveau van de waardeketen. Het analysekader bestaat uit vier hoofdonderdelen: waardeketenfactoren, regionale kenmerken, overeenkomsten over het concurrentievermogen van waardeketens en de effectiviteit van deze overeenkomsten. De empirische data voor dit proefschrift zijn verzameld in een groep van vijf waardeketens uit drie verschillende regio's in Colombia, die ten tijde van het onderzoek (2000-2004) een ondertekende overeenkomst over hun concurrentievermogen hadden.

In het proefschrift wordt een bepaald soort vergelijking tussen sectoren/regio's gemaakt en de interactie tussen waardeketenfactoren en regionale factoren wordt in essentie benaderd in de context van overeenkomsten tussen meerdere belanghebbenden op het niveau van de waardeketen. Het onderzoek is uitgevoerd in de waardeketen 'cacao-chocola' in de noordoostelijke regio, de waardeketens 'cacao-chocola' en

'zuivelproducten' in Antioquia en ten slotte de waardeketens 'katoen-textiel-kleding' en 'rijst-dorsen' in Tolima. Er zijn twee specifieke soorten analyses gedaan. In de eerste plaats analyses binnen dezelfde sector en waardeketen maar in verschillende regio's. Het tweede type analyse betrof een vergelijking van twee waardeketenovereenkomsten in dezelfde regio waar een gunstig industriebeleid gevoerd werd.

De belangrijkste bevindingen en lessen van dit onderzoek verrijken de beschikbare theorieën over waardeketens en industriebeleid en stimuleren een verschuiving naar lokaal-regionaal onderzoek op het gebeid van waardeketens. Een essentiële bijdrage van dit onderzoek is de verschuiving van de analyse van waardeketens van mondiaal niveau naar de analyse van lokaal-regionaal op waardeketens gebaseerd ontwikkelingsbeleid. Dit onderzoek bevat geen conventionele mondiale waardeketenanalyse gericht op de complexe mondiale context, zoals veel onderzoek op het gebied van mondiale waardeketens. In tegenstelling hiermee is het analytisch kader in dit onderzoek aangepast aan het nationaal-regionaal niveau, door het functioneren van nationale agrarisch-industriële waardeketens en de regionale kernen waarin zij verankerd zijn in aanmerking te nemen. Het onderzoek bouwt voort op Gereffi's *Global Commodity Chain* (mondiale productketen) benadering, splitst dit analytisch kader op en past enkele analytische categorieën hiervan (waaronder input-outputstructuur en governance) toe op het onderzoek naar regionale waardeketens. Bovendien worden regionale factoren en hun samenspel met waardeketenfactoren opgenomen in de analyse van de effectiviteit van op waardeketens gebaseerd ontwikkelingsbeleid.

Uit de resultaten volgen fundamentele lessen voor beleidsmakers op dit terrein. Aan de ene kant hebben waardeketens typische kenmerken wat betreft economische structuur (input-outputsamenstelling en belemmeringen voor toegang en opbrengsten) en governance die kenmerkend zijn voor hun functioneren en het resultaat van beleid op meso-niveau beïnvloeden. Aan de andere kant spelen de specifieke regionale kenmerken (economische en niet-economische factoren, bijv. sociaal-economische en politieke omstandigheden) waarin de waardeketens verankerd zijn een complementaire rol in deze interventies. Kortom, de analyse van de interactie tussen waardeketen- en regionale factoren toont aan dat de waardeketenfactoren meer invloed hebben op de implementatie en resultaten van op waardeketens gebaseerd ontwikkelingsbeleid dan de regionale factoren. Ongeacht de regionale beleidsomgeving waarin

een overeenkomst over het concurrentievermogen van een waardeketen wordt geïmplementeerd, kan de economische en governance-structuur van de waardeketen het goed functioneren ervan ondersteunen of belemmeren.

Ten slotte kan een overeenkomst over het concurrentievermogen door regionale overheden ingezet worden als instrument voor sociale en economische beleidsinterventies. Ten eerste kunnen overheden hieraan deelnemen om sociaal beleid te bevorderen (het creëren van werkgelegenheid en het realiseren van inkomensverbetering voor kleine boeren), vooral in noodlijdende gebieden met een traditie van of mogelijkheden voor de productie van grondstoffen. Ten tweede bieden overeenkomsten over concurrentievermogen de publieke sector de gelegenheid om regionale processen van economische herstructurering aan te pakken en endogeen ontwikkelingsbeleid met de actieve betrokkenheid en bijdrage van verschillende regionale belanghebbenden te bevorderen. Daarnaast kan een overeenkomst over het concurrentievermogen gebruikt worden om alternatieven voor illegale gewassen en illegale landbouw- en veeteeltactiviteiten te stimuleren en om vrede en voorspoed te bevorderen in delen van het platteland die getroffen zijn door het gewapende conflict in Colombia.

1 Introduction to the Study

1.1 Introduction

Globalization has meant an increasing coordination of productive activities on a worldwide scale. Globalization is a multidimensional process characterized by an increase in international economic and financial flows as well as by meaningful cultural, political and institutional exchange (Vazquez Barquero 2005: 1). According to Gereffi, 'in global capitalism, economic activity is not only international in scope; it is also global in organization. "Internationalization" refers to the geographic spread of economic activities across national boundaries' (1999: 41). Meanwhile, globalization is a more comprehensive term, which implies the functional integration and coordination of internationally dispersed activities (ibid). The outstanding transport and telecommunication revolution and the widespread use of new technologies, in particular information technologies, have heightened this process. Globalization has had profound impact over public sector interventions in the economy, causing a shift from traditional industrial policies to the design of competitiveness and productivity policies that involve an approach that is more systematic.

From an economic point of view, the background of this process is the crisis of the Fordist mass production model of the end of the 1970s. This paved the way for the emergence of a new global division of labor, 'because of the increasing difficulty of achieving high levels of productivity gains and the limits this imposed on the ability of the system to keep wages (and hence consumption) moving upwards' (Scott and Storper 1990: 12). This system underwent a severe restructuring as producers were seeking new ways of production organization; hence, decisions made by firms became a key determinant of the spatial distribution and

coordination of production (1990: 12). It has compelled firms to make decisions about which parts of the production process to perform within the firm boundaries and which functions to outsource to other firms shaping an array of coordinating schemes, 'which consists of networks of inter-relationships within and between firms structured by different degrees of power and influence' (Dicken 1998: 8-9). The new circumstances promoted the outsourcing of manufacturing and off shoring of service jobs to lower-cost sites (Bair 2008). In this circumstance, above all, there will invariably be 'a primary co-ordinator driving any particular production chain or network' as articulated by Dicken. According to Scott and Storper,

> The contemporary rise of post-Fordist technological system focused on flexible production is bringing about the transformation of the old Fordist territorial division of labor (with its core production regions and branch plant and resource extraction peripheries) into a new economic order consisting of internationalized commodity chains linking together production regions that are themselves constituted as networks of manufacturing and service activities (1990: 22).

As Wignaraja observes, 'globalization has gained momentum especially as a result of great transformations that are prompting the world economic integration, falling trade barriers (economic liberalization), increasing technological progress (the information and telecommunication revolution), declining telecommunications and transport costs and highly mobile multinational enterprises seeking out new investments' (2003: 3). However, Dicken (1998: 11) contends that,

> [A]lthough transport and telecommunications have indeed been revolutionized...both geographical distance and, especially, *place* remain fundamental. Every component in the production chain, every firm, every economic activity is quite literally, grounded in specific locations. Such grounding is both physical, in the form of sunk costs, and less tangible in the form of localized social relationships.

In other words, globalization has not meant the death of the territory but instead its revival. In accordance with Dicken, all economic activities are geographically localized in spite of a globalizing world.

Globalization weakened the capabilities of national governments to deliver their traditional industrial policy, forcing them to assume a more comprehensive approach embodied in the competitiveness policies. 'In

this new global-local economic order, the ability of the nation-state to regulate its own economic affairs is diminished' (Scott and Storper 1990: 22) Namely, firms and regions face new challenges along different dimensions of globalization amidst great speed of information exchanges, knowledge, investment and people flow across country boundaries. This circumstance has increased the demands of firms to enhance not only their productivity at the micro level but to improve their competiveness environment. In addition, globalizing forces have significantly undermined the effectiveness of national economic policies to deal with the strategies of transnational firms as articulated by Albuquerque (2002: 18). 'Intensified international competition and interdependence have reduced the workability of national macro-economic regulation… much policy making and institution-building today is likely to be most effective when directed not exclusively to sectors at the national level but to agglomerations with their geographically-specific production logics' (Scott and Storper 1990: 22). In general, the scope of action of national governments to deliver economic promotion policies as in the previous scheme of traditional industrial policies has narrowed. In line with Albuquerque, the definition of economic promotion policies by the national government is neither appropriate nor effective when the policy objective is to modernize the local business systems since it requires an institutional setting closer to its problems, potentialities and specificities.

It is important to recall that

> the crisis of the Fordist mass production system which constituted the dominant scheme of production organization during the post-war period embodied the crisis of predominant development theories, which had eliminated the allusion to the territory, replacing it by the abstract logic of macroeconomic categories and economies of scale of production (Albuquerque 2002: 22).

These shifts in the global and national economic contexts accompanied changing conceptions about competitiveness, from the neoclassical production theory (firm level factors) to the embedded firm in relation to other firms and with local institutions. 'The neoclassical theory offers two major concepts to regional and local development: equilibrium and mobility. These concepts provide that all economic systems will reach a natural equilibrium if capital can flow without restriction' (Blakely 1989: 60-1). It follows that there is a territorial homogenizing tendency and in

the end regional disequilibria tend to reduce automatically prompted by mobility factors such as labor migration, capital investments and trade (flows of goods and services). They act in theory as automatic adjustment mechanisms, hence the intervention of the state should be limited to its classical functions otherwise it will distort economic functioning at the regional scale and increase regional disequilibrium. Critics of this position question the neoclassical assumption of uniqueness of the production function, assumed in the theory of international trade, arguing that on the contrary, there is a wide array of techniques for the production of a certain good. Hence, factor mobility leads to imbalances, given that they are allocated in the most technologically advanced spaces, the most secure and developed locations and, under the same circumstances, remain there (Furio 1996: 38). Largely, the neoclassical economic theory does not have a significant spatial dimension. Neoclassical economists take an anti-intervention stance. This model falls short in explaining differences in the abilities to compete among regions and the relative success or failure of some of them (Blakely 1989: 61). The new theories make special recognition of the fact that competitiveness not only depends on the firm, but also on how the firm manages relations with other firms and with institutions–many of them local institutions, and their overall competiveness environment; in this sense, competitive advantage also derives from other sources, not only from within the firm. The new competition schemes returned a central role to the territory as 'a specific "resource" and a main "actor" of economic development, and not just as a mere space or framework of economic and social activities' (Albuquerque 2002: 23). In the same vein, Dicken (1998: 12) argues that 'place matters; that "territorialisation" remains a significant component in the organization of economic activity'. The new regional development theories recognize that

> Territorial factors and the socio-institutional and cultural differentiation, as well as the existence of development strategies concerted by the diverse social, public and private actors, comprise substantive factors in economic development, since they allow the achievement of increasing returns in the acquisition of knowledge appropriated to the territorial economic profiles (2002: 22).

The GCC framework regards the space as a global setting. This concept applies especially to the study of commodity chains led by global buyers or producers in the international context (Gereffi 1994: 14-18).

Most studies undertaken by GCC researchers dealt with governance issues, with a strong emphasis on buyer-driven and producer-driven GCCs. Conversely, they have neglected systematically the local-regional component of the global networks. In fact, this framework has not yet been applied to the analysis of meso-level policies (private-public sector partnerships) that target the functioning of local-regional VCs. The bulk of studies focused more on sectoral issues than on local-regional particular schemes to prepare and enhance regional producer's technical and bargaining position to participate in the global sphere. No comprehensive studies exist using the VC analysis framework developed by Gereffi to examine the design and implementation of policies and public-private sector cooperation schemes at the sub-national level targeted to the competitiveness promotion of regional VCs. However, it is important to acknowledge that, in particular during the first decade of the 2000s, there have been attempts to use the VC framework as an analytical tool for policy design and delivery (Kaplinsky and Morris 2008: 294). In this context, the promotion of multi-stakeholder development partnerships for VC development including governments, business and NGOs amongst others became a central component of competitiveness policies in Colombia

These developments have set the background in which national and regional competitiveness agreements are implemented in Colombia. These public-private partnerships at the level of VC are developed in the background of the national policy for productivity and competitiveness. The regional CAs of several VCs is a *proactive* answer at the meso-level to the new challenges that firms and nations face in the context of globalization. Likewise, they are recognition that a systemic approach towards competitiveness is needed in countries that are planning to have a successful restructuring of their economies while promoting the international competitiveness of their firms. Meyer-Stamer (1998: 16) states that,

As firms get under increasing pressure due to globalization, their demands on their local environment increase. Consequently, meso-policies increasingly have to be formulated at the regional and local level…. It will be often easier to mobilize locally the know-how for diagnosing strengths and weaknesses of firms in their environment and to formulate measures to strengthen strengths and overcome weaknesses.

This study since the onset puts forward the idea that to understand the scope of the policy of CAs of VCs and to inquire into its likely process effectiveness, it was necessary to unravel the individual and combined influence of VC factors and regional factors on the agreement and outcomes of VC meso-level interventions. The research was designed to shed some light on the interaction between sector (VC) and region in the context of formulation and implementation of regional competitiveness policies. It was developed through a multiple case study of Colombian regional VCs and their CAs embedded in the country's national competitiveness policy. Five value chains and three regions were selected: the VC cocoa-chocolate in the *northeastern region*, the VCs cocoa-chocolate and dairy products in *Antioquia* and finally, the VCs cotton-textile-garments and rice-rice threshing in *Tolima*.

The first contribution of the study has to do with the scaling down of the GVC analytical framework to the analysis of local-regional VC-based development policies. In fact, this research did not carry out a conventional study on GVC analysis focused on the wider and complex global context, as has occurred with most of the cases documented by GVC researchers. Conversely, it adapted this frame to national-regional levels, though taking into account the complexities of the functioning of national agro-industrial VCs and their regional nuclei where they are inexorably embedded. Hence, it brings that construct to the regional level where crucial decisions are taken at the micro and meso-levels. The study expands and disaggregates Gereffi's GCC framework and applies some of its analytical categories (input, output, structure and governance amongst others) to the study of regional VCs. In addition, it includes regional factors and their interplay with VC factors in the analysis of process effectiveness of VC-based development policies. It is important to point out that Gereffi's framework is a comprehensive one, though it is necessary to bring the analysis to lower layers of territorial analysis. In short, since the focus of VC analysis framework has been gradually moving towards the study of regional issues, this research moved this endeavor one-step forward by studying the influence of VC level and regional level factors on the degree to which meso-level actions are formulated and implemented, and on their likely outcomes.

In summary, the results of this study reveal key lessons for VC policymakers and scholars in this field. On the one hand, VC's regional nuclei have typical features in terms of economic structure (input out com-

position, and barriers to entry and rents) and governance that characterize their functioning, and influence the outcome of meso-level policies. On the other hand, the specific regional characteristics (economic and non-economic factors, e.g. socioeconomic and political conditions) where the VCs are embedded play a complementary role, halting or supporting interventions and their outcomes at the VC level. Hence, the nature of the interactions between VC and regional characteristics at the end determines the specificity and outcomes of VC level action at the regional level. This situation makes the process effectiveness of a similar policy instrument (e.g. CA) likely to yield different results depending on the features of each VC and the regional setting where it is implemented. The implication for policymakers is that adequate VC-based development policies should be designed starting from a previous awareness of the VC factors and regional characteristics to take the necessary complementary steps to assure their policy process effectiveness. This chapter presents an introduction to the study including the research statement, objectives and research questions and the methodological design, concluding with a brief overview of the chapters that composed this book.

1.2 Research statement

The global commodity chain has become an important feature of the world economic geography amidst the process of globalization and is drawing a great deal of attention from the academic community. This new reality has set the adequate context in which competitiveness strategy and new approaches towards industrial policy are growing in importance. However, the link between those issues has not been explored in detail, for instance, it is necessary to shed light on the nature and effectiveness of competitiveness strategy and collective action, in particular, on the performance of VCs at the national and regional level, under different conditions of economic structure and governance. In this sense, Wignaraja acknowledges that there are a great deal of empirical studies on competitiveness strategy; however, he questions the theoretical foundations of many of them and their empirical bases, which he regards as often weak. Moreover, he points out that 'the sheer volume of studies that have been generated to date on competitiveness is impressive but this may have been achieved at the expense of academic quality and rigor' (2003: 6). This research seeks to overcome the above shortcomings

by means of a sound theoretical framework and through the empirical analysis of a set of VCs in Colombia.

In view of the increasing international competitive pressure, during the last 18 years, the Colombian government adopted a national policy for productivity and competitiveness. At the onset of the 1990s, it began with structural reforms (labor, fiscal, financial, trade liberalization, privatization) and since the second half of the last decade, it has focused its sectoral policies and its competitiveness policy in general on VC schemes, and includes public-private initiatives for competitiveness (CAs) both at the national, and local-regional levels. In effect, approximately 60 agreements, around half of them at the regional level were signed throughout the period 1996-2004. The Colombian experience is gradually becoming known internationally. According to Metcalfe, what is happening in Colombia provides a fascinating case study of the evolution of science, technology and innovation policy towards a national system of innovation perspective (2003: 123). This is a pioneer case in Latin America of a decentralized implementation (to sector and region) of a national competitiveness policy; it is highly innovative, and yet, its policy process effectiveness has not been studied. This research attempts to fill these lacunas and advance the understanding of the process effectiveness of meso-level policies conducted at the local-regional VC level.

1.3 Research objectives

The study is led by the following objectives.

1.3.1 General objectives

The first objective is to analyse the process effectiveness of the decentralized implementation of the Colombian national competitiveness policy during the period 1996-2004.

To analyse the influence of value chain and regional level factors on how meso-level actions are formulated and implemented and on their likely developmental outcomes.

1.3.2 Specific objectives

To describe the most important characteristics of the Colombian national policy for productivity and competitiveness and the modalities under which it has been decentralized regionally (1991-2004).

To evaluate outcomes of meso-level interventions carried out in local-regional VCs with different characteristics and regional dynamics, and to establish relevance and policy process effectiveness.

1.4 Research Questions

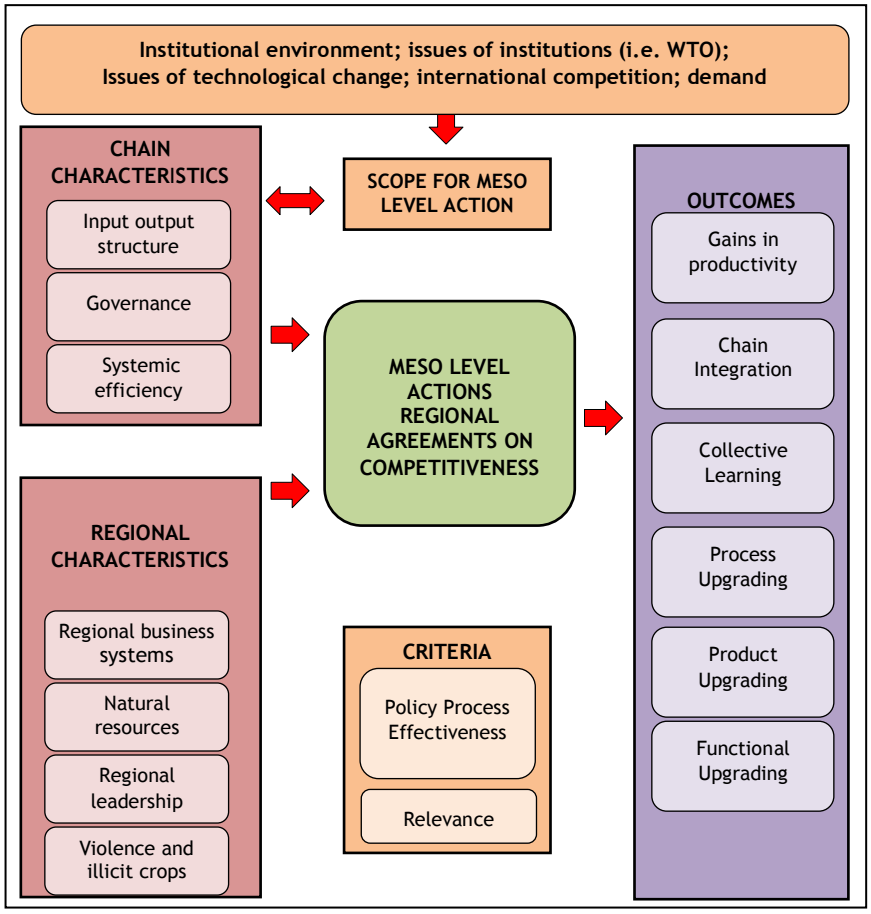
It is important to point out that in order to study policy process effectiveness, it must be acknowledged that the VCs are differently structured (market structure, size and structure of firms, supply chain composition and chain depth) and are characterized by different governance situations (organization and control). Consequently, the research scrutinizes the relative importance of VC level and regional level factors that impinge on the degree to which meso-level actions are formulated and implemented. It is oriented to explore the following key questions and subquestions.

1. Which have been the main components of the Colombian national policy for competitiveness and productivity and how have they been articulated and decentralized to the regions?
   What components encompass the Colombian policy of competitiveness agreements?
   In which ways have the national policy for productivity and competitiveness been decentralized and articulated to the regions?
2. What have been the outcomes of agreements on competitiveness of VCs at the regional level with different structure and governance configurations during the period (1998-2004) and what lessons can be drawn from this?
3. To what extent do different economic structure and governance configurations of the chains influence the developmental outcomes of the agreements on competitiveness?
   What has been the influence of the economic structure of VCs on the developmental outcomes of VC multi-stakeholder development partnerships at the local regional level?

What has been the influence of the governance configurations of VCs on the developmental outcomes of VC multi-stakeholder development partnerships at the local-regional level?

4. To what extent do local-regional characteristics influence the developmental outcomes of the agreements on competitiveness?

Figure 1.1
Analytical Framework



Source: This research.

1.5 Analytical Framework

The analytical frame designed to address the key research questions of this study draws on VC analysis, local-regional theories and concepts, and concentrates on meso-level development policies at the level of VC. It is composed of four main elements (figure 1.1): value chain factors; regional characteristics; CAs at the level of value chain; and policy process effectiveness of competitiveness agreements. These key elements and their interrelations are discussed in detail in chapter 2.

1.6 Methodological Design

This section describes the research strategy, the selection of the case studies and data collection processes and other aspects related to the research methodological design.

The research strategy is based on a comparative case study of VCs in different regions of Colombia, including their CA signed during the period (1998-2003). The methodological design takes into account the guidelines set by Robert K. Yin (1994). According to Yin, a case study is an empirical inquiry that researches a contemporary phenomenon within a real life context, especially when the limits between the phenomenon and the context are not evident. The inquiry in the case study counts on multiple sources of evidence. It benefits from the previous development of theoretical propositions to guide the collection and analysis of data.

It was developed in two phases beginning with an overall analysis of the national policy for competitiveness and productivity in Colombia.

The second phase encompassed an ex-post evaluation of the regional agreements based on selected comparisons of cases. Five chains were selected for detailed comparative analysis. The construction of the cases integrated the following elements: the regional setting of the VC, a description of the VC including the competitive challenges and scope for VC level action; the VC's CA; and implementation and outcomes of the CA. The latter includes a discussion about core activities performed in development of the CA, the most important outcomes of it and a detailed analysis of the influence of VC and regional factors on the formulation and outcomes of the CA. Finally, there are concluding remarks. The most important instrument for information gathering in the second phase is 'key informant interviews'. Explanation is based on contrasting

case studies that is, developmental outcomes as a function of VC characteristics and developmental outcomes as a function of regional characteristics.

1.6.1 Selection of the chains

The empirical data comes from a set of Colombian regional VCs with a signed CA. Five chains and three regions were selected for the second phase of the study to consider the influence of regional and VC factors on the functioning and outcomes of the CAs: the VC cocoa-chocolate in the *northeastern region*, the VCs cocoa-chocolate and dairy products in *Antioquia* and finally, the VCs cotton-textile-garments and rice-rice threshing in *Tolima*. It is important to point out that the study deals with comparisons of case studies instead of comparisons of sets of variables (Table 1.1).

Table 1.1
Value chains (type of comparisons)

Type of Comparisons	Value Chain	Region	Variables	Purpose of Comparison
1) The same chain with agreement in one region and same chain with agreement in other region	X	A	Independent -Regional context -Value chain characteristics	Finding out to what extent, the local-regional characteristics influence the outcome of the agreements on competitiveness.
	X	B	Dependent -Performance of the agreement (effectiveness)	
2) Different value chains with agreement on competitiveness in the same region	X	A	Independent -Value chain characteristics (structure) -Value chain governance	To find out what the influence of different economic structure and governance configurations of the chains on VC meso-level intervention at the local regional level is. Comparisons are made upon two different chains in the same region in order to focus specifically on VC economic structure and governance factors. This type of comparison applies to two regions, which have two VC competitiveness agreements.
	Y		Dependent -Performance of the agreement (effectiveness)	

Source: This research.

For the assessment of policy process effectiveness of the decentralized implementation of the national policy for productivity and competitiveness, the central instrument that is analysed and taken as proxy of the decentralized implementation of the national policy for productivity is the agreement on competitiveness for the different VCs included in the study. The sequence of analysis is as follows: agreement, activities, products, outcomes.

1. *Agreement.* Analysis of the scope for collective action (the agreements partially provide this information). Second, review of the matrix of commitments made by the chain's stakeholder, identifying the main activities to be carried out.

2. *Products.* To find out what activities have been executed and what the products are.

3. *Outcomes:* These refer to the VC itself. They are explained in terms of improvements in the organization of the VC (i.e. upgrading, gains in productivity, etc.).

4. *Policy Process Effectiveness* is then analysed in terms of quality of commitments, developmental outcomes of the value chain's performance and life cycle of the competitiveness agreement

Information sources and strategies for data collection: The research relied on a combination of secondary and primary sources. Secondary sources fulfilled a key role given the policy analysis nature of this project, namely: archives, administrative documents (i.e. minutes of the gatherings of the national and regional VC councils and executive summaries and detailed reports of the technical secretariats of the chains) and databases and documents from public and private organizations, especially from: Ministry of Trade, Industry and Tourism, IICA-Ministry of Agriculture and Rural Development, DANE, Centers of Productivity, Regional and National Council for Competitiveness of the different VCs, NGOs, Universities and private firms. The primary sources were mostly key stakeholders, government officials and experts of the VCs. In-depth interviews with key informants of the VCs in the different regions where the research took place were conducted. They were carried out through semi-structured questionnaires and informal discussions. Empirical research on the selected five value chains was conducted in Antioquia, Bogotá, Tolima and Santander. The fieldwork was developed during the period, January 2005-January 2006. A total of 192 in-depth semi-

structured interviews were conducted with key stakeholders in the selected value chains: agro and livestock producers (52), industrialists (41), other VC key stakeholders (12), government officials (15), technical secretariat of the chain (national 5, regional 5), members of the VC council for competitiveness (national and regional 29), producer associations (13), NGOs (5), academic, research centers and technological institutions (15).

1.7 Chapter Overview

The thesis is organized into 13 chapters. Chapters 1 to 8 constitute the main body of the thesis and are presented in a printed version. Chapters 9 to 13 contain an in-depth analysis of the five case studies and are condensed in a CD ROM that accompanies the printed part. Chapter 1 presents an introduction to the study including the research statement, objectives, questions and the methodological design. Chapter 2 develops a background chapter on Colombian policy of CAs. This chapter begins with a brief summary of the main components of the Colombian national policy for competitiveness and productivity during the period (1991-2005) and how they were articulated and decentralized to the regions. Second and related to the former, *the agro and livestock policy* (the strategy for competitiveness of the agro sector). Third, there is a description of the instruments for this policy: the CAs and the councils for competitiveness. Fourth are the CAs (1995-2004), ending with concluding remarks.

Chapter 3 elaborates on the core concepts and theoretical aspects that frame the current research and draws on three strings of academic literature local and regional development theories and policies, competitiveness strategy and value chain analysis.

Chapter 4 elaborates on the quality of the different VC CAs included in the study. It begins with the contextual setting of the research, then, continues with a short overview of the CAs. Next, the relevance and 'policy process' effectiveness of the respective CAs is presented.

Chapter 5 elaborates on the main developmental outcomes of VC CAs. It focuses on the analysis of the development of regional capabilities for competitiveness, namely upgrading opportunities at the micro level and VC integration and collective learning.

Chapter 6 addresses the influence of regional factors on value chain-based development strategies. First, it elaborates on the development trajectory of the regions included in the study. Second, the main elements of the territorial embedding of the value chains are discussed to put in context the broader economic structure in which the VCs are situated. Third, it discusses the differences in societal embedding of the VCs and their influence on the outcomes of VC CAs, taking into account business systems' variables such as the role of the state, the role of the regional elite and its connections and, the state business relationships. Fourth, the quality of CAs and the regional factors are discussed. Five, a synthesis on the influence of regional factors on developmental outcomes is presented.

Chapter 7 deals with the question of to what extent VC level factors influence the developmental outcomes of VC CAs. First, it elaborates on the drivers of change. Second, the influence of VC's economic and governance structures and systemic efficiency on the developmental outcomes of the CAs is presented. Third, it elaborates on the quality of the CA and VC factors.

Chapter 8 reflects upon the major theoretical issues in VC analysis and 'third generation of industrial policies', based on the empirical findings from the case studies. This chapter summarizes the main empirical findings led by the key research questions; points out the major lessons learned and implications for VC-based development policy formulation, the most important theoretical contributions and finally, the limitations of this study and suggestions for further research. It shows, that VC analysis literature has focused largely on global commodity chains, and the study of sectoral problems or particular issues without inquiring about territorial aspects at the regional level until recently, where some scattered efforts have been advanced on this matter. A meaningful contribution of the current research is in the methodological sphere, since it shows from a sector (value chain) region comparison that specific VC characteristics and the regional factors influence the formulation, implementation and process effectiveness of meso-level policies.

Case studies 1 to 5 are presented in Chapters 9 to 13 in electronic format on a CD ROM. Case study 1 in chapter 9 presents the VC cocoa-chocolate in Santander. Case study 2 in chapter 10 describes the VC cotton-textile-clothing in Tolima. Case study 3 in chapter 11 depicts the VC rice-rice threshing in Tolima. Case study 4 in chapter 12 presents the VC

cocoa-chocolate in Antioquia and Finally, case study 5 in chapter 13 illustrates the VC dairy products in Antioquia.

2 Colombian Policy of Competitiveness Agreements

2.1 Introduction

The economic liberalizing tendencies boosted by the economic conservative governments of British Prime Minister Margaret Thatcher and American President Ronald Reagan during the 1980s and condensed in what John Williamson (1993) called the 'Washington Consensus', were finally embraced by most Latin American countries, in particular by the liberal government of Cesar Gaviria in Colombia, at the onset of the 1990s. These policies included market reforms, price decontrol, privatization, deregulation, fiscal discipline, financial and trade liberalization, and foreign direct investment, amongst other reforms conducted towards the internationalization of the economy in a global context.

During the second half of the 1980s and at the beginning of the 1990s, national governments that participated in the Uruguayan round of the General Agreement on Tariffs and Trade (GATT) discussed and signed several measures amidst a large and complex trade negotiation on a myriad of goods and services targeting economic internationalization. Hence, national governments gave up part of their autonomy to carry out traditional industrial policy based on strong interventionist policies to promote, for example, infant industries. Instead, the World Trade Organization (WTO) system as a multilateral organization took a powerful stand in the coordination of the agreements that had come into effect since its formal establishment in 1995 as a result of the Uruguay round negotiations (1986-1994). In this context, 'international rules no longer leave space for industrial policy interventions' (Rodrik 2004: 37). Liberalization and privatization reforms became hegemonic and the force of facts and new policy consensus left behind import substitution policies.

The implementation of market reforms and the neoliberal agenda brought several challenges to national firms including opportunities and threats among the different economic sectors, in particular the agricultural and industrial sectors. The key issue was the need for them to change their traditional ways of doing business. Because the artificial protection of their productive activity through market distortions introduced by government licenses and regulations, direct subsidies, largely to public enterprises, high tariffs, foreign exchange controls and so on were being lifted and they had to prepare to face stringent and aggressive foreign competition in the international markets. National producers were compelled to face the incursion of efficient competitors from abroad as well as to prepare to venture into other markets internationally or globally. To face this new environment, firms and regions had the challenge of becoming both productive and competitive. Likewise, the economy had to recover from the negative outcomes of the first round of adjustment policies and the economic restructuring processes. In fact, in 1999, the Colombian economy shrank for the first time in 50 years (-4.5%). This meant large unemployment rates, a catastrophic decline of the agro and livestock sector and economic distress. The role of the government was redefined, showing a clear tendency to move away from industrial policy and its large industrial projects, as was originally conceived, towards a more integral competitiveness policy following the advice of new development theories such as the competitive advantage of Porter (1990) and systemic competitiveness (Esser et al. 1996). The traditional sources of competitiveness based on static factors such as natural resource endowment and cheap labor had to be strengthened by factors that are more dynamic such as advanced human resources, knowledge and strong institutional development. There was a need to introduce systemic rationality to support innovation processes, collective learning and attempts to achieve productivity gains undertaken by the different economic units at the micro level, and systemic competitiveness to the economy as a whole. First, the competitiveness of a firm was not expected to be the result of individual endeavors. Instead, it was the result of joint efforts with suppliers, related industries and customers and coordination along the VC. Actions at the meso-level were deemed necessary, given the need to provide a sound competitive environment (e.g. infrastructure, education and training, export policy, science and technology, environmental policy) to support the efforts at the micro-level

and at the aggregate level (provision of an adequate macroeconomic environment).

As Herzberg and Wright (2005: 37) point out,

> At a time where trade liberalization has brought a renewed pressure for countries to dramatically improve their competitiveness, governments are compelled to work even closer with the private sector. When public authorities, entrepreneurs – and subsequently, donors - fine-tune their engagement with each other through credible public private dialogues, their coordinated actions can ensure a stronger impact of policies on investment, employment and growth.

In this line of thought on governance, the policy for the agricultural and livestock sector by the Ministry of Agriculture and Rural Development has evolved into a VC perspective for about two decades and in this framework the CAs of VCs became a wide-ranging response by the national government of Colombia, in particular since the mid-1990s.

The signing and development of CAs of VCs among different countries in Latin America, and in particular in Colombia, represents an actual change of policy emphasis in two different and interrelated aspects. First, the policy embodies a change from a supply orientation to a demand driven one. In the past, 'the state administration carried out, with a supply vision and in a centralized way, the management of the policy through direct financial support to those firms and sectors that met the established requirements in the incentives laws' (Vazquez Barquero 2005: 45). 'The new development policy has a "demand" vision and emphasizes on endowing territories and productive systems with the services that firms require to solve their competitive problems instead of facilitating direct funds to the firms' (2005: 45). Second, the change in policy orientation is also reflected in a move from a traditional sector orientation to an agro-industrial VC, which is a more comprehensive approach. It includes not only the particular agricultural sector but also involves the whole range of activities and actors as well as the economic and technical relations that are established among them in the process required to bring an agro product from the inputs sourcing and production through its processing, distribution and supply to the final consumer. The multi-stakeholder partnerships for agro-industrial VC development involve public and private sector coordination of activities and exchanges through regional councils for competitiveness. In this scenario, the iden-

tification of needs at the micro and meso-level by the agricultural producers, their associations as well as by other producers engaged in processing and transforming downstream the VC, constitute an important input for policy design, in particular for the Ministries of Agricultural and Rural Development and the related sectoral agencies. The commitments acquired by the government through its participation in CAs of agro-industrial value chains embody the new demand-oriented approach of the sectoral policies. The resulting policy design is genuinely *demand inspired*, based on firsthand knowledge of the needs of agricultural producers, which means direct feedback from the intended beneficiaries. Then, industrial policy becomes an 'interactive process of strategic cooperation between public and private sectors which, on the one hand, serves the elicit information of business opportunities and constraints and on the other hand, generates policy initiatives in response' (Rodrik 2004: 38).

The notion of sectoral CAs was introduced in Colombia in 1994 in the national development plan, and then in 1996, the first agreements were signed. In the same year, an influential study by IICA (Herrera and Bourgeois 1996) put forward an instrument for agricultural and policy design and implementation in Latin America and the Caribbean called the CADIAC approach (Chains and Dialogue for Action. Participatory Approach for the Development of Competitiveness of Agrifood Systems), which became an influential policy framework during the government of President Misael Pastrana (1998-2002) with the technical support of IICA, in the context of the Program of Agricultural Supply (PROAGRO), which included the signing of CAs for the regional nuclei of value chains. The CADIAC approach deems the organization of the chain as a key strategy to achieve competitiveness gains. It means, the generation of spaces for discussion and formal and ongoing dialogues between different stakeholders in representation of the private and public sector. Such spaces might be expected to facilitate the definition of policies and specific actions for competitiveness strengthening as well as a propitious room for stakeholder coordination (Hernandez and Herrera 2005).[1]

This chapter builds on the following question: Which have been the main components of the Colombian national policy for competitiveness and productivity and how have they been articulated and decentralized to the regions? It focuses largely on *the Colombian policy of Competitiveness Agreements (CA)* and is divided into five main parts starting with an intro-

duction. The second part discusses the background to the VC-based competitiveness policies in Colombia. The third part elaborates in detail about the CAs as a key feature of the national policy for productivity and competitiveness in Colombia. The fourth part is dedicated to analysis of the regionalization strategy, which is a key part of the process of decentralization and articulation of the national policy for productivity and competitiveness to the regions. Finally, the fifth part presents concluding remarks.

2.2 Background to the Value Chain-based Competitiveness Policies in Colombia

During the last two decades, the Colombian government has been adapting its institutions with the purpose of facing the challenges posed by productive internationalization and globalization. A set of policies to promote improvements in the competitive environment characterized by structural reforms were carried out during the 1990s. At the onset of the decade, Colombia undertook a short stabilization program and a series of structural reforms (trade liberalization, labor, fiscal, monetary and financial, and privatization) in order to internationalize its economy and break with its past inward development model. This process was deepened and further institutionalized with the Constitutional reform in 1991, and the advent of an unequivocal outward-oriented strategy with a hasty reduction and elimination of tariffs and restrictions to exports. Also, throughout the second half of the 1990s, complementary measures were undertaken to promote the competitiveness of the productive sector. The reform process of the commercial policy severely affected the agro and livestock productive system in Colombia. Its exposure to international competition occurred in adverse conditions given the disadvantages in both costs and productivity in relation to many products in the international markets, and in particular its inability to compete with the large subsidies allocated by the developed countries to their agricultural products (Bejarano 1998).

The reforms of the 1990s and the economic opening set the scenario for redefinition of the government's role in the economy. The recommendations of the multilateral organizations in relation to the expected role of the government, according to Bejarano (1998: 188) included: the provision of economic security through institutions and stable policies,

the elimination of price distortions generated by public policies (i.e. taxes, subsidies and transferences) to create the conditions for markets to function properly, keeping competitive exchange rates and avoiding currency appreciation, investments in infrastructure, technology and human resource development and finally the design of a competitiveness policy according to international commitments by the government. In this scenario the latter gradually abandoned direct interventions in the markets for agricultural and livestock products. Subsequent national governments, to compensate for the reduction of the state, defined a strategy that privileged a greater participation of the private sector in the design and management of policies and hence a sharing of responsibility of the outcomes. In this scheme, the government presented a shift in its relations with the productive sector from dealing with particular links as it traditionally did during the import substation industrialization model (ISI) towards dealing instead with the members of the VC.

The marketing boards (e.g. IDEMA) and other institutions through which the government traditionally regulated the markets were dismantled or liquidated. Meanwhile, the para-fiscal funds administered by the business interest associations of production have gained momentum, while other instruments for sectoral policies have been developed. Most of them represent direct incentives, compensations and subsidies. Increasingly the support services are demand driven and they target strategic alliances, collectives and VCs more than individual producers or individual sectors and in several cases require co-funding. This process has been accompanied by a systematic institutional development to leverage the productivity and competitiveness policy and the national system of science and technology through new legislation, the creation of new ministries, and the fusion of a few of them. Likewise, there has been a surge of new instruments that promote and organize the participation of civil society in partnerships with the government for the diagnosis of competitiveness problems, the design of a vision, the search for solutions to problems and co-management of development policies. The national and regional councils for competitiveness and the CARCE are examples of this trend in Colombia.

Box 2.1
The contextual framework

Colombia is an Andean country located in the northwestern outermost part of South America with a continental area of 1,141,748 Km2. In 2005, it had around 42 million inhabitants, 75 per cent living in urban areas (DANE 2005). During the period 1990-2005, the Colombian economy underwent a process of economic opening and multiple efforts carried out by the different administrations to internationalize the economy. The GDP in 2005 was US122610.6 million, equivalent to a GDP per capita of US 2663.2. The total exports increased about 60% in 10 years, from US13194.8 million FOB in 1995 to US21486.4 million in 2005 at constant 2000 prices. Meanwhile, during the same period imports rose from US19444.8 million in 1995 to US26953.6 million in 2005 (ECLAC 2006). The net inflow of foreign direct investment in 2000 was US2394.8 million, while in 2005 it was US10374.7 million. Largely, the economy is still resource based and though there has been an outstanding increase in exports, the economic opening has opened the doors to competing imports.

There are extra-economic factors that make Colombia a unique country in Latin America. Since the 1950s, it has endured an internal armed conflict with intermittent times of peace and episodes of violence. The conflict that involves guerrilla and paramilitary groups affects some regions more than it affects others, especially the rural areas and the agricultural sector. The cultivation of illicit crops and the trafficking of drugs have added more instability to the country and fueled the internal conflict. The Colombian economy, as well as the democratic system, have been able to prevail and are part of the most stable in the continent, though the challenges of achieving peace and security and further improvements in the living standards of the Colombian population remain the same.

In short, given the impact of the *economic opening* and of the entire range of market reforms on production and employment and particularly on economic sectors and regions that were most exposed to international competition, the national government was prompted to accompany the first wave of structural reforms that encompassed its economic restructuring with the development *of a national policy for productivity and*

competitiveness. The creation of a conductive environment that served as a competitive platform for the internationalization of firms was of paramount importance. In this background, the policy of VC (productive chains) gained momentum and defined the new competitive strategy of the national government. The VC received a policy meaning and reflected the attempt of the government to approach the different stakeholders of the Colombian economy at the sector and regional level in a systemic way. We focused largely on the national and regional scope. This research adapts the framework of Gereffi et al. (1994) to the analysis of meso-level policies in order to understand the Colombian policy of CAs though focused on the sectoral and regional components of the VC.

2.2.1 Agro and livestock policy (strategy for competitiveness)

This section presents the most relevant aspects that constitute the background of the CA in Colombia and the key sectoral policies that have accompanied the implementation of such agreements.

The national development plan (1994-1998) introduced a competitiveness strategy for the internationalization of the Colombian economy, to be implemented based on a notion of public-private sector consultation at both national and regional levels, agreement and joint action aimed at the development of strategies in the technological, productive, commercial and infrastructural areas to allow the efficient use of the productive resources and the generation of sustainable competitive advantages. The CAs provided a natural space for implementation of this new approach.

The CAs for the agro-industrial VCs have been supported by a government strategy based on a wide array of active sectoral policies. The agricultural policy had an important boost during the period of President Pastrana (1998-2002) with the creation in 2000 of *PROAGRO* (Program of Agro and Livestock Supply). It was conceived as the strategy through which the intervention of the State to improve the productive supply of the agro and livestock sector would be carried out, in coordination with the private sector.[2] The goal of PROAGRO was to increase the production of goods of VCs with higher competitive potential to establish themselves in internal and external markets, and of great importance in the sectoral performance and in the living conditions of rural inhabitants. This program embodied the general conception of the Pastrana admini-

stration of increasing and diversifying the export supply with a strong regional component, and was a sectoral expression of that policy. PROAGRO was designed by the MADR and DNP in an attempt to foster the recovery of agriculture, which had endured a very severe crisis during the 1990s; and by this means to promote the generation of thousands of jobs that had been lost, as well as the improvement in rural incomes, which had deteriorated during the crisis.

The strategy of PROAGRO was based on the following criteria: public-private sector coordination, regionalization, modernization and concretion of commitments. First, the program promoted the agro-industrial VCs and offered to boost the development of sectoral CAs signed in the previous years and to encourage the signing of CAs in the VCs that required one.[3] In this sense, there was continuity to the sectoral CAs' scheme, though PROAGRO was endowed with appropriate instruments to strengthen it. Second, the plan was designed to be implemented by means of a decentralized scheme targeting the regions with more advantages for the production of certain agro and livestock goods to establish the 'nucleus of productive development'. Thus, PROAGRO was in line with the idea of the government that the implementation of the agricultural policy should be spatially localized. It envisaged the creation of 'Regional Councils of the CAs', which were promoted by the MADR in conjunction with the Departmental Agricultural Secretariats and the Regional Centers of Productivity. *In this way, the PROAGRO became the basis for the range of regional CAs for agro-industrial VC that would be signed in the following years in the country*. Third, this effort needed to be conducive to the modernization of both production and commercialization processes of the VCs, promoting technological innovation and the achievement of competitive costs. Fourth, clear commitments had to be established between the government and private stakeholders within the framework of the national and regional councils for competitiveness.[4] The regional stakeholders were expected to participate in the diagnosis of the VCs' competitive problems, the agreement of a vision of the future for each VC and the specification of strategic objectives and development interventions (activities, programs, projects) to be carried out by means of public-private sector joined efforts. In fact, this scheme increased the likely effectiveness of the sectoral instruments and their developmental outcomes, given that they targeted producers who were working in a VC scheme, and not as individual units.

The initial phase of PROAGRO included a set of agro-industrial value chains identified by the government and private sectors based on their potential to participate competitively in both domestic and external markets: 'balanced meals', 'poultry and pigs keeping'; 'cotton-textile-garments'; 'vegetables and fruits'; 'dairy products'; 'potato and its industry'; 'forestry'; cocoa-chocolate'; 'oils and fats'; and 'cultivation of shrimp'. The program left some room for the participation of other VCs after they had formalized their CAs and assured markets for their products, for example, rice, sugar and kidney beans. Some of the VCs included in the first batch of PROAGRO and other few VCs had already signed and were working in the implementation of CAs.

Initially, the program included nine VCs at the national level (the sectoral CAs) and contemplated the implementation of *regional nucleus of* productive development for a group of the VCs. It is important to point out that, the regional VCs selected for the ex-post evaluation of the current study were part of PROAGRO.

The strategy of PROAGRO demanded a great deal of coordination among the different agencies related to the MADR, for example ICA and CORPOICA, FINAGRO and between MADR and other ministries that were closely related to the policy for competitiveness and productivity, such as the Mincomex, the Ministry of Development and DNP and the Ministry of Environment. It required also articulation with the export plan and the national policy for competitiveness and productivity. PROAGRO mobilized different key business interest associations, including universities, private entrepreneurs at the national level according to the pertinent VC. At the regional level, the creation of *nuclei of productive development* and the signing of regional CAs implied also a great deal of coordination between the regional nuclei and the national VC (National Council for Competitiveness and Regional Councils for Competitiveness).

Regional productive nucleus: Defined in terms of an agglomeration of productive units; producers and firms in a given geographic space that gives them outstanding advantages for the production of a certain product. The collective construction of the regional CA sought to exploit the advantages of each region and then articulate them to the national strategy for competitiveness. The following VCs of PROAGRO signed regional CA between May 2000 and July 2001: 'cotton-textile-clothing' in Tolima and 'dairy products' in Antioquia. In addition, the 'cocoa-

chocolate' agreements on competitiveness were being discussed in Antioquia and northeastern region. Poultry also presented important dynamics in the constitution of regional councils for competitiveness in different productive nuclei and in the preparation of the CAs.[5]

Table 2.1
Institutionalization of the national policy for competitiveness and productivity

Period	Year / Laws and decrees
Cesar Gaviria (1990-1994)	**1991** Creation of Ministry of Foreign Trade. **1991-1993** Competitiveness study of the Colombian economy 'Creating the competitive advantage of Colombia'. Monitor Company. **1993** Law 101 of 1993 (December 23) 'General law of agricultural development and fisheries'.
Ernesto Samper (1994-1998)	**1994** *National Council for Competitiveness;* National strategy for competitiveness; National policy for science and technology; Document CONPES 2748 DNP: UDE Strategic Export Plan. December 15 de 1994. **1995** Competitiveness studies in (Bogotá, Medellin, Cali, Cartagena, Barranquilla and Bucaramanga) by the '*Monitor Company';* The policy for the agro and livestock, fishing and forestry sector of President Samper (1994-1998) Document CONPES 2786, Mini-Agricultura-DNP-UDA, Santafé de Bogotá, D.C. June 7 de 1995. **1997** CONPES 2899, Sectoral agreements for competitiveness, progress, challenges. January 15 1997; Decree 1675 de June 27 de 1997 'by which it is suppressed the Institute of Agricultural Marketing (IDEMA) and its liquidation is ordered; CONPES 2724 DNP: UDE *'Por una Colombia Competitiva*', Santafé de Bogotá, DC, August 24 de 1994.
Andres Pastrana Arango (1998-2004)	**1998** Mix Commission of Competitiveness and Foreign Trade, Decree 2222 de October 30 de 1998. **1999** The Ministry of Foreign Trade was restructured by Decree 2553 of 1999; *Export Strategic Plan 1999-2009;* July 1999 First national conference for competitiveness and Productivity (NCCP) in Cartagena By 2004 a total of nine (NCCP) have taken place in the country; The national policy for productivity and competitiveness; IICA, Guidelines for the Promotion of regional agribusiness centers and regional competitiveness agreements. **2000** During the II conference for competitiveness in Cali, 2000; the national government presented the proposal for the network '*Colombia Compite'*. It was composed by the following specialized networks: internationalization, finances, human capital, institutions and government, technologies of information and communication, energy and gas, transportation and logistics, work, science and technology, management; Document CONPES 3076 May 03, 2000 DNP: UDA. Creating PROAGRO; Document CONPES 3130 'Evaluation of the Agricultural supply program (PROAGRO) in the year 2000. DNP: DEAGRO Bogotá July 26 2001.
Alvaro Uribe Velez (2002-2006)	**2002** Law 790 of 2002 merged the Ministry of Foreign Trade and Ministry of Development and created the Ministry of Trade, Industry and Tourism (MCIT). **2003** By decree 210 of February 2003, the Direction of Promotion and Entrepreneurial Culture and the DPC became part of the administrative structure of the Vice Ministry of Development; *Law 811 of 2003* created the 'VC's organizations' in the agricultural, livestock forestry, aquaculture and fishery sector in Colombia. It modified Law 101 of 1993 and created the VC organizations in the agricultural sector; A mission was conducted by Mr Rudolf Buitelaar, Officer of Industrial Affairs of the Division of Productive and Entrepreneurial Development of ECLA to evaluate the export CAs policy carried out by MICT. **2004** Documento CONPES 3297 'agenda interna para la competitividad y la productividad: metodología' Ministerio de Comercio, Industria y Turismo DNP: DEE-DDTS Bogotá 26 de Julio de 2004. **2005** Introduction of the 'internal agenda for competitiveness and productivity'. The construction of the regional dimension of the internal agenda was carried out with the coordination of DNP with cooperation of MCIT Confecamaras, Trust of Americas, OEA, CAF, in 24 departments and two regions (Bogotá-Cundinamarca) and (Orinoquia-Amazonia).

Source: Compiled by the author.

In spite of the changes of national governments from 1990 to 2004, emphasis on the competitiveness issues is present in all of them and although the relevance of some programs and instruments might change from one administration to the other, the VC approach has remained a focal point in the competitiveness policy at all levels from national to sectoral and regional (table 2.1).

In sum, the instruments of sectoral policy are increasingly bound or linked to the VC activity and organizations. These tools have leveraged the endeavor of MADR with the promotion of agricultural and livestock sectoral CAs, and the Ministry of Development (later the MCIT) with the industrial and services' VCs. The roles played by the agencies that are part of the organic structure of the ministries in charge of sectoral policies have been very important in supporting the work with VCs at the sectoral and regional level. The DNP has also fulfilled a key function in the implementation of competitiveness policies such as in the case of the 'Internal Agenda'.

2.3 Competitiveness Agreements (CAs)

It is important to recall that during the last two decades, regional administrations have confronted both a great increase in their functions and an imbalance between such commitments and their own resources, plus those transferred from the central level. Because of this, they have been increasingly searching for other local-regional stakeholders' support (hoping to pool resources and efforts) to face the challenges posed by the decentralization process and, above all, to promote local economic development amidst globalization.

The need for promoting VC development at the regional level requires the participation of several actors. It is neither a matter of traditional industrial policy nor an exclusive private sector concern. 'Rather than focusing the discussion on joint action by the private sector only, the question is also raised how the public and private sector can work together towards more effective local institutional arrangements' (Baud 2002: 4). The regional CA is a policy device that promotes the undertaking of public/private partnerships and cooperation schemes among several VC actors at sector and regional levels. The coordination of the CA is done by the VC regional councils for competitiveness, which embody a modality of public/private partnership to promote VC development.

The partnerships are a key element in managing local development initiatives through joint efforts, horizontal cooperation, shared leadership, multiple and complementary capabilities and collective learning.

The CAs of value chains (VCs) embody a new management approach of the government in regards to the support policies of the private sector, and is one of the most outstanding instruments of the new institutional arrangement developed in Colombia during the last two decades. The scheme draws several stakeholders (business, agricultural and livestock producers, their associations, universities, the government, etc.) to work in different sorts of partnerships with the purpose of creating synergies in the private and collective action domains at the national and regional levels. These efforts are aimed at improving the productivity of firms and farms and their overall competitive position amidst the process of internationalization of the Colombian economy. According to Herzberg and Wright (2005: 4),

Competitiveness partnerships can both clarify the incentives and build the capacity of governments to implement reforms. Dialogue with entrepreneurs not only helps to reveal to governments the likely microeconomic foundations for growth, it creates a sense of local ownership which makes policies more likely to succeed in practice, ideally building a sustainable and self-reinforcing constituency for reform.

This section is divided into two parts beginning with a description of the instruments for this policy (the CAs and the councils for competitiveness) and followed by the value chain organizations.

2.3.1 CAs and the councils for competitiveness

'A Competitiveness Agreement is a formal framework for dialogue and public-private concerted action created in order to reach consensus policy and actions aimed at strengthening chain competitiveness' (Herrera and Hernandez 2005: 19). A CA is a consensus document signed by the main stakeholders involved in the elaboration of a diagnosis, a vision and a plan of action with strategic projects for the improvement of the competitiveness of a VC, mainly in the following aspects: markets, technology, quality, human capital, information, entrepreneurial development, environment and information (MADR-IICA 1999a: 9). The main objective of the CA is *the improvement of productivity and competitiveness of the VCs in*

order to strengthen the national production, achieve a better integration of the links of the VC and the expansion of external markets.

During the period 1995-1998, IICA and MADR signed several technical cooperation agreements. In this context, they developed a conceptual framework of the subject, conducted several studies for the VCs and were in charge of the coordination of the national CAs. Then, the strategic role performed by IICA in the competitiveness policy continued in the context of the CAs signed in the PROAGRO.

The agreements on competitiveness coordinated by MADR were of two types: the national CAs, since 1995, and the regional CAs for agro-industrial VCs from 2000. Although a series of CAs were signed during the government of President Samper (1994-1998), the national and regional CAs, under the actual scheme, were signed during the government of Andres Pastrana (1998-2002). In addition, other types of CAs (the export CAs for industrial VCs) were coordinated by the Ministry of Development until 2002, when it was merged with the Ministry of Foreign Trade to form the Ministry of Trade, Industry and Tourism (MCIT), which continued this task. During the Government of President Andres Pastrana (1998-2002), the Ministry of Foreign Trade placed an export emphasis on the CAs thus promoting and coordinating the export CAs, both at the national and regional level. This research concentrates mainly on the study of the regional agreements on competitiveness coordinated by the MADR, thus there won't be a detailed review of the agreements coordinated by the Ministry of Foreign Trade.[6]

There are two main types of commitments acquired in the CAs (MADR-IICA 1999a: 4). First, commitments of a national nature associated mostly with public policies such as *general availability incentives and specific normative* about various issues that require a great deal of coordination and diligence among the different instances of the public sector related to the competitiveness policy and private sector actions of national character (e.g. national business interest associations and large corporations). The second type of commitment requires the participation of regions and embodies the spatial expression of this policy. The regional actors have to be involved in the process: departmental and municipal administrations, universities, centers of productivity, private firms, research centers, business interest associations and producer associations. This scenario portrays commitments at what the MADR-IICA called the conglomerate or nucleus level. 'Geographical grouping has the advantage

that members from the same regions can meet more frequently, network more effectively, and present a single voice to local authorities and constituents. Regional working groups also reduce the risk of particular regions being under-represented in sector- or issue-oriented groups, undermining their legitimacy' (Herzberg and Wright 2005: 16).

The councils for competitiveness (national and regional) became a vital instrument for the coordination of the processes of discussion, signing and development of CAs for agro-industrial VCs**.** In this sense, the composition, organization and strengthening of national competitiveness councils and later on of regional competitiveness councils for VCs (e.g. cotton-textile-garments and lacteous) became a priority for the MADR.

A council or committee for competitiveness of a VC is a modern and flexible instrument designed to deal with relevant issues related to the CAs. It includes members in representation of the different links of the VC such as leading entrepreneurs, business interest associations, producer associations, universities, sectoral research centers, technology development centers, inputs and technology suppliers, members of the national and/or regional governments amongst others. The councils do not generate bureaucratic structures, though they provide an optimal space for cooperation among different stakeholders of the VCs and in particular for the coordination of the CAs. The organization of the competitiveness councils includes the work with subcommittees for specific topics, which enhances the scope of action and effectiveness of the councils. A key factor for the success of the CAs is the participation in the process of at least one leading entrepreneur who is able to energize the work in the council, to call upon all levels of decision-making, to share its vision and to show by means of actual examples in its own firm the advantages that the linkages throughout the VC bring to the different stakeholders in terms of productivity and competitiveness (Kairuz 2005). According to Herzberg and Wright (2005: 16), 'relatively informal mechanisms can be good for tackling specific problems but lack sustainability, whereas more formal structures may have greater longevity but less dynamism'. The regional councils for competitiveness were created under the first scheme discussed by Herzberg and Wright, though they are moving towards the second structure as far as the process of consolidation of the value chain policy advances. Law 811 of 2003 further enhances the insti-

tutional structure of the regional councils by introducing the figure of 'chain organizations'.

In general, the *national councils* for competitiveness are created by the MADR administrative resolution. These councils have the support of the MADR as well as of large firms and business interest associations for their functioning. They are considered policy advisory organizations to the MADR in the case of agro-industrial VCs. In practice, these councils have two main types of stakeholders, technical and political. First, those who perform the technical work at the interior of the council. Second, the high-ranking authorities, including ministries, presidents of larger companies and national business interest associations, which are in charge of the policymaking process.

The situation of the *regional councils* is different; they can be assimilated into technical committees because they do not have the governance to generate national or regional policies. However, they can influence the policymaking process indirectly through the members that participate in the council and through the national competitiveness councils. The regional councils plan, organize, prepare, agree, propose, monitor, facilitate exchanges of information, coordinate and support the development of activities. About one-third of these councils have remained working since their creation. In contrast, other VCs' regional competitiveness councils have been dismantled after a certain period of functioning because of the loss of interest of part of their members as well as the lack of funding of their technical secretariat amongst other reasons. As Herzberg and Wright (2005: 31) point out, 'competitiveness partnerships may become ineffective after a promising start, descending into a talk shop from which little substantive action results. Participants may become disillusioned with wasting time and energy, with negative effects on the credibility of public policy'.

During the period 1998-2002, the constitution and operation of regional competitiveness councils to work with the PROAGRO was a key institutional development though it faced some obstacles. The process of formulation and signing of a CA and its execution had support and strong participation in certain regions. In others, the councils for competitiveness did not have a balanced and meaningful representation of the key stakeholders of the VC's different links. Likewise, there were logistic problems and lack of resources to put into operation the regional councils in most of the productive nuclei, then, the government decided

to finance part of the costs temporarily to assure the functioning, especially of their technical secretariat in the context of PROAGRO (DNP 2001). The MADR has continued coordination of several regional agro-industrial VCs with the technical cooperation of IICA. In 2004, 25 VC organizations in Colombia were identified, 17 with CAs, 11 with technical secretariats, and some of them functioning under the scheme of 'Regional agribusiness nucleus' in several regions of the country (Espinal 2005).

A self-evaluation of the CAs conducted by IICA (2005) with a series of technical secretariats of national and regional VCs shed light on the performance of the CAs and mainly about the functioning of the competitiveness councils of value chains.

Regarding the functioning of the regional councils and their technical secretariats, the evaluation pointed out the main achievements and problems for their operation. The main achievements identified in interviews were: increases in both sowing areas and production; technological upgrading, collective knowledge about the VC functioning, generation of better business and new projects, technological and entrepreneurial training, improvement in inputs (seeds) and product quality, improvement in relations between the chain stakeholders and better linkages of the VC. Above all, 'competitiveness partnerships can build trust and understanding simply by bringing people together on a regular basis and allowing them to get to know each other' (Herzberg and Wright 2005: 4).

The main problems in the functioning of the CAs were first, a deficient participation of the largest industries, traders and agro-livestock producers in the meetings of the VCs. Second, the lack of resources hindered the systematic work of the technical secretariat in the regions, which could be explained by the insufficient financial contribution or co-funding by the private sector for the technical secretariats, and the difficulties of hiring and maintaining the technical secretariats. Third, the small regional producers lacked knowledge about the functioning of the committee because of the deficient diffusion of it amongst the producers. Fourth, the regional nuclei had access problems to the national agencies because of logistical difficulties, principally distance. Likewise, they complained about the scarce participation of national institutions in the meetings of the regional nuclei. Five, lack of use of competitiveness indicators, which was also identified at the national level. Largely, the evaluation found a great deal of commitment, accountability, technical

knowledge and leadership of the technical secretariat and a good relationship with the active members of the regional councils. The problems identified were taken as bases for promoting the improvement in the functioning of the regional nuclei and the national CAs on competitiveness (IICA 2005).

The study by Benjamin Herzberg and Andrew Wright (2005) on competitiveness partnerships based on the review of 40 countries' experiences, found that 'a common feature of partnerships that work well is an effective secretariat. The secretariat can be hosted within any of the participating members – an NGO, government ministry, international organization, company or business association – or it can be free-standing, with funding from one or more of the participants' (Herzberg and Wright 2005: 16).

The technical secretariat of a competitiveness council is an agency or a person that the different stakeholders of the VC respect and recognize for his/her experience and integral knowledge about different aspects of the VC. Likewise, he/she should be perceived as a neutral party in the context of the CA, as a facilitator-integrator of processes in the VC as well as a leader and the key administrative person in the council. According to IICA (1999: 8), the technical secretariat has the following functions: to convoke the meetings, write the minutes, formulate projects included in the plan of action, manage or coordinate and follow up on these projects, all while monitoring the VC's competitiveness. In addition, if there is a technical contract with MADR-IICA, the technical secretariat has to write periodical reports about the performance of the VC and development of the CA. The funding of the technical secretariats especially the regional has been done primarily by contracts of three, six or even ten months with MADR resources. In particular cases such as the CA of the fruits VC, ASOHOFRUCOL has financed the technical secretariat. In the case of the budget of the cocoa-chocolate VC's national council, it has been financed by different sources, for example in a given year, it was funded with MADR resources (about 27%), Fedecacao (25%) and around 48 per cent by the companies (CNC S.A., Casa Luker S.A. and Girones S.A.), Corpoica contributed the office for the technical secretariat.

The case of the technical secretariat for some VCs of the agro-entrepreneurial nucleus of the northeastern region such as cocoa-chocolate has had a great deal of continuity since 2003. There are in-

stances in which the technical secretariat of a regional VC is in charge of a public organization such as in the case of cocoa-chocolate in Antioquia, which functions in the Gobernación of Antioquia (regional administration) premises. It has had appropriate management, though critics consider that a technical secretariat should be neutral because some stakeholders are afraid of manipulation by political interests and that the secretariat might lose scope of action and independence.

2.3.2 Value chain organizations

Law 811 of 2003 created the VC organizations in the agricultural, livestock, forestry, aquaculture and fishery sectors in Colombia.[7] It became the most important piece of legislation developed to foster and to endow the VC movement in Colombia with legal backing from organizations such as the national councils for competitiveness that coordinate CAs designed to promote improvements in the productivity and competitiveness of the productive units along the VC. This legislation took the VC organizations to an institutional level. It defined the minimum legal formalities to be observed in the commercial agreements signed in a VC organization and in this sense, there was an attempt to go beyond the mere agreements on wills and assure through verification and monitoring that the commitments of the public and private sector must be kept. Likewise, the financing of the VC organization's operational costs, also received the backing of the legislation, in the sense that it could be secured with contributions of its members. The VC organizations registered in MADR would have priority in access to incentives of governmental sectoral instruments. Finally, the VC organizations obtained the status of policy advisors to the national government in regards to the products related to the VC.

Law 811 of 2003 filled a perceived vacuum and provided an institutional framework for the VCs, and the VCs' organizations that worked to promote their productivity and competitiveness. It regulated the relationship among the private and public sector, the sources of funding, and the requirements to be acknowledged and registered in the MADR. The law itself is a clear sign of the awareness amongst private and public stakeholders about the potential of the VC organizations for the promotion and construction of the country's economic development. The work with VCs has reached a vital milestone in its process of consolidation though its maturity won't be obtained until the VC regional organiza-

tions are strengthened since the law gave priority to the national organizations, and the regional ones are still searching for resources and a more explicit legal framework for their activity. As Espinal (2005) points out, the VC organizations have become social management models. Their key objective is to make the management of the state entirely more efficient, from which the civil society is an integral part.

2.4 Regionalization Strategy

As background information of the agreements on competitiveness, it is important to stress that the sectoral agreements on competitiveness have a national geographic scope and the stakeholders' participation takes place largely at the national level; ministries and their associated agencies, sectoral business interest associations of the main links of the VC, research centers and key entrepreneurs. The government considers the national councils as key sectoral policy advisors. However, the notion of regional agro-entrepreneurial nucleus (cluster)[8] could not be bypassed in this policy, since the core agricultural products and even the entire VC have been historically located in specific regions or groups of regions in which the crop had more incidence than in others. In some geographic spaces, the most important sources of revenue and jobs were generated around the activity. The spatial expression of the CAs could be found for example in the cases of rice in Tolima and Huila, and cotton in Meta, Tolima and in a group of departments of the Atlantic Coast; potato in Boyacá and Pasto, textiles in Antioquia, sugar cane in Valle del Cauca, cocoa in the northeastern region and Antioquia, and coffee in the coffee Axis. The agglomeration of productive units, producers and firms in a given geographic space that gave them outstanding advantages for the production of a certain product was a reality that the government of President Pastrana (1998-2002) not only took into account but also constituted in a paramount pillar of its competitiveness policy and essentially in its VC approach. In this sense, the identification of the regional agribusiness nuclei starting from the sectoral CAs was a first step in the regionalization of the CAs. Then, the promotion of the new institutional arrangement in the region was deemed crucial, beginning with the constitution of the regional council of competitiveness and the technical secretariat, which was instrumental to coordinate the dialogue, mutual agreements and collective action undertaken at this spatial level. Finally, the regionalization of the sectoral CA had the potential to benefit their im-

plementation because of the synergetic effects obtained by incorporating in the scheme the regional and local public sector, the universities, research centers, deconcentrated public institutions such as SENA, ICA and CORPOICA; the regional productivity centers, the business interest associations and private entrepreneurs. Since the regional agribusiness nuclei originated in the sectoral CAs, the functioning of the scheme demanded consistency between the sectoral and regional CAs and, between them and the national policy for competitiveness and the strategic export plan, and at least a minimum degree of coordination between the national and regional councils for competitiveness of the VC.

The government expected to find in the work with sectoral CAs and agro-entrepreneurial nuclei at the regional level an optimum space for focalization by topics and regions of the public resources allocated for investments since the CAs included strategic objectives and lines of action developed into activities and projects in key areas for the development of markets, technology, information, environment and human resources (IICA 1999: 4). The regions, through their CAs for the different regional nuclei for agribusiness development, had the opportunity to access information and promote awareness about the available support included in the sectoral policies of the national government. In addition, regions have the chance to coordinate efforts among the different stakeholders of the VC to channel available resources to development projects for the VC and in this sense for the region. In May 2005, there were 20 national VCs coordinated by MADR-IICA; 85 per cent had an active technical secretariat and about 70 per cent had a signed CA. Meanwhile, in 2005, there were 51 organized regional agro-entrepreneurial nuclei;[9] about 91 per cent of them had a working technical secretariat. There were 18 regional VCs with CAs (agro entrepreneurial nuclei); 40 per cent of these VCs did not have an active technical secretariat. The remaining 33 VCs did not have a CA signed yet (see appendices 1, 2 and 3).

In the case of the agreements on export competitiveness (export CAs) led by Mincomex, as pointed out above, they operated under a different scheme. In total, ten regional export CAs were signed during the period 1998-2002 and according to an evaluation study of the policy for competitiveness and productivity for that period, they performed better than those of national origin did. It was pointed out that location matters and that geographic proximity is a factor of competitiveness (Velasco 2003: 69) (see appendices 4 and 5).

In sum, the regional CA of several VCs signed and developed in Colombia during the period of study embody a proactive response at the meso-level to the new challenges that firms and nations face in the context of globalization. As Meyer-Stamer points out,

> As firms get under increasing pressure due to globalization, their demands on their local environment increase. Consequently, meso-policies increasingly have to be formulated at the regional and local level… It will be often easier to mobilize locally the know-how for diagnosing strengths and weaknesses of firms in their environment and to formulate measures to strengthen strengths and overcome weaknesses (Meyer-Stamer 1998: 16).

2.5 Concluding Remarks

The competitiveness policy in Colombia has prominent features to underline the policy learning process; the continuity with change in the policy; the multi-layer nature of the policy; and the recognition that the decentralized participation and implementation are necessary. The national agreements are central to satisfy the leading firms while the regional agreements are crucial for the inclusion of agro-players.

There has been a policy learning process in the context of the national policy for competitiveness and productivity. The schemes developed to promote public-private sector partnerships and collective action among key stakeholders of the different VCs in the country have promoted improvements in information flow and coordination in several ways that is, between the regions and the nation, amongst private stakeholders, between private, public and academic sectors and between public institutions. In regards to the public-private sector relationships, the different devices to foster competitiveness developed by the national government have provided scenarios to test the idea that cooperation is better than conflict especially in situations of severe economic crisis such as that of the end of the 1990s. In line with Herzberg and Wright (2005: 8), 'competitiveness partnerships can build trust and understanding simply by bringing people together on a regular basis and allowing them to get to know each other'.

There has been an increasing awareness about the most important economic characteristics of the regions. In this sense, the main agro-entrepreneurial nuclei have been identified and studied, as well as the clusters, VCs and networks that operate in the regions. The information

flow between the local, regional and national governments have increased and become instrumental for policy interventions of a different nature. A new institutional arrangement in the regions has emerged, where the interaction between the private and public sector is more fluid. That is, universities, regional development centers, productivity centers, training institutions, CARCE and VC organizations participate in different cooperation schemes with the purpose of promoting regional development. Finally, it is important to point out that there have been regional differences in regards to the entire process of decentralization of the competitiveness policy. Some regions have appropriated these policies and instruments, and in general have taken more advantage and benefited more than others have.

The multi-layer nature of the competiveness policy constitutes one of its main features. For example, the VCs' regional agreements on competitiveness are more than a scheme of horizontal relationships among key actors of the VC. They are generally envisioned as the regional nuclei of the national CAs (sector level) and are part of the national competitiveness policy. In this sense, the agreement and implementation of these schemes require coordination between different levels: national and deconcentrated sectoral policy agencies (for example ICA, SENA); between national (sectoral) and regional VC councils for competitiveness; between national, regional and local governments: and between the national agro-producer associations (e.g. Fedecacao), business interest associations and their regional chapters, among others. Finally, this coordination incorporates the partnerships established between regional NGOs and the national government and international donors. Horizontal networking needs to be complemented with vertical networking in order to access national institutions and resources (Helmsing 2002). The coordination among decentralized agencies at the local level implies a higher coordination between both regional and national levels, in regards to those agencies. Eventually, the performance of central agencies such as the Colombian Agricultural Institute (ICA) improves, given better coordination with their local branches, which at the same time are enhanced by their interaction in partnerships with other local actors. In this background, chances for small producers to be reached by government policies and resources have increased. In addition, this situation has been reinforced by the systemic efficiency,[10] gradually introduced by the firms that lead the VC, which has the potential to improve the VC governors'

competitiveness as well as the small producers' socioeconomic conditions.

There has been continuity with change in the competitiveness policy. For example, a group of institutions and instruments had a permanent presence during the period of study in the competitiveness policies of the different governments. They have been able to adapt to the institutional changes originated in the policy for competitiveness and productivity while meeting the different requirements and priorities of those administrations, for example FINAGRO and the ICR (Rural Capitalization Incentive), BANCOLDEX and PROEXPORT. These institutions were created during the government of President Gaviria (1990-1994) and have been instrumental in the sectoral policy ever since.

As some stakeholders directly related to the implementation of VC policies point out, there is a prominent policy bias in the support for low competitiveness sectors, with the objective to compensate their competitive disadvantages and market distortions (Espinal 2005: 48). The economic opening has affected agricultural producers in crops such as cotton, rice, sugar and animal feed (e.g. sorghum), which have had to face stiff competition from international markets. However, these sectoral policies have targeted them in one way or another. Likewise, the micro, small and medium-scale industry in garments and other labor-intensive sectors, which in a first wave of the economic opening were severely damaged, fall in the above category. However, these policies have also benefited prominent sectors with prospects to export flowers, tropical fruits, textiles and leather and, have promoted the increasing export diversification including other nontraditional exports. Finally, employment generation and food security are goals of the government's sectoral policies, which in many instances have higher priority than efficiency considerations.

The possible explanations to this situation are explored in the following chapters of this research and are supported on the idea that differences in both the regional and VC characteristics affect the policy process effectiveness of the meso-level policies at the regional level.

Notes

[1] The CADIAC approach states that moving from theory to reality is feasible in the event that formal and permanent mechanisms for dialogue and concerted action between the VC key stakeholders and between them and the government, that finally lead towards the definition of agendas and commitments for the development of the chains, are put in place. Therefore, it is through this vision that the competitiveness agreements rise as chain instruments (Hernandez and Herrera 2005).

[2] Document CONPES 3076 of 03 May 2000 DNP: UDA.

[3] The information related to the VCs' policy will be developed in detail in the chapter dedicated to the analysis of VCs in Colombia.

[4] DNP, CONPES 3076, 2000.

[5] It is important to point out that, IICA and MADR had been testing the methodology for the promotion of agro-business regional nucleus and regional CAs on competitiveness since November 1998 with a pilot program in some of these VCs such as the case of 'cotton-textile-clothing' in Tolima (IICA 1999). These efforts were supported by the CADIAC approach; 'Chain Focus and Dialogue for Action suggests that the transition from theory to reality is viable if mechanisms of dialogue and consultation, both formal and permanent between actors in agrifood chains and between them and governments, leading to the establishment of agendas and commitments for change can be developed. It is how the chain can move from the realm of the conceptual into the realm of reality, and become an institutional permanent body. It is from this vision, that the "competitiveness agreements" arise as instruments of change' (Hernández and Herrera 2005: 19).

[6] According to Velasco (2003: 35), the dilemma faced by the Ministry of Foreign Trade (Mincomex) of whether to work with the CAs with a regional emphasis or at the sectoral or national level was disentangled by practical means given that, for the policy implementation, the *government grouped the main exporters according to the productive processes that linked them independently of the geographic factor*, and these arrangements were called value chains. This criterion diverged clearly from the approach taken by the Ministry of Agriculture and Rural Development in its work with the agro-industrial value chains. The Ministry of Foreign Trade promoted the development of export CAs mostly for industrial goods with strong export components, though it also included VCs of services and a number of agro-industrial VCs that already had CAs and were part of the PROAGRO, coordinated by the MADR. The coordination of the export CAs during the government of President Alvaro Uribe (2002-2006) was redistributed. Law 811 of 2003 allocated the coordination of the CAs related to the agricultural sector including those of export competitiveness of agro-industrial

VCs to the MADR. Forty export CAs were signed during the period 2000-2002, 76 per cent of a national nature and the remaining 24 per cent were regional CAs; 28 CAs of goods and 12 of services (MCIT 2005).

[7] Law 811 of 26 June 2003 modifies Law 101 of 1993 and creates VC organizations in the agricultural sector.

[8] IICA (1999) included in the guidelines for the promotion of regional agribusiness centers and regional competitiveness agreements.

[9]Observatorio de Competitividad 'Agrocadenas'; the criteria used for the classification are that the VCs have an agreement on competitiveness and/or an active technical secretariat within the projects of cooperation of IICA-MADR.

[10] See Kaplinsky (2000: 126). It is an important analytical component of VC analysis that focus on the potential efficiency gains that are likely to be achieved as a result of VC integration. Systemic efficiency means VC efficiency.

3 Framework

3.1 Introduction

This chapter elaborates on the core concepts and theoretical aspects that frame the current research and draws on three strings of academic literature—local and regional development theories and policies, competitiveness strategy and value chain analysis. The chapter contains five sections, beginning with a discussion on the global challenges and the search for national competitiveness, largely among developing countries. Second, the study analyses the new competition. Third, the different approaches to the study of global networks and VCs are examined. The fourth section develops in detail the analytical framework proposed for the study mentioned in chapter 1. Finally, a concluding section summarizes the main points of the chapter.

3.2 Global Challenges and the Search for National Competitiveness

Global production networks increasingly coordinate productive activity as a competitive response to the decline of mass production systems, which had an important impact during the 1950s and 60s. The crisis of *Fordism* was followed by

> [A] loosening up with respect to control, location and the function of responsibility for tangible and intangible activities. There has been a clear movement away from large vertically integrated operations which internalised all functions and activities (tangible as well as intangible) within one corporation to the externalisation of ownership of activities/actors/functions and their dispersal to smaller firms operating far and wide globally (Kaplinsky and Morris 2001: 101).

The emergence of flexible production systems schemes meant a crisis of the traditional industrial policy that lost ground to the new realities firms faced amidst globalization. The latter being the fertile ground for these events to happen.

The widespread specialization among firms has further hastened the international division of labor, thus, as 'firms focus on their core activities or competencies, new coordination needs arise within the value chain between firms engaged in complementary activities' (Papalcuer 1997: 14). These profound changes have yielded spatial outcomes, for instance, newly industrialized countries have gained a prominent role in the global economy, making the nature of their new function dependent upon the magnitude and effectiveness of the competitiveness efforts carried out at the national level. From the 1990s onwards, countries around the world have been involved in one way or another in the so-called search for national competitiveness. Given the disappointing performance of the global economy during the 1980s that is, mounting foreign debts, hyperinflation and negative growth of most developing countries in particular those of Latin America, several nations undertook a package of stabilization policies and structural adjustments lead by international organizations such as the IMF and the World Bank. Behind the reality there was an even more challenging one, the world economy was undergoing dramatic changes on the ground, and there was a clear shift towards liberalization framed by the neoliberal orthodoxy. In fact, the complexity and dynamic nature of the vast transformations that have been taking place worldwide during the last three decades have had a profound impact on people around the world. They have brought several opportunities but also posed several threats to countries on all continents. These challenges have also generated the need for nations to adapt their economies and institutions to the demands of an increasingly interdependent and globalized world.

In general terms, the institutional reforms, market liberalizations, privatizations and other structural reforms proved insufficient to improve the economic performance of many countries, thus they were accompanied by competitiveness policies. Industrial development policy shifted focus from a sectoral approach to a more comprehensive one, which included an industry emphasis. Instead of defensive measures taken by business interest associations, dialogue, concerted action and cooperation schemes amongst different sectors that cut across the industry be-

came the focal point. It paved the way for value chain-based development policies to gain center stage in the competitiveness policy setup of several countries in Latin America. The new VC emphasis provided a more comprehensive policy framework that included the sector and its different links, recognizing the existence of vertical networks that operate at various spatial levels that is, the international, national level as well as important regional nuclei. This new trend was best captured in the observation of scholars such as Best (1990: 266) who considered a strategic industrial policy on the government side an important dimension of the new competition, the emphasis of which should be the promotion of Schumpeterian competition and (collective) entrepreneurial firms instead of individual ones. The main components of industrial policy as a component of economic policy conceived by Best are first, 'a strong antitrust pro-competition policy'; second, 'administering a balance between cooperation and competition'; third, 'primacy of strategy over planning'; last, 'a universal or sector specific, as opposed to firm-specific, orientation' (1990: 266-9). This point of view is reinforced by Humphrey and Schmitz (1996: 1860), who argued that 'the objective of policy intervention at the micro level should be to develop the capability of groups of firms to generate processes of improvement deriving from interfirm linkages and contact with the market'. Targeted intervention at the individual firm lost ground in favor of collective efforts, which could promote and take advantage of important agglomeration economies such as economies of scope and scale. To sum up, as put forward by Humphrey and Schmitz, 'intervention is most effective when it is based on the "Triple C": customer oriented, collective and cumulative. The three "Cs" do not necessarily go together, but an SME support approach which is guided by customer orientation and targets the collective is more likely to achieve cumulative improvements in competitiveness' (1996: 1873).

During the 1990s, several Latin American countries designed competitiveness policies that included the development of an institutional setup to drive the whole process including, norms and policies and, institutions such as the national council for competitiveness in Colombia. The changing nature of industrial policy, the endogenous development needs and the devastating outcomes of the economic restructuring on several regions and key sectors such as agriculture and livestock prompted countries such as Colombia to undertake an aggressive program of VC-based development policies and partnerships including its

decentralization to the regions. The agreement on competitiveness of several value chains at the regional level became a proactive response at the meso-level to the new challenges that firms and nations faced in the context of globalization. Likewise, they were a recognition that a systemic approach towards competitiveness was needed in countries that were planning to restructure economies successfully while promoting the international competitiveness of their firms. According to Meyer-Stamer, firms increase their demand on their local environment since globalization puts them under increasing pressure. 'Consequently, meso-policies increasingly have to be formulated at the regional and local level…. It will be often easier to mobilize locally the know-how for diagnosing strengths and weaknesses of firms in their environment and to formulate measures to strengthen strengths and overcome weaknesses' (1998: 16).

As pointed out above, this new reality set the context in which competitiveness strategy and new approaches towards industrial policy were growing in importance. However, the link between those issues had not been explored in detail, for instance, it was necessary to shed light on the nature and policy process effectiveness of competitiveness strategy and collective action, in particular, on the performance of value chains at the national and regional level, under different conditions of economic structure and governance. In addition, the empirical work of scholars and the available literature on global value chains had systematically neglected the regional component in its analytical framework, which is fundamental to understand the developmental outcomes of VC-based development interventions such as the competitiveness agreements of value chains in Colombia. In this case, there was a lack of explanation from the existing theory to practical questions such as to what extent factors at VC and regional levels and their interplay influenced the discussion, implementation and outcomes of meso-level policies carried out at the level of value chain. Finally, we would like to put forward the idea that the VC and local-regional levels constitute an important playing field for competitiveness policies as summarized by Humphrey and Navas-Aleman (2010: 20).

> We have to look beyond the individual enterprise, the individual farmer and the independent small producer when considering how to increase the incomes of the poor through promoting their involvement in market-oriented production. Focusing on the value chain and the links between the firms spread along it, allows policymakers to diagnose issues affecting

the performance of the chain as a whole, mobilize stakeholders through their involvement in diagnosis and problem solving and support more effective relationships between firms in the chain.

3.2.1 New competition and competitiveness strategy

This section presents a brief review of the change in thinking and approaches towards the study of industrial competitiveness and the contributions of Best (1990), Esser et al. (1996), Meyer-Stamer (1998) and Porter (1990, 1998, 2003), paying special attention to the elements that contribute to the theoretical framing of the current study. First, competitiveness is a widely known concept, though there is no clear consensus about its meaning in spite of the fact that it has paramount implications for the fate of entrepreneurs, especially in developing countries and for the livelihood of its inhabitants. 'Competitiveness remains a concept that is not well understood, despite widespread acceptance of its importance' (Porter 2003: 25).

The new business environment and the major economic restructuring processes taking place in both developed and developing countries are condensed largely from a theoretical standpoint in the concept of *new competition*. The latter constitutes an important advance in the understanding of what is happening at the regional level as a response to the major events taking place globally. Best's theory gives a supreme role to the entrepreneurial firm whose definition has theoretical influence of Schumpeterian concepts of entrepreneurship and competition, and the Penrosian concepts of experience, teamwork and growth of the firm (1990: 276). To be competitive, countries and firms have to congregate several actors around competitiveness goals with the vital participation of government, the sector institutions and firms, not by mean of a traditional industrial policy but through schemes that involve strategic alliances along with what Best calls the 'production commodity chain' supported and enhanced by the proactive role of government.

From a theoretical perspective, the new industrial policy and in particular the competitiveness policy became even more systematic after the publication of the influential book by Michael Porter, *The Competitive Advantage of Nations* (1990). Porter, from the business administration and strategy perspective, argued that competitiveness is created, but not derived, from static comparative advantages as was traditionally accepted.

'Productivity and innovation, not low wages, low taxes, or a devaluated currency, are the definition of competitiveness' (1998: 263). Competitiveness is regarded as the efficiency with which a nation uses its economic resources. It is 'rooted in a nation's microeconomic fundamentals, manifested in the sophistication of its companies and the quality of its microeconomic business environment' (Porter 2003: 41). In this definition, competitiveness is treated as synonymous of productivity. Innovation is a key component that influences the construction of a nation's competitiveness and supports the effort of its industry to upgrade (1998: 155). Porter states that 'companies in a nation must upgrade their ways of competing if successful economic development is to occur. A nation's companies must shift from competing on comparative advantages (low-cost labour or natural resources) to competing on competitive advantage arising from unique products and processes' (2003: 25).

Porter (1990) pays paramount attention to the microeconomic business environment and in its analysis introduces a chief analytical tool, 'the diamond of competitiveness'. The four mutually interdependent components of it shape the environment in which local firms ought to compete and that fosters or prevents the creation of the competitive advantage. They are context for firm strategy and rivalry; the context, in which firms are created, organized and managed as well as the nature of domestic rivalry (1990: 108). Second, demand conditions, the sophistication of home demand and the pressure from local buyers to upgrade products and services sharpen the ability of enterprises to compete internationally. Third, related and supporting industries; this component refers to the availability and quality of local suppliers and related industries, and the state of development of clusters. Finally, factor endowment; in this category, Porter highlights that 'a nation's firms gain competitive advantage if they possess low-cost or uniquely high-quality factors of particular types that are significant to competition in a particular industry' (1990: 75). In sum, the competitive advantage of a firm depends not only on static but also largely on dynamic advantages. Since competition goes beyond prices, productivity improvements and innovation become key factors in Porter's framework.

This point of view is complemented by other scholars who consider that competitiveness is the result of efforts carried out systemically at four levels: 1. Micro-level of the firm and inter-firm networks; 2. Meso-level of specific policies and institutions; 3. Macro-level of generic eco-

nomic conditions; and 4. Meta-level of slow variables like socio-cultural structures, the basic order and orientation of the economy, and the capacity of societal actors to formulate strategies. Systemic competitiveness as a concept addresses a broader spectrum than individual firms do; it applies to nations, regions, industrial sectors or subsectors (Esser et al 1996; Meyer-Stamer 1998: 3). In this line of thought, 'industrial competitiveness comes about neither spontaneously via a change in the macro framework nor merely via entrepreneurship at the microlevel. It is, rather, the outcome of a pattern of complex and dynamic interaction between governments, firms, intermediary institutions, and the organizational capacity of a society' (Esser et al 1996: 27).

This research focuses mainly on the meso-level. It refers to specific policies (meso-policies, i.e., export finance) and institutions (meso-institutions, i.e., technology institutes and training centers) to create a competitive advantage. This level relates to particular targeted policies (technology, environmental, export, import, education and training, regional infrastructure, finance, industrial structural policy) to shape industries and their environment with the aim of strengthening the competitiveness of industries (1996: 28). Meyer-Stamer states that this context is precisely the 'world of local and regional industrial competitiveness initiatives to strengthen the firms' environment' (1998: 3). Another important point in relation to the meso-level is that the institutions that perform at the meso-level are not necessarily governmental, that is NGOs, business associations, firms and private-public sector partnerships like the national or regional council for competitiveness, for several value chains in Colombia. There is also an increasing trend prompted by the pressures on the local-regional firms by the international competition to formulate meso-level policies at regional levels. These policies cannot be confused with traditional industrial policy, on the contrary 'mesopolicies to create systemic competitiveness are about stimulating competition and supporting firms to make the best of a highly competitive environment' (1998: 16).

Finally, Meyer-Stamer contends that global commodity chains 'adds a missing dimension to the systemic competitiveness concept. In the latter, world market integration and competitive pressure is taken for granted, and the focus is mainly on the producing firms. It is, however, essential to understand both features thoroughly to understand why competitiveness emerges, or why it does not' (1998: 22). As pointed out in this re-

search, the different elements that shape the theoretical framework are interrelated and the attention to commodity chains is a common feature in all approaches from Porter to Meyer-Stamer. The systemic competitiveness framework fits the requirements of the current research, in the sense that it depicts the synergy between the state and other members of society to create the conditions for successful industrial development intentionally, which is the case of the regional agreements on competitiveness. All of these factors are at play in these multi-stakeholder development partnerships of value chains carried out at the national and regional level. Their aim is the promotion of the agricultural sector, further integration of the links of the chains, achievement of higher productivity, penetration and consolidation of national and international markets and the overall increase of industrial competitiveness of the country.

3.3 Global Networks and Value Chains

3.3.1 Value chain analysis: Theoretical perspectives and policy approaches

This field is still under construction and is being built systematically through an influx of fertile academic work during the last decade. Kaplinsky (2001) traces the concept of VC to the 1960s and 1970s when it was used in input output studies by,

> Analysts charting a path of development for mineral-exporting economies [Girvan 1987]. It was also adopted in recent French planning literature in the form of the filière. But during the 1990s, value chain analysis became widely used, particularly as a consequence of the writings of Michael Porter [Porter, 1985, 1990] and in an influential book by Womack and Jones (who refer to it as the "value stream") [Womack and Jones 1996] (Kaplinsky 2001: 121).

In addition to the literature described by Kaplinsky, the contribution of Best (1990) to the field is relevant too. Best introduces in his framework the concept of *production chain* and refers to it as extending from the first to the last operational phase in turning raw material and labor into a final product. In relation to this concept, he states that there are four forms of coordination across production chains: 'hierarchical-bureaucratic and hierarchical-clan within vertically integrated enterprises,

market amongst autonomous and independent firms, and consultative cooperative amongst mutually independent firms' (1990: 13-14). The concept of coordination can be associated with the concept of governance widely used in value chain literature and shows the interest of Best in the production chain, which he considers to be part of the new competition. However, he stresses the fact that 'inter-firm coordination in the New Competition cannot be explained in terms of the traditional hierarchy or market dichotomy; allowance must be made for consultative coordination or cooperation amongst mutually interdependent firms each of which specializes in distinct phases of the same production chain' (1990: 13).

Porter defines within his theory two terms closely related to the value chain notion as used in this study, value chain and value system. The term *value chain* applies to the firm itself. It is used by Porter to describe the group of activities performed by a firm while competing in a particular industry. For Porter a firm is more than the sum of its activities, 'a firm's value chain is an interdependent system or network of activities, connected by linkages. Linkages occur when the way in which one activity is performed affects the cost or effectiveness of other activities. Linkages often create trade-offs in performing different activities that must be optimized' (1990: 41). Meanwhile, a *value system* regards the firm's value chain as embedded in a larger stream of activities. What Porter terms value systems is close to the meaning of value chain as used by the main stream. In practice, Porter's definition includes sourced inputs (supplier value chain), production (firm value chain), distributors or retailers (channel value chain) and buyers (buyer value chain). However, it is important to take into account the appreciation made by Gereffi about two facts: first, that as defined by Porter, a value system is a set of interlinked 'complete' firms that have all the business functions. Second, the term value chain as used by the mainstream researchers on value chains also incorporates firms that have specialized in certain value chain functions such as design and marketing, one example of these companies could be Nike or Reebok, which are global brands without a single factory (2001: 2).

Hopkins and Wallerstein (1986) introduced the concept of commodity chain, 'a network of labor and production processes whose end result is a finished commodity' (Hopkins and Wallerstein 1986: 159, quoted by Gereffi 1994). However, it gained a significant boost during the second

half of the 1990s, when many publications and conferences took place on this subject. A rich array of research followed influential book edited by Gereffi and Korzeniewicz (1994), G*lobal Capitalism and Commodity Chains*. A global commodity chain (GCC) 'consists of sets of inter-organizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world economy' (Gereffi et al. 1994: 2). According to Gereffi, 'industrial and commercial capitals have promoted globalization by establishing two different types of international economic networks: "producer driven" and "buyer driven" commodity chains' (1999: 41). The first case applies to leading global brand-named merchandisers, large retailers and trading companies in labor-intensive sectors such as garments, footwear, consumer electronics and fresh fruit. The main source of governance comes from their market power and control over key processes such as design, marketing and production networks coordination (1994: 97). The second applies to capital and technology intensive industries and are dominated and controlled by transnational corporations or other large integrated industrial enterprises in sectors such as car manufacturers, computers, aviation industry and electrical machinery; these major firms play central role in controlling the production system, including its forward and backward linkages (ibid).

3.3.2 Main dimension of value chain analysis

Gereffi (1994: 97) presents three main dimensions within its analytical framework. First, there is an *input output structure,* defined as the series of economic interrelations within the links in the commodity chain in a sequence of value added activities. Second, there is a *territoriality (geography),* related to the 'spatial organization of production in the commodity chain' (1994: 97). Last, the framework contains *governance structure,* which embodies the 'authority and power relations that determine how financial, material, and human resources are allocated and flow within the chain' (ibid). In this sense, the concept relates to the 'power relations in the chain and the institutions which mould and wield this power' (Kaplinsky and Morris 2000).

In regards to the governance dimension, Gereffi et al. (2001: 4) distinguish three broad forms of governance in value chains: 'inter-firm networks, quasi-hierarchical relationships between powerful lead firms and independent but subordinate firms in the chain, and vertical integra-

tion within enterprises'. In a subsequent work, Gereffi et al. (2003) proposed a new, though related, classification to explain governance patterns in GVCs describing five types of governance beginning with market on one extreme and hierarchy on the other. Additional forms of chain governance are classified as inter-firm networks, and have different forms of network governance. These are modular, relational and captive value chains. First, *market type* governance has the lowest degree of coordination in this classification. 'The degree of transactional dependence cost of switching to new parties are low for both parties…transactions are easily codified, product specification are relatively simple, suppliers have the capacity to make the products in question with little input from buyers' (2003 13-15). The *captive value chain* encompasses quasi-hierarchical relationships between powerful firms and independent but subordinate firms in the chain (2001: 4). In a captive value chain there is a high degree of monitoring and control by the lead firm, which creates dependence, if not on individual suppliers, then on its supply base as a whole (2003: 13). The third type of governance is hierarchy (2003: 13). In a *hierarchy* type of chain governance there is the highest degree of coordination (monitoring and control) of this classification. The dominant form of governance is managerial control. The fourth type of governance is *modular value chain*. In this network type of value chain, the degree of coordination is low 'suppliers in modular value chains make products to a customer's specifications, which may be more or less detailed' (2003: 13). Finally, in the *relational value chains* there is 'mutual dependence regulated through reputation, social and spatial proximity, family and ethnic ties' (ibid).

Kaplinsky (2001: 31) adapts the traditional concepts of legislative, judicial and executive governance to the value chain analysis and distinguishes between the governance exercised by parties internal and external to the chain (Table 3.1).

Table 3.1
Governance in value chains

Type of governance	Exercised by parties internal to chain	Exercised by parties external to chain
Legislative governance	Setting standards for suppliers in relation to on-time deliveries, frequency of deliveries and quality.	Environmental standards. Child labor standards.
Judicial governance	Monitoring the performance of suppliers in meeting these standards.	Monitoring of labor standards by NGOs. Specialized firms monitoring. Conformance to ISO standards.
Executive governance	Supply chain management assisting suppliers to meet these standards. Producer associations assisting members to meet these standards.	Specialized service providers. Government industrial policy support.

Source: Kaplinsky (2001)

Industrial upgrading

Another important theoretical contribution of the GCC framework is the notion of industrial upgrading, which is closely related to the governance issue. Industrial upgrading 'is a process of improving the ability of a firm or an economy to move to more profitable and/or technologically sophisticated capital and skill intensive economic niches' (Gereffi 1999: 51-2). In other words, 'firms can upgrade their processes ("doing things better") or products ("making better things"), or they can aim to move to higher value-added stages in the chain like design or marketing, named "functional upgrading"' (Schmitz and Knorringa 2000: 181).

According to Gereffi (1999: 52), there are four levels of analysis of industrial upgrading.

1) W*ithin factories:* it 'involves moving from cheap to expensive items, from simple to complex products, and from small to larger orders'.
2) *Within inter-firm enterprise networks:* 'Upgrading involves moving from mass production of standardized goods to the flexible production of differentiated merchandize'.
3) *Within local or national economies:* It 'involves moving from simple assembly of imported inputs to more integrated forms of [Original Equipment Manufacturing] OEM and [Original Brand Manufactur-

ing] OBM production, involving a greater use of forward and backward linkages at the local or national level'.

4) *Within regions:* 'upgrading involves shifting from bilateral, asymmetrical, inter-regional trade flows to a more fully developed intra-regional division of labor incorporating all phases of the commodity chain from raw material supply, through production, distribution and consumption' (1999: 52).

The traditional way of defining and evaluating upgrading is criticized by Meyer-Starmer, who puts forward the idea that, 'in the future we need to rethink the concept of upgrading and acknowledge that it must be a relational category that does not compare a company's, cluster's or location's previous practice with current practice, but look at their position vis-à-vis main competitors instead' (2004: 330).

The GCC-GVC framework has been improved in terms of its analytical capacity and is gaining in formalization. However, some scholars have pointed out various shortcomings of this approach. The main criticism stresses the fact that GCC researchers have concentrated too much in the governance dimension and in particular in the polarized classification between producer-driven and buyer driven GVCs. Meanwhile, the other dimensions of this framework have been purposely neglected (Bair 2008: 355; Henderson et al 2002: 440). They proposed an alternative analytical framework to analyse the complexities of international networks described in the GCC-GVC framework (the *global production network*) (Jeffrey, Dicken, Hess, Coe and Wai-Chung Yeung 2002). 'The global production network…is a conceptual framework that is capable of grasping the global, regional and local economic and social dimensions of the processes involved in many (though by no means all) forms of economic globalization' (Henderson et al. 2002: 445). In contrast to the over-territorialized network of economic sociology, analyses of global commodity chains (GCCs) and global value chains (GVCs) have consistently highlighted the international dimension of trade and production networks in the world economy (Bair 2008: 340).

From Gereffi's definition of GCC, it follows that the GCC construct is largely concerned with issues framed at the global-spatial level of analysis. Most studies undertaken by GCC researchers dealt with questions of 'how the global economy is governed, of how the links between global companies and local enterprises are structured, and on how up-

grading can be achieved or thwarted' (Schmitz 2004: 2). Before the work by Schmitz et al. (2004), researchers had neglected systematically the local-regional component of the global networks as policy foci, for example, the alternatives for local action within clusters have not been analysed thoroughly. The territory as such was not considered when bringing the analysis to a lower level that is to the arena of industrial policy formulation, the local-regional level (ibid). To overcome such restriction, this study complements the GVC literature with the GPN literature, which affirms that 'an understanding of the "territoriality" of production networks – namely, how they constitute and are re-constituted by the economic, social and political arrangements of the places they inhabit – is central to an analysis of the prospects for development at the local level' (Henderson et al. 2002: 446). In this line of thought, this research acknowledges that value chains are socially and spatially embedded configurations as recognized by several scholars who have developed or applied the global production networks literature (Bair 2005, 2008; Henderson et al. 2002; Hess 2004).

Conversely, this study approaches the VC analysis from a different VC policy perspective and in doing so contributes to the policy formulation at the local-regional level. Hence, it brings that framework to the regional level where crucial decisions at the micro and meso-level are taken. The study expects to enhance Gereffi's GCC framework and apply some of its analytical categories (input out structure-and governance amongst others) to the study of regional value chains and complement the framework, including regional factors and their interaction with VC factors in the analysis of policy process effectiveness of VC-based development policies. It is important to point out that Gereffi's framework is a comprehensive one, though it is necessary to bring the analysis to lower layers of territorial analysis.

During the last decade, efforts were made to bring the VC analysis to the regional level (clusters-industrial districts). In fact, alternatively, the GVC approach has been combined with the cluster studies for the analysis of clusters of both developing and, lately, developed countries. It has also been complemented with the industrial district approach (Halder 2004; Meyer-Stamer et al. 2004; Rabellotti 2004; Schmitz 2004). Likewise, the GVC chain framework is increasingly regarded as a tool for policy design and delivery (Kaplinsky 2008), and for the undertaking of contemporary locational policies. The latter involve the establishment of

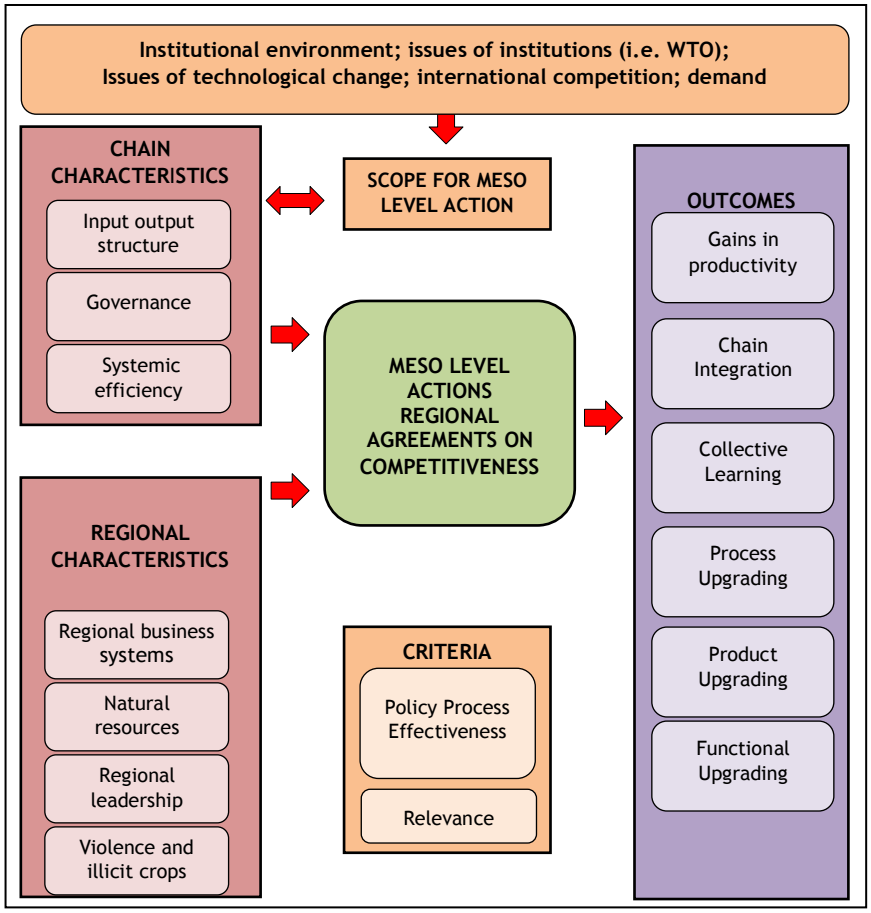
roundtables, collective and concerted action amongst public-private sector stakeholders and other types of partnerships or alliances for local economic development, as described by Meyer-Stamer (2004). Nevertheless, the public-private partnerships for VC development have been less documented, leading to a literature vacuum on this subject, though there is a growing awareness about their policy potential to promote the improvement of the livelihoods of rural small holders and micro and small industrial entrepreneurs through participatory approaches (Helmsing et al 2011; Meyer-Stamer 2004; Morris 2001; Ruben et al 2007; van Wijk et al. 2009).

3.4 Analytical Framework Description

Since the focus of attention of VC analysis is slowly moving towards regional issues, through the design and application of this analytical framework, we expect to contribute to this effort by shedding light on the influence of VC factors and regional characteristics on the degree to which meso-level actions are formulated and implemented and on their likely outcomes on local regional development. This progress would pave the way for the job of scholars and policymakers who are moving into this specific field.

This section develops thoroughly the *analytical framework* proposed for the study and mentioned in Chapter 1. It draws on VC analysis, local-regional theories and concepts, and concentrates on meso-level development policies at the level of VC. It is composed of four main elements (figure 3.1): 1) value chain factors, 2) regional characteristics, 3) competitiveness agreements at the level of VC, and 4) policy process effectiveness of competitiveness agreements. These key elements are discussed in detail in this section, based on the theories and concepts that support them.

Figure 3.1
Integrated framework for value chain policy analysis



Source: This research.

3.4.1 Value chain factors

Gereffi's definition of global commodity chain applies particularly to the study of commodity chains led by global buyers or producers in the international context. VCs at the international, national, regional or local level share many similarities in their operation *within* the global commod-

ity chains, though they have more limited geographical spread (McCormick and Schmitz 2002: 43). For analytical purposes, this framework is adapted to this study of regional VCs. It incorporates analytical categories developed by Gereffi (1994) and Kaplinsky (2001), namely the VC's economic structure, governance and institutions, and systemic efficiency.

The concept of agro-industrial VC is used in this research to describe the set of productive (value-added) activities that are necessary to bring a product from its conception and design throughout different stages, up to its end use. This process includes amongst others: the sourcing of raw materials, production and agro-industrial processing (incorporating the input of producers' services (and in a number of cases physical transformation), distribution, retailing, final consumption and disposal after use. The concept also comprises the inherent power relations (organization and control) that take place amid the chain's stakeholders in the process of coordination of production and the geographical spread of the links (Barrientos 2003; Gereffi 1999; Kaplinsky and Morris 2002; Mayoux 2003; McCormick and Schmitz 2002; Sturgeon 2001).

VC economic structure: In the context of the Global Commodity Chain framework (Gereffi 1994), a VC's economic structure refers mostly to its input-output structure. That is, the set of technical and economic input-output relations that are established among the different VC links. These exchanges take place through the supply of raw materials between links and add value to the final product along each stage of the productive process necessary to bring a product from its conception to its end use. In the study of VC economic structure, this study gives special attention to the dynamic rents (*entry barriers and rents*). The study of the VC input-output structure supports the identification of key sources of power in vertical networks, related to the governance structures that are shaped along the different VCs.

Barriers of entry and rents: Rents are a dynamic variable that have a changing composition within the VC and reflect changes in the VC economic structure, rent distribution as well as in the VC governance. 'Rents arise from the control of scarce valuable resources, and to be appropriated, require protection from competition. This is reached by taking advantage of, or by creating, barriers to entry' (Kaplinsky 2000: 287). According to Papalcuer, 'entry barriers allow lead firms to increase their bargaining power over suppliers and customers, reduce their exposure to

competition, and increase their profits above the industry average' (1997: 26).

As Kaplinsky (2008) observes, there are four major *categories of rent*. The first is monopoly rents, which 'arise when actors are able to utilize their "political power" to limit access, either to other buyers or to other sellers'. The second is resource rent; 'this rent arises as a natural bounty of nature, in which natural resources of varying yield are unevenly distributed spatially'. The third category is the endogenous rents that 'are constructed by chain participants, such as innovations in process, or branding over product'. Finally, the exogenous rents, 'which are set by parties external to the chain, such as governments, the efficiency of complementary sectors or the availability of natural monopolies', for example: infrastructure, financial intermediation, effective property laws, law and order, property rights'(2008: 287-300). According to Kaplinsky, leading firms protect their rents from competition by means of previous or new entry barriers such as: scarcity, regulatory exclusion, non-availability of alternative sources, trademarks, know-how, patents, copyrights, procedures, legislation, legal enforcement procedures among others.

The endogenous rents are generated at the micro-level and provide the private sector with high command over them by means of 'unwritten process know-how, or by formal entry barriers such as trademarks, copyrights and patents' (Kaplinsky 2008: 300). Exogenous rents are generally reflected in legal frameworks and are largely outside the influence of chain participants (ibid).

In this context, it is important to point out that the agreements on competitiveness of value chains are vehicles to create endogenous and exogenous rents while the barriers to entry are relational.

The governance and institutional structure: the governance factor is related to the 'authority and power relations that determine how financial, material, and human resources are allocated and flow within the chain' (Gereffi 1994: 97). Governance, according to Kaplinsky et al. (2001), characterize the processes by which key firms in the VC set and/or enforce the parameters under which others in the chain operate. 'The question of governance arises when some firms in the chain work according to parameters set by others, when it happens, governance structures may be required to transmit information about parameters and enforce compliance' (2001: 20-2). Peter Gibbon (2001: 61), states that

governance is the 'rules of the game but mainly in relation to governance by and for lead agents'. In the same vein, Kaplinsky (2004) argues that governance addresses questions of power relations among different VC stakeholders, for instance, the determination of functions in the chain, the setting of performance standards required for participating in the VC and, where necessary, the coordination of VC upgrading processes through supply chain management procedures.

In short, 'governance refers to the inter-firm relationships and institutional mechanisms through which non-market coordination of activities in the chain is achieved' (Kaplinsky 2001: 20-2). Two distinct needs for coordination prompt governance structures to arise: 'first, high companies' involvement in supplier product specification implies coordination of supplier's activities. Second, the more they are exposed to risks as a result of the supplier's failures, the more they will directly intervene to coordinate and monitor the supply chain' (Gereffi et al. 2001: 4).

Since the current research characterizes governance in different regional value chains in Colombia, the concept of governance and its operationalization is very important. Two major concepts in relation to governance are worth considering. First, the main sources of power in governance, and second the types of governance in VC.

VC main sources of power

There are two main power sources originated from a multiplicity of barriers of entry and rents from which VC dominant firms underpin their governance: 'their market power…and their positioning in VC segments in which they can create and/or appropriate high returns' (Kaplinsky 1998, quoted by Gereffi et al. 2001: 1).

Market power: Related to relative position of a firm in a given market and the degree of control that it has over it.

Positioning in key segments has to be with the positioning of the main firms in key VC segments such as design, marketing, product development and network coordination. The positioning of VC governors in key segments of the VC such as transportation, processing and/or marketing gives a strong bargaining condition in relation to its suppliers.

The **distribution of gains** throughout the chain is a key issue related to the sources of power. 'Kaplinsky (2000), in particular, suggests that the ability to govern often rest in intangible competences (R&D, design,

branding, marketing) which are characterized by high barriers of entry and command high returns-usually reaped by developed country firms. In contrast, developing-country firms tend to be locked into the tangible (production) activities, producing to the parameters set by the "governors", suffering from low barriers to entry and reaping low returns' (Humphrey and Schmitz 2001: 20).

Indicators for different types of governance

This research takes into account the different indicators of governance developed by scholars in the VC field (Humphrey and Schmitz 2000; Mayoux 2002; McCormick and Schmitz 2002).

Market-based or arm's length relationship: Chains, networks or systems with many customers/many suppliers, repeat transactions possible but information flow limited, no technical system (Mayoux 2002: 15).

Balanced networks: Where suppliers have various customers, if suppliers have few customers, customers have few suppliers, there is intense information flow in both directions and both sides have capabilities that are hard to substitute, there is a commitment to solve problems through negotiation rather than threat or exit.

Directed networks: Where the main customer takes at least 50 per cent of output, customer defines the product (design and technical specifications), monitoring of supply performance by customer, supplier's exit options are more restricted than customer's, customer provides technical assistance, customer knows more about supplier's costs and capabilities than supplier knows about customer's.

Hierarchy: 'vertical integration of several chain stages with the firm, supplying establishment owned by customer or vice versa, very limited autonomy to take decisions at the local level. Having to consult or obtain permission from headquarters' (Mayoux 2002).

Finally, it is important to take into account in the characterization of governance along a VC that different configurations can appear in the same chain, 'governance can be exercised in different ways, and different parts of the same chain can be governed in different ways' (Humphrey and Schmitz 2001: 20).

Systemic efficiency

An important analytical component of VC analysis is that focus on the potential efficiency gains that are likely to be achieved because of VC integration. As stated by Kaplinsky (2000), 'effective value chains arise from systemic as opposed to point efficiency' (2000: 122). Systemic efficiency means VC efficiency. Firms increasingly have come to realize that individual activities in the productivity and competitiveness fields 'account for only a thin share of the product's total value added and unless it "governs" its chain to achieve broader levels of systemic integration, little more could be done to achieve competitive advantage' (Kaplinsky 2000: 126).

The leading firms in each VC approach this issue in different ways and with mixed results. The need for systemic efficiency becomes evident when the largest firms come to realize that the growing competitiveness challenges cannot be met by *point efficiency* activities. These involve the actions individually taken by the firm to solve its particular efficiency problems, since they are merely a part of a whole. Instead, to obtain meaningful competitive gains, firms need to, through their coordinating role, promote cost reductions, efficiency gains and compliance with process and product standards of its suppliers along the VC (Kaplinsky 2000, 2008).

Finally, it is important to point out that most VC research that is, projects and cases have been conducted with a clear bias towards governance issues including upgrading and other dimensions (input output structure, geography and systemic efficiency) have clearly been neglected. The latter have not been widely developed as analytical categories in the VC realm. Now it is time, as understood by a number of scholars (Blair 2008; Hess 2008; Humphrey and Navas-Aleman 2010; Kaplinsky and Morris 2008; Mayer-Stamer 2004; Morris 2001, 2002; Schmitz et al. 2004), to advance in the VC's relevance for policy delivery, for development cooperation, for private social accountability promotion and for locational policies in developing areas among others. In this line of thought, in this research we strive for a VC analysis more centered on the territory (local and regional issues) and consequently on the use of VC framework for local development policies. The study of Colombian policy of VC competitiveness agreements at the regional level reflects our concern and we expect to contribute to the enhancement of this new

trend of VC research and policy delivery from the lessons learned out of this unique experience.

3.4.2 Regional characteristics

The analysis of the regional characteristics is developed through a theoretical framework that combines the notions of business systems and embeddedness. In this context factors such as regional leadership, natural resources and illicit crops and violence are included.

The GCC literature is largely concerned with issues framed at the global-spatial level of analysis. To overcome such restriction, this study complements the GVC literature with the Global Production Network literature, which affirms that 'an understanding of the "territoriality" of production networks–namely, how they constitute and are re-constituted by the economic, social and political arrangements of the places they inhabit – is central to an analysis of the prospects for development at the local level' (Henderson et al. 2002: 446). This research acknowledges that VCs are socially and spatially embedded configurations as it is recognized by several scholars who have developed or applied the global production networks literature (Bair 2005, 2008; Henderson et al. 2002; Hess 2004). According to Hess (2004: 176), 'embeddedness basically signifies the social relationships between both economic and non-economic actors (individuals as well as aggregate groups of individuals, i.e., organizations), and economic action is grounded in "societal' structures"'.

As it is argued by Henderson et al. (2002: 451), 'GPNs do not only connect firms functionally and territorially but also they connect aspects of the social and spatial arrangements in which those firms are embedded and which influence their strategies and the values, priorities and expectations of managers, workers and communities alike'. It means that to conduct a comprehensive analysis of the performance of firms and outcomes of VC development policies carried out at the regional level, the vertical analysis of the functional and territorial links of firms provided by the VC framework ought to be complemented with a horizontal analysis of economic institutions and the interaction of chain and non-chain actors in a given territory where the value chain has a stake. Besides 'the business system approach…begins with the fact that each economic actor is anchored "horizontally" in a specific society or geo-

graphical setting that may also affect its performance' (Andriesse et al. 2011: 151).

Whitley (1999: 19) regards business systems as 'the ways that economic activities are organized and controlled' or governed through market economies. 'The comparative analysis of business systems presumes that distinctive ways of organizing economic activities become established and effective because of major differences in key social institutions such as the state, the financial system and the education and training system…as well as more diffuse factors such as cultural preferences and beliefs' (Whitley 1992: 13). This analysis is carried out by Whitley (1992, 1999, 2007) mainly at the national level though he states that '[n]ot all cohesive and stable business systems are nationally specific and bounded…the nature of firms, their strategies, and capabilities frequently vary, between sectors, technological regimes, and regions within countries' (Whitley 2007: 35). Andriesse et al. (2011: 156) argue that

> [T]here is ample reason to assume that different scale levels may impinge on the operation of a particular business system. The international arena, national governance and specific sub-national regional constellations may interact in complex ways, differentiating outcomes between localities. Interestingly, this recognition of multiple scalarity introduces an element of value chain analysis in business systems.

Some scholars have applied the business systems framework to conduct studies at the subnational level particularly in southeast Asia (Andriesse et al. 2011; Van Helvoirt 2009).

The business system approach explores '[h]ow different kinds of societal institutions governing business activities encourage firms and other strategic actors to develop varied organizational capabilities that enable them to compete effectively in different kinds of industries and markets' (Whitley 2007: 5). As Helmsing et al. (2011: 3) point out: endogenous business systems have a multi-dimensional and evolving nature. The horizontal dimension of networks of firms denotes the way firms' relationships are shaped by the institutional context. A key source of power in the regional business system emerges from the relationship between public sector and firms. In addition, 'state business relations concern, according to business systems theory, the way in which economic business interests are represented and the ways and means by which the state

supports economic development, especially through upgrading technology, human resources, and development finance' (2011: 12).

3.4.3 Multi-stakeholder development partnerships at the level of value chain (competitiveness agreements of value chains)

Van Westen (2002: 58) contends that an appropriate way of promoting local economic development is a 'moderate political embedding of the economy, where the state, in partnership with the private sector and civil society organizations can create a framework conductive to growth'. The value chain-based development policies contribute to the above endeavor, in fact, the VC framework is increasingly being used as an analytical tool for policy design and delivery (Humphrey and Navas-Aleman 2010; Kaplinsky and Morris 2008: 294). In this context, the promotion of governments, business and NGO partnerships for VC development has become a central component of the competitiveness policies in Colombia as well as in other Latin American countries. According to Humphrey and Navas-Aleman,

> Rather than aiming at broad-based solutions for market development, value chain analysis works more directly on the linkages between agents in the market in order to reduce the costs of inter-firm coordination, maximize flows of knowledge along the value chain to overcome deficiencies in information about markets and technologies, increase the potential for value-adding strategies based on intangible attributes, and create trust so that people feel safe to make investments for the future (2010: 99).

The public/private partnerships for development do not constitute a new, recently introduced policy device in development literature. On the contrary, these partnerships are considered a key feature of local-regional development policies, in particular since the beginning of the 1990s, amidst the decentralization and economic restructuring processes. Nevertheless, the public/private partnerships for VC development have been less documented, leading to a literature vacuum on this subject. However there is growing awareness about their policy potential to promote the improvement of the livelihoods of rural small holders and micro and small industrial entrepreneurs through participatory approaches (Meyer-Stamer 2004; Morris 2001; Ruben et al. 2007; van Wijk et al. 2009).

A competitiveness agreement involves collective action in the form of schemes of private-public partnerships whose main goals in the case of

agro-commodities are the promotion of the agricultural sector, a better integration of the links and improvements in productivity to foster the national and international competitiveness of the local-regional production and the overall socioeconomic development of the region. All the competitiveness agreements have at least three main components: a strategic diagnosis agreed by main VC stakeholders, a collective vision for the VC and a plan of action to reach the vision (matrix of commitments). The main subjects regularly discussed and included in the different regional agreements on competitiveness for VCs in Colombia are the following: human resource development, technological development and transfer, information systems, international markets, organization of producers and production costs.

The discussion and signing of a CA is not free from contradictions, though the actual conditions make it necessary to reach consensus about key common issues that favor cooperation, though competition amongst firms is not excluded. It is important to point out that each stakeholder (firms, producer associations, governments, NGOs) has independent development intervention goals as well as strengths and weaknesses to meet the competitiveness challenges posed by globalization at the regional or sub-national level. For instance,

> The private sector has an interest in building networks of contracts with groups of small producers, and is able to implement quality standards and provide key inputs and to organize supply chain logistics. However, companies often are (understandably) reluctant to accept the high up-front costs of supplier development programs for previously excluded small producers and often tend to avoid high risks of supplier failure by engaging with larger and experienced producers (Helmsing et al. 2008).

Thus, greater needs for cooperation and coordination in their development interventions arise. Likewise, a great deal of commitment and imagination by the local-regional governments is necessary to make these public-private partnerships functional.

A regional council of competitiveness carries out the coordination of these partnerships for the VC. It is a modern and flexible instrument designed to deal with relevant issues related to the CAs. It includes members in representation of the different links of the VC such as leading entrepreneurs, business interest associations, producers' associations, universities, sectoral research centers, members of the national and/or

regional governments amongst others. The councils do not generate bureaucratic structures, though they provide an optimal space for cooperation among different stakeholders of the VCs and for the coordination of the CAs.

In sum, the VC competitiveness agreements work under the logic of public-private partnerships for VC development. According to Walzer and Jacobs (1998), 'Partnerships are in a continual state of flux and adapt to changing local needs. They often begin with loose and informal networking by private and public agencies but then are transformed into more structured organizations, incorporating resource commitments by the participants'. In general, CAs facilitate this transition from loose informal networks to more structured partnerships through the Regional Councils for Competitiveness, which are in charge of the CA's coordination, and it has kept them structured as non-bureaucratic organizations. The problem in such organizations is the risk of becoming a mere agreement of wills without accountability or resources, along with deficient monitoring and supervisory structures, hence there can be limitations to enforce compliance, and in many cases, there can be lack of commitment by the stakeholders included in the CA, given their diverse interests. Thus, the success of these participatory devices depends on the good will and mobilization capacity of those who signed it, and it depends on whether the CA addresses the real needs of those concerned.

3.4.4 Policy process effectiveness of VC competitiveness agreements

Taking into account that the research is about analysis of policy process effectiveness of competitiveness policies at the regional level including collective action, the research is instrumented to evaluate the products of interventions and their outcomes. The main criterion for the analysis is policy process effectiveness. For the assessment of effectiveness of the decentralized implementation of the national policy for productivity and competitiveness, the main instrument that will be analysed and will be taken as proxy is the *agreement on competitiveness* for the different chains included in the study. The sequence of analysis is as follows: agreement, activities, products and outcomes.

Agreement: The scope for collective action is examined (the agreements partially provide this information).

Activities: The matrix of commitments made by the chain's stakeholder is reviewed identifying the main activities to be carried out.

Products: To find out what activities have been carried out and what the products are.

Developmental Outcomes: These refer to the VC itself. They are explained in terms of improvements in the organization of the VC (e.g. upgrades, gains in productivity, etc.).

3.5 Conclusions: Common Ground

In summary, the different approaches considered shape the analytical frame of this research. This chapter elaborated on the key concepts and theories framing the current research and drew on three strings of academic literature—local and regional development theories and policies, competitiveness strategy and VC analysis. Finally, the analytical framework proposed for the study was developed in detail.

The contribution of Best's 'new competition theory' share many elements in common with Porter's, in the sense that they consider that competitiveness not only depends on the firm, but also on how the firm manages relations with other firms and with institutions, many of them local. Competitive advantage also derives from other sources, not only from the sources within the firm. Moreover, the network as well as the emphasis on market friendly *policies* constitutes a common feature of the different frameworks on which this research relies on (e.g. new competition, Porter's competitiveness approach and systemic competitiveness). Porter's diamond of competitiveness offers an important frame to understand the competitive environment of firms, to diagnose the firm's threats and opportunities and, to study the competitive responses of firms including their relations with support and related industries. This perspective is criticized in terms of the limited and indirect scope for government policies to promote competitiveness (Wignaraja 2003: 19). These central contributions complement and are complemented by the systemic competitiveness approach especially in regards to meso-level policies and institutions to create competitive advantage, which are central to this research. Competitiveness is the result of actions undertaken not only at the firm itself, or at the macro-level but at different interacting levels including competition and cooperation among several actors from firms, business associations, governments at different levels, sup-

port institutions and what Esser et al. (1996: 28) call, the organizational capacity of a society, but this organizational capacity needs to have a decentralized base. Finally, VC analysis provides an analytical frame to unravel these types of relations in international, national and regional value chains and to analyse the developmental outcomes of collective and private action at the regional level. Those contributions are a good departure point to carry out contemporary analysis of competitiveness strategy and support the meso-micro level stand that is taken in this research. Above all, it is important to acknowledge that 'regions become key players wherever important aspects of certain activities take place, namely, associational activity, learning capability, and networking practices among firms and governance organizations' (Cook and Morgan 2000: 59). In this sense, a more comprehensive analytical framework is needed to determine the way VC actors and non-chain actors, including the government, interplay at the local level and how these relations influence the outcomes of VC development interventions. Regional business systems and embeddedness offer a key framework to deal with these interactions and for 'the "horizontal" analysis of economic institutions within the territory' (Andriesse et al. 2011: 152). In particular, to study the influence of local-regional characteristics (economic and non-economic) on the outcomes of chain-based development strategies, as is the case of the CAs at the VC level.

4 Multi-Stakeholder Agreements at the Value Chain Level: Quality of the Agreements

4.1 Introduction

The VC framework is increasingly being used as an analytical tool for policy design and delivery (Kaplinsky and Morris 2008: 294). In this context, the promotion of governments, business and NGO partnerships for VC development has become a central component of competitiveness policies in Colombia. To understand the scope of these policies and to inquire into their likely process effectiveness, it is necessary to unravel the individual and combined influence of VC factors and regional factors on the CA and outcomes of VC meso-level interventions.

Chapter 4 elaborates on the quality of the different VC competitiveness agreements included in the study. It begins with the contextual setting of the research, which includes a brief description of the five VCs, then, continues with a short overview of their CAs. Next, the relevance and 'policy process' effectiveness of the respective CAs is presented. Finally, it ends with a section of concluding remarks.

4.2 Contextual Setting of the Research

The historical development of the economic structure of the selected VCs shows dynamic industrial sectors that contribute to the development of agricultural activities, which in turn support the capital accumulation processes of the former. These relations are not free from conflicts and public sector intermediation through sectoral policies has been crucial. This section presents a short overview of the VCs included in the five case studies. It focuses on a sectoral description of the VCs. A detailed description of each of the five regional VC cases selected for the

study and their respective CA is presented in chapters 9 to 13 on CD ROM.

4.2.1 Value chain cocoa-chocolate

A short historical overview of the sectoral development of cocoa production shows that it has been cultivated in Santander in significant amounts since the 18th century. Chocolate factories provided a boost to cocoa cultivation during the 20th century, largely in the northeastern region and other areas such as Antioquia, Tolima and Huila. 'Colombian cocoa exports remained constant until 1919. In 1920 the country became an importer to cater for the internal demand and this situation continued until the mid-1980s' (IICA 2001d).

The CNC S.A., the largest chocolate firm in the nation, was established in Antioquia in 1920 and soon became the largest table chocolate producer nationwide. The industrial growth of the firm was restricted during the first part of its operation by the short supply of cocoa in the country. The company achieved a large reduction of its dependence on imported cocoa during the 1950s and developed a strategic long-term plan to promote and enhance cocoa cultivation in the country. Therefore, throughout the 1970s there was a meaningful increase in internal cocoa supplies, which according to Kalmanovitz (1985: 98) accounted for about 65 per cent of the total supply in 1972. At present most of its cocoa input is sourced at the national level.

Cocoa production faced a severe crisis in Colombia during the 1990s due to low prices in the national market, crop diseases, deficient official assistance to producers and resource relocation to other crops amongst others. Competitiveness policies for the agricultural sector and programs such as PROAGRO have prompted during the last decade the recovery of cocoa at both national and regional levels. Currently more than 95 per cent of cocoa production is absorbed by the domestic industry and cocoa exports are minimal. In fact, the chocolate industry accounts for most of the VC cocoa-chocolate exports.

Most cocoa agriculturalists in Colombia are small producers who sell small quantities in the market. In 1993, there were 125,642 hectares of cocoa, and in 2004, there were 104,590 hectares with a total production for that year of 50,722 tons and 51,633 jobs (MADR 2010). Cocoa producers have been gradually updating their cultivation introducing certi-

fied seeds and replacing old plantations with new planting projects. The new projects funded by plan Colombia, NGOs and other public and private institutions are expected to increase considerably both the planted area and cocoa output of the country.

Cocoa is the main raw material used by the chocolate industry. In 2002, cocoa beans accounted for about 79 per cent of the total purchases realized by the industry. CNC S.A. and Casa Luker S.A. constitute an oligopsony and in 2004, they accounted for approximately 87 per cent of all cocoa sales in Colombia (MADR-IICA 2006b: 141). CNC S.A. has a processing plant in Rionegro (Antioquia) and another in Bogotá. The largest chocolate processing firms, including Colombina, concentrate the commercialization of cocoa, chocolate and confectionery and they have been gradually increasing their participation in international markets though they are not meaningful players at that level. Meanwhile, the participation of the small chocolate companies in the national chocolate industry is minimal. At the regional level, they represent the entire chocolate industry in Santander and have little participation in Antioquia. They produce mostly table chocolate, have predominantly a craft production structure and target the regional market in particular.

The northeastern region (Santander), one of the cases included in the study, is the largest cocoa producer in Colombia. In 2002 (year of the CA), the region accounted for 45.1 per cent of the national production and 41 per cent of the planted area (MADR 2006). The VC integration in the region was weak because most of the value-added was generated in other regions where the main agro-industries were located. The regional value-added was low because around 90 per cent of the grain was transformed in other areas. CNC S.A. and Casa Luker S.A. are located in the northeastern region with a high degree of control of the cocoa commercialization stage instead of being in the industrial link, thus, this deliberate strategy has positioned them as the major buyers of cocoa in the region. In this sense, they control access to raw materials. They have been embedded in the region for a long time while enjoying the advantages of first movers based on a solid network of buying points and appointed buyers.

In contrast, regional industry is missing key developments, maintains its small scale and has not obtained meaningful cooperation schemes involving larger industries.

Antioquia, the other region included in the study, is the sixth largest cocoa producer nationwide with about five per cent of total cocoa cultivation by area (MADR 2006). The location in the region of the headquarters of the largest chocolate firm in the country, the CNC S.A. including one of its two factories provide special conditions for the cooperation schemes contemplated in the CA. Fundamentally, it made collaboration opportunities between the regional government and the industrial sector available not only based on economic considerations, but also on social and other issues related to the historic embedding of the firm and its owners in the region. The public-private sector partnership targeted mainly the agricultural link (cocoa cultivation). This cooperation did not take place between the larger companies and the small chocolate regional firms.

4.2.2 Value chain dairy products

According to Agrocadenas (MADR-IICA 2005), the origins of the dairy industry in Colombia can be traced to the latter end of the 16th century when Spanish settlers imported livestock largely from Andalucía, Galicia and the Canary Islands. However, the largest influx occurred near the end of the 19th century when many specialized milk-producing breeds such as Holstein and Ayrshire were introduced from Europe, New Zealand and North America (2005: 918).

Raw milk production stretches nationwide but it is concentrated in four regions: Atlantic, Western, Central and Pacific. The milk market is led by the Atlantic and central regions. The Departments of Boyacá, Meta, Santander and Santander del Norte integrate the latter. National milk production has seen outstanding growth during the last 20 years; it increased from 2,002 million liters in 1979 to 6,645.68 million liters in 2004 (MADR 2005). Antioquia is the second largest producer of milk in the country. In 2002, it produced 969.8 million liters of milk, 16.2 per cent of national production. Although production took place in the whole region, the northern and southern areas of Antioquia, which in 2001 and 2002 accounted for 74 per cent of the regional production, were particularly important in the production of fresh milk (Vazquez and Giraldo 2004).

The sector has essentially two production systems: specialized milk production with 10 per cent of the total livestock and the milk produced

in double purpose programs comprising 90 per cent of remaining dairy cows (MADR-IICA 2001c: 20).

The dairy industry is the most developed link in the VC and has an oligopsonistic position in relation to the livestock sector. During the 1990s, the industry had outstanding growth, well above average of the manufacturing industry. Between 1992 and 2000, it increased its participation from 2.9 per cent to 4.1 per cent of the value of the national industrial production and employment increased 7 per cent to about 13,846 jobs in 2000 (MADR-IICA 2005: 924). Foreign investment and technology has influenced the development of the dairy industry. For example, Nestle incorporated milk powder and baby food in the mid-1950s and in the 1960s began the industrial production of yogurt and kefir During the next two decades there was a process of technological absorption, and the 1990s witnessed a vibrant period of technological development given the need of the dairy industry to become more competitive in the international markets (MADR-IICA 2001c: 43).

In 2003 there were 1067 firms dedicated to the milk industry in Colombia. Antioquia had 82 firms and 7.7 per cent of participation ranked fourth after Cundinamarca, Valle and Boyacá (MADR-IICA 2006c). The major industrial firms have positioned brands and significant commercializing channels. The dairy processing firms perform different functions within the VC and in certain instances are vertically integrated, as is the case of Colanta. On the contrary, craft industries are localized in rural areas or small cities and generally use limited technology (MADR-IICA 2001c: 44).

The dairy industry in Colombia is a growing sector with increasing exports. According to the Observatory Agrocadenas (MADR-IICA 2006c: 434),

> Around 88% of the national production of raw milk is absorbed by the sub-links dedicated to the production of milk powder and milk processing, while the remaining 12% is allocated to the maintenance of young bulls in the double purpose production systems (meat and milk) or is commercialized in metallic containers in rural areas, towns of smaller size or in strata 1 and 2 of the main cities of the country.

The VC has a large presence of domestic firms (formal and craft production) and the presence of foreign capital investments embodied in firms such as Parmalat, Nestle-Cicolac and DANONE.

In 2002, the main milk pulverizers in the country were Colanta, a domestic dairy cooperative based in Antioquia with 40.2 per cent of the total production of milk powder and two multinationals: Nestle-Cicolac (24.1%) and Proleche-Parmalat (16.1%). These firms concentrated about 80.4 per cent of the total national production consolidating an oligopoly in this market (MADR-IICA 2006c).

The location of two of the largest dairy processing firms in Colombia (Colanta and Proleche-Parmalat) supported by substantial production of raw milk have boosted the dairy industry in Antioquia. The dairy VC has softened the socioeconomic crisis in the northern and eastern parts of Antioquia, and above all, has contributed to employment and income generation in both rural and urban areas of the region (MADR-IICA 2001: 18). Antioquia is the main location of the largest milk cooperative in Colombia and one of the largest in Latin America (Colanta). Despite the fact that the latter did not support the CA in Antioquia actively, it played an important role in the daily business of the VC to the point that it claims to have its own VC (MADR-IICA 2001).

4.2.3 Value chain rice-rice threshing

Rice has been cultivated in Tolima from the onset of the 17th century, first in Mariquita and then in other locations such as Alvarado, Venadillo, Saldaña, Chaparral and Ibagué. Rice was also cultivated in Valle del Cauca in the 18th century. Cultivation on a commercial scale began in Ambalema at the end of the 19th century and an important modernization of the cultivation took place during the first decades of the 20th century including irrigation improvements (MADR-IICA 2001a; Ramos 2000). The following links in the VC rice-rice threshing are located in Tolima: agricultural production of rice (green paddy); industrial processing; threshing (white rice) and commercialization. There are few intermediaries and the VC depth is limited. Historically, Tolima has been the largest rice producer in Colombia and it consolidated as the first rice producer in the country during the 1950s with the systemic incorporation of mechanized modern agriculture. The crop is also produced in different regions of Colombia, largely the eastern plains, central zone, northern coast and, Santander and the Low Cauca.

Rice cultivation has remained steady in the context of commercial agriculture. There were 385,915 hectares planted in 1993 and in spite of the

difficult conditions that Colombian agriculture faced throughout the 1990s, the area under cultivation increased 23.3 per cent during the period (1993-2000) (MADR 2004). In 2004, about 511,248 hectares were cultivated nationwide, and about five Departments accounted for 77 per cent of the total paddy rice production (Tolima, Casanare, Meta, Huila and Norte de Santander) (MADR-IICA 2006d: 378)

Colombia is the third largest rice producer in America, after Brazil and the USA. Most of its production is allocated to the domestic market and its exports are marginal given the increasing tendency that domestic consumption has shown during the last decade. 'In 2000 the VC of rice generated US 521 million dollars, 72% in the agricultural sector (paddy rice) and purchased by the threshing industry, 7% by other inputs consumed by the industry and the remaining 21% was the value added by the industry' (MADR-IICA 2006d: 371).

There are about 100 rice-threshing mills in Colombia; 23 per cent are large firms, 16 per cent medium firms and the rest small and microenterprises. The industrial activity is concentrated and has an oligopolistic market structure since three of the firms (Molinos Roa S.A., Molino Flor Huila S.A. and Arroz Diana S.A.) sell about 50 per cent of the white rice consumed in the country (MADR-IICA 2006d: 383). The largest industrial firms are geographically concentrated in Espinal (Tolima) and have positioned their brands and own distribution networks.

According to Agrocadenas, the rice agro-industry has an important place in the overall national economy since it accounts for 6.8 per cent of the national food industry, 1.8 per cent of the total national industry and generates yearly about 4,500 direct jobs. The rice industry (threshing) in Colombia performs different functions within the VC: 'it funds producers, collects, prepares, stores, and funds the storage, processes the paddy rice, and carry out marketing, research and development and sells' (MADR-IICA 2006d: 369-82). In addition, the rice industry absorbs the entire domestic production of paddy rice.

The case of the VC rice-rice threshing in Tolima is characterized by first, a commodity whose production and commercialization is heavily subsidized around the world. Second, a crop produced with high productivity but that cannot compete against other countries given the price distortions in subsidies and other protection measures. Third, a crop that had domestic real price reductions during the decade of the 1990s. Fourth, a VC whose main links are highly protected by the government

by means of tariffs and nontariff barriers. Fifth, a VC in which the agricultural production and the white rice produced by the industry target mainly the domestic market and that only under special circumstances is opened to imports (mostly to cover the internal supply deficit) and exports. Six, a VC constantly threatened by smuggling. All of these facts put the price issue as a central point in the agenda of the relationship between rice producers and the threshing industry and the government as a third party (referee) with or without a CA. The profitability of the sector is decided largely by government policies domestically and abroad. For instance, the price band fixed by the government and a prior approval of imports protected the price of rice. However, the tendency by the industry to import the grain introduces several tensions among the rice producers and the rice-threshing industrialists who enjoy an oligopsonistic position in the market.

4.2.4 Value chain cotton textile clothing

The textile industry embodies a significant chapter in Colombian economic history. During the 18th century and part of the 19th century, Santander had dynamic, specialized artisan textile manufacturing with products made of cotton and wool. However, the early industrialization process and the sophisticated imports of equipment, fabric and other materials from England challenged their competitiveness given their precarious technological level. At the start of the 20th century, attention shifted toward Antioquia. In 1910, Antioquia had a textile factory located in Bello, the Colombian Textile Company (Coltejer) in Medellin and other firms located in this sector on a smaller scale (Tirado 2008: 18). In 1925, the textile industry had not less than 20 firms including Fabricato. The factories from Antioquia counting Tejicondor had a dominant position in the market all through the first half of the century.

During the period 1977-1983, the textile sector evidenced signs of decline and loss of competitiveness from the textile industry boom in South Korea, Taiwan and Hong Kong and then, by other Asian countries such as Indonesia, Malaysia and India, lack of investment and productivity and the smuggling phenomenon. The national government responded with incentives and other measures to protect the domestic industry through the abrupt economic opening of the early 1990s. The liberalization policies affected the industrial sector severely, with stiff competition from abroad and a reduction of favorable sectoral policies

from the state. This situation led many textile and garment firms to insolvency, some of them went bankrupt and in 1995, there were about 14 firms filing for bankruptcy deals (called *concordatos*) with the government (Rojas 2003, cited by MADR-IICA 2006a: 341). The hardships for the industry continued until 2000 when the sector began a recovery aided by the competitiveness policies including the multi-stakeholder CAs and a better response to domestic demand and exports.

In 2004, there were about 549 textile firms (weaving and fabric). According to their size, 60 per cent were microenterprises, 16 per cent small firms, 11 per cent medium enterprises and 12 per cent large firms. The textile industry is located mainly in largest consumption centers; Bogotá DC and Medellin account for about 70 per cent of all firms (MADR-IICA 2006a: 344).

According to Agrocadenas (MADR-IICA 2006a: 345-46), the garment industry had approximately 8,319 firms in 2003. Classified by size, 90 per cent were microenterprises, 7 per cent small firms, 1.7 per cent medium and 0.95 per cent large enterprises. It is important to point out that 13 per cent of firms were dedicated to assembly activities (*maquila*). The garment firms are geographically located in the largest industrial centers of the country. Medellin is the leading city in textiles, fashion and clothing; it has about 18 per cent of all firms including the largest, Bogotá DC 23 per cent, Cali 7.1 per cent, Bucaramanga 5.2 per cent, Cucuta 2.1 per cent, Barranquilla 2 per cent, Cartagena 1.8 per cent, Pereira 1.6 per cent and Ibagué 1.1 per cent.[1]

Cotton production is carried out by small producers in most of the country: more than 90 per cent are units less than 10 hectares (MADR-IICA 2006a: 338). During the 1950s, Tolima grew to be the leading region in cotton production accounting for about 70 per cent of the total national harvest. The country became a cotton exporter and enjoyed that position for three decades from the 1960s to 1993 when it became a net importer of cotton to meet its internal demands due to low international fiber prices associated with soaring subsidies in the most important cotton producing countries, differences in productivity, the reduction of import tariffs for this commodity in the country and the decline of institutional support for cotton growers. There was a steady decline in cotton prices for about a decade from 1993-2002, which reduced the profitability of the crop; hence, there was a redistribution of investments from cotton to other more profitable crops. The planted hectares in cotton fell

from 113,634 in 1993 to around half (52,229) in 1999. The cotton crop had a tenuous recovery in 2004 to reach 66,258 planted hectares. The additional production prompted a reduction of imports though the country keeps importing more than half of its cotton demand (MADR 2005).

4.3 Agreements on Competitiveness (CAs)

This section presents a synthesis of the main aspects of the regional CAs for the VCs included in the study (for further details see case studies 1 to 5 in chapters 9 to 13 on CD ROM).

Table 4.1
Overview of the Case Studies (sectoral and regional CAs)

Antioquia	Northeastern region (Santander)	Tolima
· Cocoa-chocolate (National -sectoral- 2001; Regional 2002). · Dairy products (National 2001; Regional 1999).	· Cocoa-chocolate (National-2001; Regional-2002).	· Cotton-textile-clothing (National 1996, 2000; Regional 1999; PROAGRO 2000). · Rice-threshing (National 1998; Regional 2000).

Source: MADR-IICA

4.3.1 CA of the VC cocoa-chocolate in the northeastern region

In general, the regional CA is an agro-production oriented development intervention whose main goal is to increase production through increases in productivity and in cocoa production area in the region. The VC faced the challenge of increasing productivity from 437 kilos/hectare to 1200 kilos/hectare, and the renovation of about 33,000 hectares and planting of 37,900 new hectares in the region over a 15-year period.[2] Thus, the VC had the goal of increasing production to fulfill the deficit of domestic supply and generate surpluses for exports. One of the main goals of the CA and particularly of the main firms was to develop crop planting further because the country was importing cocoa. In short, the CA embodies a positive sum game for the members of the VC. The large firms expected to gain access to raw material; assure quality and quantity with stable prices. The agro-producers expected to raise productivity and

hence profitability. Finally, the government expected greater macro-sectoral policy coherence and a meaningful reduction of cultivation of illicit crops and of the armed conflict (see case study 1 in chapter 9 on CD ROM). The CA offered excellent opportunities for cocoa producers and industrialists given the national chocolate industry's unsatisfied demand for cocoa. High demand for cocoa accompanied by a domestic supply shortfall stimulated the CA. Supply constraints in the international markets (crisis in Ivory Coast) and the good quality cocoa produced in Colombia made it optimal for the industry to buy in the domestic market; hence, the demand for new production was assured. It generated a special condition for signing the CA since the main chocolate factories were willing to cooperate with the agriculturalist to increase the supply and quality of cocoa in the market. It is important to highlight the fact that private resources from the companies, NGOs and Fedecacao, and funds from the national, regional and local governments as well as from international organizations were available to promote the production of cocoa in the region (see case study 1 in chapter 9 on CD ROM).

4.3.2 CA of the VC cocoa-chocolate in Antioquia

This case shows a financially and administratively robust regional government with a strong will to participate in the CA based on its social agenda. Although the regional government through the Agricultural Secretariat had an important part in the CA, the institutional development of the region provided opportunities for more participation of the members of the VC. In this sense, the administrative organization of the cocoa-chocolate VC in Antioquia was different from the traditional scheme of a regional council for competitiveness and a technical secretariat.

The CA had as a stated goal the establishment of 6000 new hectares of cocoa and the renovation of 2000 to total 10,500 hectares in production in the year 2015. For the same period, the agro-industry aimed to process about 55 per cent of the crop. The CA was divided into four main strategies: regional focalization of cocoa development, productive modernization of the VC, social development in productive areas and external markets penetration. The regional government participated in all of them as responsible for certain activities. The largest chocolate companies were the primary participants from the private sector: CNC S.A.,

Casa Luker S.A. and Fedecacao (MADR-IICA 2000) (see case study 4 in chapter 12 on CD ROM).

4.3.3 CA of the VC dairy products in Antioquia

The dairy products VC during the 1990s was facing several challenges associated with increasing pressures to become more competitive in the face of international markets' state liberalization policies. The main stakeholders of the regional VC were interested in increasing their competitiveness while fully recovering from the economic crisis amidst the opening of the Colombian economy. The industrial sector was particularly interested in strengthening raw milk production and improving quality. Nevertheless, price setting was a very divisive issue because the milk industry was interested in market driven price fluctuations, while raw milk producers wanted institutional price regulation, to protect them from seasonal supply situations and unfair practices from the commanding market position of the industry.

In the context of the CA, the VC level action was conceived in three different domains: public, private and collective. The public sector action was oriented primarily to the development of productive infrastructure such as collecting centers for cool or processed milk, improvement in road transportation, education and training. At the national level, the most important activity carried out by the government was the regulation and monitoring of crucial VC variables such as milk quality and price. Private action related to productivity issues at the firm level: diversification of production, reduction of processing costs, innovation and updating of equipment and certification of production among others. Finally, collective action targeted activities such as structuring and development of a cleaner production agreement, development of new price schemes, technology development and transfer, development of an information center for the dairy VC, creation of a center for innovation and technological development for the dairy subsector, promotion of consumption and a dairy culture (see case study 5 in chapter 13 on CD ROM).

4.3.4 CA of the VC rice-rice threshing in Tolima

The background to the regional CA of the VC rice-rice threshing in Tolima is in the sectoral (national) CA for the rice VC signed in 1998. It stated that 'on average, the rice VC was not competitive and that such a

situation had been worsening during the last six years, as it was shown by the increasing gap between internal and external prices and the imports' upward tendency, which led the country to lose its condition as a net exporter of rice surpluses (IICA-MADR 1998: 6).

However, the dynamics of the two main links at the time of the CA was typical of a growing VC in the process of recovering from the effects of economic opening during 1991-1995. This fact, plus the common need to increase productivity and competitiveness to stay in the market within the global economy influenced the CA of the VC. The CA of the VC rice threshing in Tolima was the second regional CA signed in the country.

The VC level action was conceived in the public and collective domains. The public sector had to support the infrastructure for the CA in issues of irrigation, training, research and transfer (ICA, Corpoica, Regional Government and University of Tolima). In terms of collective action there was a scope for training, technical transfer and coordination of rice qualities. Since prices were not the source of cooperation with agriculturalists, cooperation between industrialists and agricultural producers could take place on the issue of quality and production (a steady supply of rice). In this sense, the proximity of the links had a potential for technological transfers to rice producers and other types of cooperation (Corpoica 2000). The commercialization of their own brands carried out by the larger threshing mills offered opportunities for cooperation with rice producers to assure quality and volume and with smaller industrialists from which they also bought white rice. Commitments were made in the areas of: rent of land and soil preparation, seeds, financing and credit, training and transference, markets and information systems (see case study 3 in chapter 11 on CD ROM).

4.3.5 CA of the VC cotton-textile-clothing in Tolima

The CA for the VC is developed in a region that was severely affected by the eruption of a volcano in November 1985 in which more than 30,000 people died and a city in the northern part of Tolima called Armero was destroyed. The national government reacted by giving tax exemptions and guaranteeing free import duties to new enterprises that settled in the region over the next decade. The case analyses the different economic and power relations in the VC in the context of the CA as far as Fibrato-

lima (a regional firm created in the aftermath of the natural disaster) sought to break the long standing monopsony of Diagonal (controlled by Medellin larger textile firms), by seeking regional VC integration through a directed network type of governance. In this sense, the CA is regarded as an instrument for competitive struggles between lead firms. This is a case where the VC is constructed locally by a new emerging lead firm, which eventually collapsed under the impact of its efforts.

In the background of the CA, the cotton, textile and garment sectors were enduring a great economic crisis since they were affected by the opening up of the economy and the adverse international market conditions. Cotton production dropped in Tolima to the lowest level of the decade from 55,000 hectares cultivated in 1991 to 5,437 hectares in 1999 (MADR-IICA 2001). Meanwhile, the textiles and garment links had to cope with low demand for their products, imports, smuggling and currency appreciation. It was reflected backwards in the whole VC. Fibratolima, a leading regional textile firm, was hit hard by the economic crisis in Colombia during the second half of the 1990s. Also, the economic crisis of the country amidst the economic restructuring to face it shaped the context in which the CA was formulated and actually performed (see case study 2 in chapter 10 on CD ROM).

The CA included goals for the period 2000-2005. The main goals were increasing the cotton-cultivated area to 70,000 hectares; doubling cotton consumption to 40,000 tons, obtaining productivity per hectare equivalent to 2.2 tons, generating around 166,000 direct and indirect jobs in the Department of Tolima distributed as follows: 125,000 in the cotton production, 15,000 in the textile industry and 26,000 in the clothing industry. The specific strategies of the CA were human talent development, technical and technological development, production development, market development, and development of a competitive environment (MADR-IICA 2001).

4.4 'Policy Process' Effectiveness and Relevance of the VC CAs

4.4.1 'Policy process' effectiveness of VC CAs

Herzberg and Wright argue that

> [C]ompetitiveness partnerships need to be nurtured over the long term. As an umbrella process and a focused outlet for engagement of all relevant actors, definition of reform priorities, consensus building and filtering, proposition, implementation and monitoring of PSD reforms, launching them adequately is not close to being sufficient. Maintaining the momentum, periodically reviewing processes and results, and efficiently addressing the risks involved with maintaining a lively and productive dialogue are crucial issues (2005: 37).

All of these measures are necessary to foster the policy process effectiveness of a multi-stakeholder development partnership at the VC level.

This section addresses the issue of process effectiveness of VC competitiveness agreements based on a combination of both performance and process evaluation. The emphasis is mostly on the latter since it is important to determine the way the VC-based development policies are carried out at the regional level, the process that involves the composition of the regional council for competitiveness, the functioning of the technical secretariat, the definition of commitments and the coordination and development of the CA. As Rodrik (2004: 3) observes, the

> [A]nalysis of industrial policy needs to focus not on the policy *outcomes*– which are inherently unknowable ex ante but on getting the policy *process* right. We need to worry about how we design a setting in which public and private actors come together to solve problems in the productive sphere, each side learning about the opportunities and constraints faced by the other, and not about whether the right tool for industrial policy is, say, directed credit or R&D.

This section evaluates the five VCs included in the study using a set of three criteria and six indicators. Each VC was scored for each indicator using the following score levels: 1 (poor), 2 (average) and 3 (good); these scores have a comprehensive description for all indicators.[3]

Box 4.1
Policy Process Effectiveness:
Criteria and indicator selected for the evaluation

1. Formulation and development of the CA
   1.1 Quality of commitments
   1.2 Degree of achievement
2. Composition and dynamics of the Regional Council for Competitiveness
   2.1 Functioning of the technical secretariat
   2.2 Composition of the regional council
   2.3 Dynamism of the regional council
3. Life cycle of the agreement on competitiveness
   3.1 Trajectory of competitiveness agreement

The selected criteria to analyse the policy process effectiveness of VC agreements on competitiveness were: 1. Formulation and development of the CA; 2. Composition and dynamics of the regional council for competitiveness; 3. Trajectory of the CA. Appendices 8-10 describe the indicators developed for each criterion and the description of the scores (see box 4.1). For this section we received great support from the regional and national secretariat of each VC as well as from various members of the regional and national councils for competitiveness through direct interviews with them. In addition, the minutes of the meetings of the regional and national councils and the reports of the technical secretariats to MADR-IICA provided important insights and information to analyse the policy process effectiveness of the CAs. The evaluation includes the CA, the functioning of the regional councils for competitiveness and the interrelation between both as included in the indicator 'trajectory of CAs'. Through this analysis, we conclude with a definition of which CA can be more meaningful for the development of both the VC and the region. That is, a CA that not only fulfills the goals of the key stakeholders involved in the CA but also fundamentally consolidates the coordinating capacities of the VC.

Table 4.2
Policy Process Effectiveness of VC CAs, summary of criteria and indicator scores

VALUE CHAIN	Agreement on Competitiveness		Regional Council for Competitiveness			Trajectory of CA	Average score	Ranking
	1.1	1.2	2.1	2.2	2.3	3.1		
Cotton-textile-clothing Tolima	2	2	2	2	2	2	2	2
Rice-rice threshing Tolima	2	1	2	2	1	1	1.5	3
Cocoa-chocolate Antioquia	2	2	2	2	2	2	2	2
Dairy products Antioquia	2	2	2	2	2	2	2	2
Cocoa-chocolate Santander	2	3	3	2	3	3	2.7	1

1. **Formulation and development of the CA:** The five VCs received an intermediate score in relation to the quality of commitments formulated during the discussion of the CA (see appendix 8 and 11). Although to varying degrees, all agreements are formulated of a mixture of well-structured commitments with other incomplete ones in terms of financial and administrative responsibilities by the members of the CA. In other words the competitiveness agreements of the different VCs contain a mix of clear and ambiguous lines of action and of concrete and vague commitments. It is expected that a CA with *good quality commitments* should have mostly well-structured commitments with clearly defined goals and measurable activities, with allocation of financial, human and material resources and timeframes set for their development. The institutional responsibilities are stated explicitly.

   The CAs of the five VCs present a different degree of achievement in terms of percentage of commitments partially or completely developed during the timeframe of the CA. Cocoa-chocolate Santander had a good degree of achievement, which means that more than 60 per cent of the commitments were fulfilled. The VCs cocoa-chocolate and dairy products in Antioquia and the cotton-textile-clothing in Tolima had an intermediate indicator, and finally the VC rice-rice thresh-

ing in Tolima had a poor degree of achievement since less than 20 per cent of the commitments were fulfilled (see appendix 8 and case studies 1 to 5 in chapters 9 to 13 on CD ROM).

2. **Composition and dynamics of the Regional Council for Competitiveness (RCC):** The composition and dynamics of the regional council for competitiveness is very important for the adequate development of a CA, since it is in charge of the coordination of the agreement. The CA of the cocoa-chocolate VC in Santander had the most dynamic and operative regional council for competitiveness. It met three criteria. First, during the period of the CA it had an active technical secretariat (a person or an organization) with technical and administrative experience in VC related issues; adequate funding with private and/or public contributions; and recognition by most of the VC stakeholders. Second, the RCC comprised most of the links of the VC and had active public and private sector participation, including the leading firm(s) of the VC. It also included NGOs, small, medium and large agro and industrial producers, business interest associations, producer associations, universities and centers of productivity. Moreover, council members had decision-making power. Third, the regional council presented high dynamism. The RCC met regularly and had supporting technical committees, solid information flows and a high degree of commitment of VC members. Meanwhile, the cocoa-chocolate and dairy product VCs in Antioquia and the cotton-textile-clothing VC in Tolima were in an intermediate position; and the rice-rice threshing VC in Tolima had a less dynamic and operative regional council for competitiveness (see appendix 9 and case studies 1 to 5 in chapters 9 to 13 on CD ROM).
3. **Life cycle of the CA:** This section deals with the trajectory of the CAs and the regional councils for competitiveness and the degree of fulfillment of the agreements. The CA of the VC cocoa-chocolate in Santander had the highest score in this indicator. The CA followed a trajectory from the signing to fulfillment of more than 60 per cent of the CA's goals and the renewal and permanence of the agreement, the technical secretariat and regional council for competitiveness. The VC rice-rice threshing in Tolima had a poor score in this indicator. The life cycle of the CA of the rice-rice threshing VC had the following path: signing of CA-partial fulfillment of the CA's goals (less than 30%) and dissolution of the technical secretariat and regional council

(see appendix 10). Finally, the VCs dairy products and cocoa-chocolate in Antioquia and the CA of the VC cotton-textile-clothing in Tolima had an intermediate score in this indicator and followed a set path. That is, signing of CA, partial fulfillment of the CA's goals (between 31 and 60%), dissolution of the technical secretariat and loss of functionality of the regional council for competitiveness (see case studies 1 to 5 in chapters 9 to 13 on CD ROM).

In conclusion the *most effective* CA for the development of the VC and of the region is the CA of the VC cocoa-chocolate in Santander. The VCs cocoa-chocolate and dairy products in Antioquia and the VC cotton-textile-clothing in Tolima had an *intermediate process effectiveness* and finally the VC rice-rice threshing was the *least effective* (see table 4.2 and appendix 11).

4.4.2 Relevance of the CA

A CA is relevant if its activities contribute to develop the goals and expectations of the key regional stakeholders involved in the CA. This section evaluates the five VCs included in the study using a set of three criteria and three indicators.

Table 4.3
Relevance of VC competitiveness agreements:
Summary of criteria and indicator scores

VALUE CHAIN	Out-comes/ Goals	Support corporate goals	Activities	Average score	Ranking
	1.1	2.1	3.1		
Cotton-textile-clothing Tolima	2	2	3	2.3	3
Rice-rice threshing Tolima	2	2	1	1.7	5
Cocoa-chocolate Antioquia	3	3	2	2.7	2
Dairy products-Antioquia	2	2	2	2.0	4
Cocoa-chocolate Santander	3	3	3	3.0	1

The selected criteria to analyse the relevance of VC agreements on competitiveness were: 1. Characteristics of outcomes; 2. Contribution to

corporate goals; 3. Improvements in VC coordination. The selected indicators were: 1.1 Relevance of outcomes; 2.1 Relevance of activities and 3.1 Degree of coordination. Each VC was scored for each indicator using the following score levels: 1 (low), 2 (intermediate) and 3 (high); these scores have a comprehensive description for all indicators. Appendices 12-15 describe the indicators developed for each criterion and the description of the scores (see table 4.3 and appendix 15).

1. **Characteristics of outcomes**: A CA is relevant if it contributes to the solution of the problems that it is supposed to address. To study relevance, it is necessary to address the relationship between the objectives of the CA and the outcomes of it. In other words, the outcome of the CAs should constitute a positive contribution to the attainment of the competitiveness goals established in the CAs. The VC cocoa-chocolate in Santander and Antioquia received a high score on this indicator, which means that most of the outcomes of the activities carried out are clearly related to the goals of the CA. One possible explanation is that since there is a raw cocoa supply deficit in the country, most of the goals of the CA deal with the qualitative and quantitative improvement of cultivation in the country. This general objective is in the interest of agricultural producers and chocolate industrialists, as was evidenced by the development of the CA and outcomes. The other VC had an intermediate score, which means that the outcomes of the activities carried out are partially related to the goals of the CA (e.g. some are related and others not, see appendix 12).
2. **Contribution to corporate goals:** A CA is pertinent when it enhances the economic activity performed by the agricultural and livestock producers and industrialists. The VC cocoa-chocolate in Santander and Antioquia received a high score on this indicator, which means that the activities conducted during the CA fully supported the achievement of corporate goals of agricultural and industrial producers. Conversely, a CA with activities of low relevance does not support most of the corporate goals of the primary stakeholders of a VC. Finally, the VCs cotton-textile-clothing in Tolima, dairy products in Antioquia and rice threshing in Tolima had an intermediate relevance of activities since the latter partially contributed to the achievement of the corporate goals of agricultural and industrial pro-

ducers (see appendix 13 and 15, and case studies 1 to 5 in chapters 9 to 13 on CD ROM).

3. **Improvements in VC coordination:** One of the main goals of the policy of CAs is to promote VC integration to foster the achievement of higher productivity and competitiveness of the different links of the VC with particular emphasis on the promotion of the agricultural and livestock sectors.

   Hence, a CA is pertinent when its activities promote and have a great influence on the integration of the links of the VC. A high degree of coordination takes place when the regional council is very dynamic and there are several events-activities of coordination (programs, projects and campaigns) amongst different links of the VC as in the case of the VCs cocoa-chocolate in Santander and cotton-textile-clothing in Tolima. The CA of the VC dairy products and cocoa-chocolate in Antioquia had an intermediate score on this indicator since the regional council had an average dynamism and there were few events of coordination among different links of the VC. Finally, the VC rice-rice threshing had a low degree of coordination, characterized by a regional council with low dynamism and virtually no events of coordination among different links of the VC, such as programs, projects and campaigns (see appendix 14 and 15 and case studies 1 to 5 in chapters 9 to 13 on CD ROM).

In conclusion, the *most relevant* competitiveness agreements for the development of the VC and of the region were the CAs of the VC cocoa-chocolate in Santander and in Antioquia. The VCs cotton-textile clothing in Tolima, dairy products in Antioquia and rice-rice threshing in Tolima had an *intermediate relevance* (see appendix 15).

4.4.3 Quality of the CA

The degree of policy process effectiveness of a CA in a VC provides information about the magnitude of the development of the CAs, and presents a notion of the scope of activities, which are likely to be deemed relevant. In this line of thought, 'the relevance of a CA' used as a criterion by itself is not enough to draw conclusions about the quality of a CA; hence it should be combined with the 'policy process effectiveness criterion'.

Table 4.4 summarizes the classification of the CAs of the VCs included in the study. The classification includes five types of CAs (outstanding, good, average, less than average and poor). In terms of quality, a CA with high policy process effectiveness and relevance embodies an outstanding CA such as in the case of the VC cocoa-chocolate in Santander, and conversely a poor CA embodies a CA with low policy process effectiveness and poor or intermediate relevance (rice-rice threshing in Tolima). A good CA is characterized by a high degree of policy process effectiveness and an intermediate relevance, which means that although the CA is highly effective, the outcomes of some of its activities are not relevant for the primary stakeholders of the VC. An average CA embodies a CA with intermediate policy process effectiveness and high relevance, which means that although it fulfilled the goals of the CA partially, the primary stakeholders of the VC deem most of its outcomes as relevant. This is the case of the VC cocoa-chocolate in Antioquia. Finally, a CA whose quality is less than average is characterized by intermediate process effectiveness and relevance. There is an incomplete fulfillment of the objectives of the CA, and a fraction of the outcomes of the CA is not considered relevant by the agricultural and/or industrial producers. This is the situation of the VCs dairy products in Antioquia and cotton-textile-clothing in Tolima (see table 4.4 and case studies 1 to 5 in chapters 9 to 13 on CD ROM).

4.5 Concluding Remarks

The likelihood of having a highly relevant CA of a VC at the level of the region increases with the policy process effectiveness. Hence, in terms of quality, an outstanding CA has both high relevance and policy process effectiveness. That is, a CA, which fulfills the goals of the key stakeholders involved in the CA and consolidates the coordinating capacities of the VC.

The outcomes of the CAs should constitute a positive contribution to the attainment of the competitiveness goals established in the CAs and to the strengthening of coordination along the VC.

The quality of the agreements can also be explained in terms of the role played by the *value chain factors* in the development of the CA. First of all, the VC factors, in particular governance, are determinant in the quality of the agreement. The commanding market position and governance

role of a VC's leading firms is enhanced by their appropriation of monopoly rents and ability to enjoy the other rents; natural rents in case they exist, and the endogenous and exogenous rents (Kaplinsky 2000). In captive VCs, the dominant market power of the largest industrial firms allows them to position their agenda in the discussion and signing of the CA. Hence, the main interests of the VC governors prevail over those of the small agro and livestock producers in the development of the CA. Issues are agreed upon and outcomes are finally reached depending on the lead firms' competitiveness objectives. They support or block initiatives and introduce standards (quality and processes) to participate in the VC according to their own goals. In this process the less competitive agro and livestock producers are excluded from the upgrading processes. In this sense, the difference in *relevance* between the VC competitiveness agreements can be explained in terms of the degree of commitment to the CA of the VC governors. The latter is a key factor in the determination of the 'policy process' effectiveness of the VC CAs. Thus, the relevance of the CA is more influenced by VC factors (see table 4.4).

Finally, *the regional characteristics* also contribute to the explanation of the quality of the CA. The differences in the key attributes of the regional business systems where the VCs are embedded are reflected in the quality of the agreements. The chance to have an outstanding or good quality CA are better if the regional business system has a strong regional government and its development trajectory has consolidated the culture of public-private partnerships for development, a solid financial scheme to support the economic activity of the different regional sectors, plus an education and training system that provides a qualified human resource to cater to the demands of the regional firms. On the contrary if the regional business system lacks the above attributes then, it generates additional entry barriers to the CA to those created by the leading firms to enhance their capacities for the appropriation of rents. The absence of cooperatives and producer associations and in general of an associational culture coupled with the lack of other regional treats becomes an obstacle to develop a sound CA.

However, it is important to take into account that even where the regional policy environment is favorable to improve the conditions of local producers and where a CA of a VC has been implemented, the governance and economic structure of the VC can prevent that such goal is achieved.

Table 4.4
Summary: Quality of the CA

Evaluation criteria Relevance	Policy Process Effectiveness		
	High	Intermediate	Low
High	Cocoa-chocolate Santander (Outstanding)	Cocoa-chocolate Antioquia (Average)	
Intermediate	Good	Dairy products Antioquia Cotton-textile-clothing Tolima (Less than average)	Rice-threshing Tolima (Poor)
Low			

Source: This research.

To what extent does the quality of CA's commitments explain the performance of CAs in terms of developmental outcomes? In order to answer this question we must elaborate on the developmental outcomes of the CAs.

Notes

[1] The data presented by Agrocadenas is based on textile and garment firms registered in the Chambers of Commerce in the country in 2004.
[2] MADR-PROAGRO et al. (2002), Acuerdo regional de competitividad Cadena de cacao-chocolate Región nororiental (Santander, Norte de Santander y Arauca).
[3] See volume I of the Report 'Increasing the sustainability of EU and Dutch commodity trade through more effective policies' on a study carried out by AID Environment and profundo and supported by VROM, 2007.

5 Developmental Outcomes of Competitiveness Agreements

This chapter elaborates on the main outcomes of VC competitiveness agreements. It focuses on the analysis of the development of regional capabilities for competitiveness, namely upgrading opportunities at the micro level, VC integration and collective learning.

5.1 Upgrading Opportunities

According to Gereffi et al. (2001), 'The concept of upgrading refers to several kinds of shifts that firms or groups of firms might undertake to improve their competitive position in global value chains' (2001: 5). Upgrading is a key criterion to assess the outcomes of VC competitiveness CAs. It provides a framework to evaluate changes in the position of smallholders and their associations, and small industrial entrepreneurs in the VC because of CAs. In effect, upgrading refers to a process in which VC actors improve their ability to move to more efficient or more value-added activities, thereby becoming more profitable and resilient commercial producers (Van Wijk 2009).

The policy of agro-industrial CAs at the level of VC was designed by the Ministry of Agriculture and Rural Development to cope with a critical economic crisis that the agricultural sector was facing in Colombia and primarily to promote its recovery. Hence, a key component of the outcomes of the regional CAs is measured by the upgrading opportunities opened to the small-scale agro and livestock producers and industrial micro-entrepreneurs by the CAs. This section describes the upgrading outcomes of VC agreements on competitiveness.

While upgrading is central to the competitiveness policy and the development interventions at the level of VC, the VC's governance struc-

ture blocks the upgrading of small industrial entrepreneurs when the lead firms based on their oligopolistic position in the market are not willing to support the process, product and/or functional upgrading of SME industrial producers. Conversely, governance promotes the product and/or process upgrading of agricultural producers as lead processing firms are interested in improving both the quality and quantity of the input produced by their suppliers in a coordinated effort to introduce systemic efficiency to the chain. This case is more likely to be found in captive value chains, which are more prone to promote the product upgrading of farmers in the context of a CA.

For analytical purposes, we include three types of upgrading: product, process and functional upgrading (see chapter 3).

5.1.1 Process upgrading

The VC CAs have contributed positively to process upgrading in the agro links of the cocoa-chocolate, dairy products and cotton-textile-clothing value chains; in rice-rice threshing the contribution was very limited. First the greater integration of the VC has been important in the cocoa-chocolate case and it was important in the cotton-textile-clothing in Tolima, though it did not happen to the same extent in the rice-rice threshing VC. The VC's coordination of activities has increased based on the adequate functioning of the technical secretariat and the development of different projects, including some coordinated by the Regional Council for Competitiveness of the VC cocoa-chocolate.

In regards to *productivity*, the results of the CA in terms of process upgrading in the VC dairy products, cotton-textiles and cocoa-chocolate were outstanding. There was a positive increase in the average yield per cow/day in the dairy products VC from 6.87 in 2001 to 7.90 in 2004 (MADR 2005). There was a positive increase in the average yield per hectare of cotton from 2.055 ton/hectare in 1999, the year CA was signed, to 2.457 ton/hectare in 2003 (MADR 2006). In the cocoa-chocolate VC northeastern region, the average yield per hectare for cocoa increased around 3.5 per cent, from 338.8 kg/hectare in 2000 to 350.6 kg/hectare in 2005 (MADR 2005). Finally, there was a positive increase in productivity in the rice-rice threshing VC from 6,586 kg/hectare in 1999, previous year in which the CA was signed to 7,294

kg/hectare in 2003 (MADR 2005) (see case studies 1 to 5 in chapters 9 to 13 on CD ROM).

Table 5.1
Process upgrading

Antioquia

VC Dairy Products

- The VC has been upgraded in terms of widespread technological use and the introduction of entrepreneurial practices in the activity.
- Introduction of a certification process for raw milk producers (Incipient implementation due to high costs).
- Gradual introduction of organic milk production, which means an increase in cleaner production practices.
- Introduction of mechanical milking and improvement of infrastructure for milk collecting and commercialization.

VC Cocoa-Chocolate

- Gradual introduction of entrepreneurial farming.
- Improvement in cocoa production techniques and in primary processing (fermenting and drying).
- Quality certification for seeds (ICONTEC) and ongoing implementation of cleaner production practices.
- Increase in the use of contract agriculture schemes in a context of a better VC integration.

Santander

VC Cocoa-Chocolate

- Introduction of new technological packages for cultivation and entrepreneurial farming.
- Improvement in cocoa production techniques and in primary processing (fermenting and drying).
- Introduction of schemes to access credit via contracts with buyers. Associational credit schemes with ICR (Incentive for Rural Capitalization).
- Development of technology for the integrated management of plagues and diseases.
- At present some of the SME regional chocolate producers are in the process of quality certification. The programs of 'best manufacturing practices' have taken place in a context that some of the small scale industries have expansion plans and are restructuring their business.

Tolima

VC Rice-Rice Threshing

- Use of machinery banks for small agriculturalist of the region. Coordination activities among VC actors to foster expansion of irrigation districts.
- Training in production of organic fertilizers for rice cultivation. Gradual introduction to applications of biological products.
- Modernization of production processes in agriculture as well as in threshing industry. Machinery upgrading with introduction of precision planting machines.
- Gradual introduction of crop collection in bulk.

VC Cotton-Textile-Clothing

- Modernization in production process of most links. Introduction of precision sowing machinery. Textile and garment companies followed different certification programs and developed intense training schemes.
- Introduction of new technology for integral management of cotton. Management practices of crop have improved especially treatment of costs and income. According to Conalgodon, before CA farmers neither kept records, nor managed activity adequately.
- Widespread use of associational credit.
- Labor qualification in agro and industrial links.

Source: This research.

The modernization in the *cocoa production process* is taking place in Santander as well as in Antioquia, mostly in the new plantations and in the primary processing of cocoa (fermentation and drying) through reorganization of the production process and innovations. A new technological package for cultivation was introduced after suggestion from the National Competitiveness Council of the VC cocoa-chocolate and adopted by all the latest cultivation projects, and, in the case of Antioquia, made mandatory for the projects in which the regional government was participating. At present, several of the SME regional chocolate producers in Santander are in the process of quality certification.

Between 2001 and 2004, a modernization of the livestock and dairy processing milk took place in several areas. Professionalization of milk production through introduction of entrepreneurial practices in the activity; modernization in milking of cows through mechanical milking; increase in cleaner production practices; improvement of infrastructure for milk collecting and commercialization; and increase in the availability of cooling tanks at the level of the farm (individual and collective). The cooling chain will be practically 100 per cent in the region in the short term; at the level of organized producers, the cooling chain is working properly from the farm up to the enterprise. In the VC cotton-textile-clothing (see case study 2 in chapter 10 on CD ROM), there was new technology for the integral management of the crop. Especially improving the management of costs and incomes and enlarging the availability of technical labor for the agro and industrial links. Finally, there was a modernization of the production processes in agriculture as well as in the threshing industry during the CA of the VC rice-rice threshing, leading threshing mills acquired quality seal by ICONTEC and others followed certification schemes (i.e. Arroz Diana S.A.). Machinery upgrading also took place in the agricultural sector with the introduction of precision planting machines, though it is not yet a widespread practice. Otto Perez, an agriculturalist from Espinal illustrates a case in which innovation took place, 'now, it is a fashion to recollect in bulk instead of bundles. The threshing mills pay 0.25 dollars premium per "carga" (load, 100 kg) if we deliver the rice in bulk. In this case we do not have to spend in packing' [1] (see case study 3 in chapter 11 on CD ROM).

5.1.2 Product upgrading

The VC CAs have contributed to product upgrading in the agro links of the VC cocoa-chocolate, dairy products and cotton-textile-clothing; in rice-threshing, it was very limited

In the cocoa-chocolate VC**,** cocoa cultivation is shifting gradually from the use of common seeds to the use of hybrid material and the introduction of seeds from high return clones. According to estimates of Fedecacao, in 2005, the northeastern region had about 10 per cent of its estimated cocoa area (53,454 hectares) planted with clones. Because of the CA, institutional plant nurseries and cloning gardens were certified by ICA; hence, the production of vegetable material was organized. In this sense, the availability of certified genetic material has increased. This process has been accompanied by a policy of producing only clones certified by ICA; distribution of planting material mainly by large NGOs, business associations (Fedecacao) and the promotion of the cultivation of organic cocoa. Consequently, the region is gradually attaining a more homogeneous product for the industry and the production of selected material has become more organized and permanent.

In the cotton-textile-clothing VC, a new cotton variety was developed by Corpoica and transgenic seeds were introduced in the crop.

In the dairy products VC, there has been a positive improvement in raw milk quality in terms of solids and proteins, which constitutes a positive response to the new specific demands of the industry. The dairy processing firms are paying price differentials taking into account these criteria and the increasing improvement of livestock races for specialized milk production. Some other positive results are the attainment of safe milk with better quality given the generalization of cooling processes in the collecting stage including the widespread use of milk cooling tanks; successful eradication of distribution and consumption of raw milk (not pasteurized) for direct consumption (Antioquia, Medellin was a successful case) (DPNCC Evaluation Matrix 2006).[2] Finally, in the rice-rice threshing VC, there were no key developments in product upgrading during the period of the CA besides the testing of new varieties for rice cultivation.

Table 5.2
Product upgrading

Antioquia

VC Dairy Products

- Positive improvement in milk quality in terms of solids and proteins' contents - development and import of specialized milk production's livestock races.
- Increasing achievement of better quality innocuous milk complemented with successful eradication of distribution and consumption of raw milk (not pasteurized) for direct consumption.
- Development of new products for the dairy industry (i.e. different kinds of flavored milk).
- Pulverization of milk has substantially increased adding value to the regional production and becoming an alternative to deal with seasonal milk surpluses.

VC Cocoa-Chocolate

- Introduction of new sowing material and institutionalized organization of the distribution of the planting material. Certification of cloning gardens for the distribution of certified seeds to the cocoa producers.
- Gradual introduction of organic cocoa.
- Use of certified seeds and seedlings in the new cultivation projects.

Santander

VC Cocoa-chocolate

- Introduction of new planting material with high quality clones and returns and the substitution of hybrids of low productivity and resistance to diseases.
- Increasing availability of certified genetic material. The activity became more attractive and the CA has promoted it. Consequently, the region is gradually attaining a more homogeneous product for the industry and the production of selected material has become more organized and permanent.

Tolima

VC Rice-Rice Threshing

- Development of new seed varieties for rice cultivation. There were no meaningful innovations in the threshing industry; ICA conducted agronomical tests for 3 new varieties and 5 new materials.

VC Cotton-Textile-Clothing

- Corpoica developed a new cotton variety.
- Testing of transgenic material in the zone by ICA and approval of the introduction of some of this material. The first decision to incorporate the transgenic cotton was made in 2002.

Source: This research.

5.1.3 Functional upgrading

The only VC that reported events of functional upgrading was the cotton-textile-clothing VC in Tolima. The other VCs did not present smallholders or SME firms at the industrial level moving into new links of the VC and/or absorbing new higher value-added functions in the VC such as transporting, marketing or processing (Kaplinsky and Morris 2008; Van Wijk 2009).

It took place in a large industrial firm in the GVC as a part of its strategy to consolidate a regional VC. It meant good business for several medium and small-scale regional garment firms. Likewise, they had product and process upgrading as part of the standards set by international buyers. As stated by Dolan and Humphrey (2000), 'The governance exercised by such companies has consequences not only for the inclusion and exclusion of firms in the chain, but also for the opportunities they have for upgrading – moving into more sophisticated functions within the supply chain or into the production of more sophisticated commodities' (2000: 150).

Functional upgrading was a strategy followed by Fibratolima, the regional leading firm of the VC, which had a positive influence on the process and outcomes of the CA of the VC cotton-textile-clothing in Tolima. Between 1991 and 1997, the firm was a traditional supplier and exporter of textiles like other companies such as Coltejer and Fabricato, though due to market changes, it shifted its traditional scheme. In the context of the CA, The firm had a type of functional upgrading in the GVC by means of deciding to enhance its participation in the full package approach implemented since 1998. To put this scheme into operation, Fibratolima had two options either buying machinery or subcontracting. It took the second option. Since the firm made this decision, it then linked with a group of regional garment manufacturers mainly Pipeline and Caribean and about five clothing workshops. This assembling of imported input schemes was carried out by Fibratolima in Ibagué and outside the region (Bogotá, Pereira and Medellin). The company provided its suppliers with cloth, designs and patterns, and the garment firms did the assembling. The leading firm tried to organize a regional common front from Tolima to supply the armed forces uniforms and to carry out contracts with the police and air force (FAC) (2000-2001). In this sense, Fibratolima established alliances with the garment producers and worked with full package schemes. The firm negotiated the full package of contracts with the armed forces and retailers, and branded manufacturers at the international level. In another scheme, the local garment producers had the client, and then they were associated with Fibratolima. The latter supplied textiles to the garment firms, and they presented themselves as a block alliance before the client. In this approach, the garment producers billed the client. It was a type of barter, Fibratolima provided textiles and the clothing firms produced the gar-

ments, then they sold the whole package abroad. The assembling of imported input schemes favored the outstanding growth of the regional garment firms to the point that Ibagué became the third largest garment center in Colombia. Some of their main clients were Polo, Ralph Lauren, Liz Claiborne and Nautica. Fibratolima allocated its production to the national and international markets with exports to Germany, United States, Venezuela, Portugal and England (see case study 2 in chapter 10 on CD ROM).

5.1.4 Upgrading 'lock in'

For agro and/or livestock input suppliers, keeping product and/or process upgrading targets set by VC governors might start a new round based on higher demands by VC governors, including changes in the incentive criteria. The additional costs incurred by input suppliers to meet the new standards set by VC governors might mean economic strain and even bankruptcy for a segment of agro-livestock producers who cannot bear the burden of the VC modernization process by themselves. Especially if these changes are not significantly rewarded with higher prices in the market, the product and process upgrading do not generate quality and productivity increases large enough to offset price rigidity. Whenever a quality-testing laboratory belongs to the VC main buyer, disputes around price determination arise since premiums for quality differentials need to be certified. In this case, to promote market transparency, it is appropriate to have an independent quality test laboratory. A way to break the upgrading lock in is through public-private partnerships, which make the upgrading process a cooperation matter instead of depending on arms-length market relations.

Nowadays, the dairy processing firms face the test of international markets, which are very demanding in terms of quality. Hence, companies are gradually upgrading their incentives from more basic standards to product specific qualities. Thus, incentives are moving from issues of production and collecting process such as the use of cooling tanks for milk collecting, toward protein and solid milk contents (Suarez 2001: 162). They constitute a clear example of systemic efficiency improvements (process upgrading). In fact, Colanta provides technical assistance to its associates to promote improvements in three main aspects soil, grasses and genetics. It has introduced changes in the payment systems favoring milk with high content of solids. Likewise, the industry has in-

creased controls to avoid medicines and other undesired substances in the milk that is taken to the factories. The firm is testing for traceability in several farms in the eastern and northern areas of Antioquia. These are conditions imposed on raw milk producers, which are difficult to follow by the small and non-organized producers. The CA proposed to develop, coordinate and disseminate an 'agreement on cleaner production' between the environmental authorities and the productive sector, conducive to sustainable development (IICA 2001).

The cocoa-chocolate VC CA in Antioquia facilitated better access to technology for cocoa growers, new planting material, training and services through public programs. The CA promoted increases in crop cultivation under associational practices in line with the sectoral policy of MADR. Small producers were included in new cultivation projects undertaken by associational schemes. Productivity increases because of improvements in plague control and new technological packages, and stable crop prices, which remain set at an international level, left cocoa producers better off. The new practices did not mean excessive costs for producers or demands by the chocolate companies, which continued paying price differential by quality. However, as a cocoa producer from Medellin pointed out, there were no clear incentives for the cultivation of organic cocoa and other high quality cocoa varieties. 'If the farm is cultivated with organic cocoa there are no premiums (price differentials) until it is officially certified. Generally, there are no processes of certification because the result is too expensive for the producers' (personal communication, 12 July 2006). The certification process is very expensive and a heavy burden for producers thus few undertake this process. This is the case that Gibbon (2001: 67) refers to as an obligatory upgrading to production processes conforming to phytosanitary or pesticide residue requirements of developed countries.

Such types of process upgrading do not necessarily involve the adoption of capital-intensive technologies such as irrigation, etc., but they may only be economic for developing country producers who already achieved certain economies of scale on the basis of some of these technologies…. As yet, the broader economics of this kind of upgrading are still unclear. Certainly, costs are clearly high, while rewards are unpredictable and not transparent. In addition, where the product aspect of such upgrading is into end-user dedicated products, this may be associ-

ated with "competency traps" stemming from their non-transferability to other end-users.

5.2 Value Chain Integration

The degree of VC integration promoted by the CAs is important though this process is likely to be more robust in some VCs than in others. Integration is stronger in VCs that have a dynamic technical secretariat and a functional regional council of competitiveness as well as an active involvement and support of non-chain actors such as NGOs, regional agencies and VC governors. In general, developments in vertical integration amongst VC actors go along with improvements in coordination among support institutions. They are reflected in a rationalization and optimization of the financial and technical resources of the different support institutions through inter-institutional agreements that include public-private sector partnerships.

The VCs with the most integration were cocoa-chocolate in Santander and Antioquia and cotton-textile-clothing in Tolima and the one with the least integration was rice-rice threshing in Tolima. Meanwhile the VC dairy products in Antioquia had an intermediate position in relation to the other VCs (see table 5.3).

The cocoa-chocolate VC in Santander reached an important degree of integration based on a strong technical secretariat funded by MADR and the support of institutions such as Fedecacao, the CNC S.A. and Casa Luker S.A. Examples of integration can be found in the work of public agencies in charge of agricultural research. This has become more relevant, since the need for research and different campaigns for agricultural extension are being designed to account for the opinions and demands of the main actors of the chain in the region. In addition, disease control campaigns (e.g. monilia campaign) have taken place with economic and technical contributions of actors from different links of the VC.

The coordination among public agencies supporting cocoa production has been enhanced. For example, Fedecacao (Federation of Cocoa Growers) has signed agreements with SENA, UMATAS (Municipal Units of Technical Assistance to the Agro Sector), ASOMUCARI, Corpoica and the *monilia campaign,* which included the leading chocolate firms: CNC S.A., Casa Luker S.A. and Girones S.A. (see case study 1 in chapter 9 on CD ROM).

Table 5.3
Competitiveness agreements and VC integration

Antioquia

VC Dairy Products

- There was great response from milk producers to the training programs organized by the chain.
- There is more dialogue and cooperation among the support institutions mainly in the livestock link.
- Increase in the use of cooling tanks promoted the production of cooling tanks for milk refrigeration in the region (4 factories producing at full scale in 2005).
- Introduction of concerted and mandatory price system. It was established amongst the members of the national chain and coordinated by the National Council for Competitiveness of the 'dairy products' VC. It applies by extension to the region and consists of payments and price differentials to producers and consumers in function of the milk hygienic qualities and composition of it (DPNCC 2006).

VC Cocoa-Chocolate

- Improvement in coordination among organizations that promote the crop in the area.
- The regional council for competitiveness of the VC is seen as the institutional articulator of the cocoa development promotion in Antioquia.
- Centralized coordination of the new cocoa cultivation projects in the regional council for competitiveness of the VC cocoa-chocolate. Includes the setting of guidelines, identification of project operators and information sharing about the development of those cocoa exploitations.
- Efficiency improvements in the public agencies in charge of promotion of the agricultural sector (i.e. the institutional role of ICA in control of planting material was enhanced)

Santander

VC Cocoa-Chocolate

- Improvement in coordination of activities of the chain based on adequate functioning of the Technical Secretariat and the development of different projects, including some coordinated from the Cocoa-Chocolate National Council for Competitiveness.
- Rationalization and optimization of the financial and technical resources of the different support institutions through inter-institutional agreements, which include also public-private sector partnerships.
- Enhancement of coordination among public agencies supporting cocoa production.
- Increase in pertinence of public agency tasks, which are increasingly defined by chain priorities such as in the cases of the mesa sectorial (sectorial committee) of SENA and the 'monilia campaign'.

Tolima

VC Rice-Rice Threshing

- Coordination among support institutions was strengthened.
- Last report of the technical secretariat of the VC to IICA-MADR (2003) stated: 'it is important to underline the lack of articulation between the links and the lack of will and credibility in the process to achieve consensuses' (CPT, 15 October 2003).

The chain's technical secretariat was dismantled in 2003 and the Regional Council for Competitiveness of the rice-rice threshing VC lost dynamism and continuity. Practically, the dialogue and negotiations returned to business as usual with three parties involved: Induarroz, Fedearroz and the national government, most of the time the contentious and divisive issue is the price at which the national harvest should be bought.

VC Cotton-Textile-Clothing

- During the period of the agreement (2000-2003), a great deal of integration among the key stakeholders of the different links of the chain took place. All the interviewees asserted that the agreement provided a good opportunity to know each other's strengths and weaknesses and to learn about the functioning of the whole chain.
- New cotton gin factories were created in Espinal, Chicoral, Guamo and imported modern machineries were introduced in the agricultural sector as well as in the cotton gin cooperatives.
- SENA increased its investments on training of professional and technicians and updated software for crop management.
- Forward contract schemes were developed between Fibratolima and cotton producers.
- There was a shift from individual to collective credit.
- Contracts for assembly (maquilia) between local textile firms and local clothing firms.
- Coordination among support institutions increased and became more fluid.

The agreement facilitated though temporarily the direct commercial relationship between the textile firms and the cotton producers. Before, this relation took place only with DIAGONAL.

Source: This research.

The government fulfilled an outstanding role in the regional council of competitiveness of the VCs of Antioquia. However, it is important to remember that the initial regional councils, which had a technical secretariat funded by MADR, were dismantled and then the Secretariat of Agriculture of Antioquia took the lead, which counted mainly on support of the leading firms of the VC (see case studies 4 and 5 in chapters 12 and 13 on CD ROM). The institutional support provided by the regional government of Antioquia for the CAs shows how the regional councils for competitiveness can become policy advisors to the regional government and an important meso-level institution at the regional level. The regional government has the potential to enhance the job done by the council by means of institutionalizing its decisions at the regional level through available legal, financial and administrative tools.

The cotton-textile-clothing VC in Tolima experienced an important degree of integration during the period of the CA (see table 5.3 and case study 2 in chapter 10 on CD ROM). An example of that can be found in Fatextol, a textile firm from the region. The company used to make 'assembling' contracts outside the region before the CA. In the context of the CA, Fatextol and the local garment firms agreed to make the assembling contracts in the region with the condition that the regional garment producers committed to maintain the required standards (i.e. use of fire extinguishers, labor issues, opportunity, quality etc.). Fatextol agreed to part of its clients' demands. It was a win-win scheme and Fatextol became a type of second tier supplier.[3] Other examples of VC integration can be found in the forward contract schemes, developed between Fibratolima and cotton producers, and the institutional credit to individual cotton producers, which practically disappeared and was replaced by associational credit.

5.3 Collective Learning

Lawson (1999) quoted by Helmsing (2001: 238) argues that 'if firm- level learning takes place to overcome co-ordination problems, then regional collective learning can be seen as the emergence of basic shared knowledge and procedures amongst a group of (geographically close) firms which facilitates co-operation and problem-solving.' Collective learning is about information flows amongst the different stakeholders of the VC, which ease cooperation and strengthen their capabilities individually and

as a whole. The policy of VC competitiveness agreements and its key operative instrument (the national and regional council for competitiveness of the value chains) facilitates the collective learning amongst key stakeholders of the VC including support institutions, public agencies, NGOs and others. This policy scheme facilitates the collective learning amongst regional stakeholders beginning with the basics of a conformation and organization of public-private partnerships for VC development. Since these partnerships cooperate in terms of the identification of competitiveness needs along the VC, development of a vision and definition of a strategic plan to solve the competitiveness problems of the VC, collective learning is the result of inter-firm cooperation through information exchanges and sharing amongst different links of the VC (e.g. technological and organizational knowledge exchanges particularly amongst support organizations, industrial firms and the agricultural producers).

In the VCs included in the study, although to different extents the actors of the links through formal and informal encounters came to know most of the problems that their clients or customers were experiencing (see case studies 1 to 5 in chapters 9 to 13 on CD ROM). As Maria Cristina Lara, regional director of ANDI and member of the technical secretariat of the cotton-textile-clothing VC in Tolima pointed out: one of the achievements of the CA is the dialogue among cotton producers and industrialists. A culture of negotiation and constructive dialogue was created. It facilitated an understanding of the problems others experienced in the same link of the VC as well as in other links and vice-versa, and to identify and discuss the chain's structural needs and research requirements (personal interview, M.C. Lara, 30 March 2005). 'At the beginning of the CA there was not enough technical labor in the agro and the industry lacked qualified operators. Something positive in the CA is that through information exchanges, the need for certain skills was made evident, and then the VC stakeholders started working on this. The network Tolima ATPDEA was conceived in the context of the CA and facilitated the formation of new skilled workers demanded by the garment and textile industry', as articulated by Luis Fernando Criales, President of the Chamber of Commerce of Ibagué (personal communication, 23 March 2006). There were joint training programs included in the job training in textile factories with public resources (SENA, regional government. the

chamber of commerce), consolidating a demand-oriented training scheme.

The cocoa-chocolate VC also provides important examples of collective learning. By initiative of the Cocoa National Council for Competitiveness, the technology for the integrated management of plagues and diseases in the cocoa plantations was developed; including the undertaking of a *monilia campaign* in its first stage in Santander. In addition, a manual of labor competencies for cocoa production was created by a public-private partnership led by the RCC and SENA in Santander. The latter is likely to be used for a unified training program not only at the regional level but also throughout the whole country. A common future in the last two projects is that they were developed with the participation and funding of public agencies, the local and regional governments, the cocoa producers and Fedecacao, the largest chocolate producers. Also, the monilia campaign included the cocoa producers for its implementation and was oriented toward changing cultivation practices to reduce plagues in the crop. There were information exchanges and sharing among the largest chocolate firms, which have their own specialized research centers, Fedecacao, the technical secretariat and other actors of the chain (see case study 1 in chapter 9 on CD ROM).

Finally, it is important to point out that comparatively, this outcome was higher in the VCs with a more organized regional council for competitiveness during the period of the CA and is influenced as well as the other outcomes by the VC characteristics and regional factors. The collective learning episodes qualitatively and quantitatively are higher in the VCs cotton-textile-clothing in Tolima and cocoa-chocolate in Santander. They are intermediate in the VC cocoa-chocolate in Antioquia and dairy products in Antioquia and are lower in the VC rice-rice threshing in Tolima.

5.4 Quality of VC Competitiveness Agreements and Outcomes of the Agreements

The outcomes of the CAs are largely related to the development of regional capabilities for competitiveness, namely the upgrading opportunities at the micro level and the VC integration and collective learning.

The quality of the agreement is determined in terms of the combination of policy process effectiveness and relevance. The policy process

effectiveness takes into account the whole process of the agreement and involves the formulation (ex-ante) and development of the CA. It also takes into account, the composition and dynamics of the regional council for competitiveness and the life cycle of the agreement.

In terms of the formulation of the CA, the five CAs had an average score in the quality of commitments formulated during the discussion of the CA. That is, the different competitiveness agreements contain a mix of clear and ambiguous lines of action and of concrete and vague commitments (see chapter 4 and appendix 8 and 11). In spite of the fact that all agreements had an average quality of commitments in the formulation stage, they presented different levels of developmental outcomes (see table 5.4). There is no clear relationship between the quality of commitments of the CAs and their developmental outcomes, though it is expected that agreements with higher quality of commitments will perform better in terms of developmental outcomes.

Table 5.4
Quality of CA's commitments and developmental outcomes

Developmental outcomes	Quality of commitments of the CA		
	High	Intermediate	Low
High		Cocoa-chocolate Santander Cocoa-chocolate Antioquia	
Intermediate		Dairy Products Antioquia Cotton-textile-clothing Tolima	
Low		Rice-rice threshing Tolima	

The CAs of the five VCs have a different *degree of achievement* in terms of percentage of commitments partially or completely developed during the timeframe of the CA and in this sense play an important role in the determination of the quality of the CAs (see tables 4.2 and 4.3).

In terms of quality, the VC cocoa-chocolate in Santander embodies an outstanding CA (high policy process effectiveness and relevance). It had a good degree of achievement, which means that more than 60 per cent of the commitments were fulfilled. Also, since most of the out-

comes of the activities carried out are clearly related to the goals of the CA, the relevance of outcomes received a high score. In addition, the coordinating capacities of the VC were enhanced.

The VC cocoa-chocolate in Antioquia is an average CA and embodies a CA with intermediate process effectiveness and high relevance. It had an intermediate degree of achievement (between 21% and 60% of commitments were fulfilled). The relevance of outcomes received a high score, which means that although the CA fulfilled its goals partially, the primary stakeholders of the VC deemed most of its outcomes as relevant. Also, the coordinating capacities of the VC were partially enhanced.

The quality of the CAs of the VCs dairy products in Antioquia and cotton-textile-clothing in Tolima is less than average (intermediate process effectiveness and relevance). They had intermediate degree of achievement (between 21% and 60% of commitments were fulfilled). The relevance of outcomes had an intermediate score, which means that the outcomes of the activities carried out are partially related to the goals of the CA. Furthermore, the coordinating capacities of the VC remain about the same.

Finally, the rice-rice threshing VC in Tolima embodies a CA with low process effectiveness and intermediate relevance and is considered a poor CA. The CA had a poor degree of achievement since less than 20 per cent of the commitments were fulfilled. Although some improvements were achieved in the competitiveness of the VC, the main stakeholders deem them more as a result of individual action rather than of collective action in the context of the CA. There is an incomplete fulfillment of the objectives of the CA, and a fraction of the outcomes of the CA is not considered relevant by the agricultural and/or industrial producers. Even worse, the regional council for competitiveness of the chain was dismantled. The next two chapters analyse the influence of VC factors and regional characteristics on the developmental outcomes of VC competitiveness agreements (presented in chapter 5). In order to explain the developmental outcomes in terms of VC factors and regional characteristics, the analysis will be done through pair-wise comparisons. In chapter six, the influence of regional characteristics on the outcomes of the CA is studied by means of a comparison of the same VC (cocoa-chocolate) in two different regions (Antioquia and Santander). In chapter seven, the influence of VC factors on the outcomes of VC competitive-

ness agreements is studied through a comparison of two different value chains (cocoa-chocolate and dairy products) in the same region (Antioquia).

Notes

[1] Interview with Otto Perez, Espinal, 22 March 2006.

[2] This is a national program promoted by the DPNCC and supported by legislation. It was implemented successfully in Antioquia. The regional government and the health territorial bodies supported the implementation of it. Milk pulverization has substantially increased adding value to the regional production and becoming an alternative to deal with seasonal milk surpluses. Innovation took place through development of new products for the dairy industry (diversification of dairy products, i.e. different kinds of flavored milk).

[3] Source: personal interview with Carolina Triana, Manufacturing Manager of Fatextol (31 March 2006).

6 Influence of Regional Factors on Value Chain Meso-level Interventions

6.1 Introduction

The previous chapter presented the developmental outcomes of the agreements on competitiveness. Now, chapter six analyses the influence of regional factors on VC-based development strategies. It addresses the most dynamic regional factors that help or hinder the optimal functioning and outcomes of the regional VC competitiveness agreements. A horizontal analysis is carried out taking into account the embeddedness of firms and other actors in the territory.

The data comes from a comparative analysis of two Colombian regional VCs located in the same sector (cocoa) and with similar VC characteristics, but located in different regional settings (Antioquia and Santander). A comparative analysis of the regional business systems of Santander and Antioquia in relation to the multi-stakeholder development partnership for the VC cocoa-chocolate was carried out to expand our understanding of how regional factors favor or hinder development interventions at the level of VC.

The business systems approach is applied from the regional perspective, given the attention paid to VC interventions in different regional governments (Departments) in Colombia. In the analysis of social and territorial embedding, various issues of this theory are included such as the role of the state, the characteristics of firms and the nature of their interaction with others in the VC and particularly in the CAs. Likewise, this research takes into account the regional institutional endowment and especially the way local-regional governments and business interrelate.

This chapter is divided into seven parts beginning with an introduction; second, the regional economic trajectory where the VCs are located is presented. Third, a discussion of the main elements of the territorial

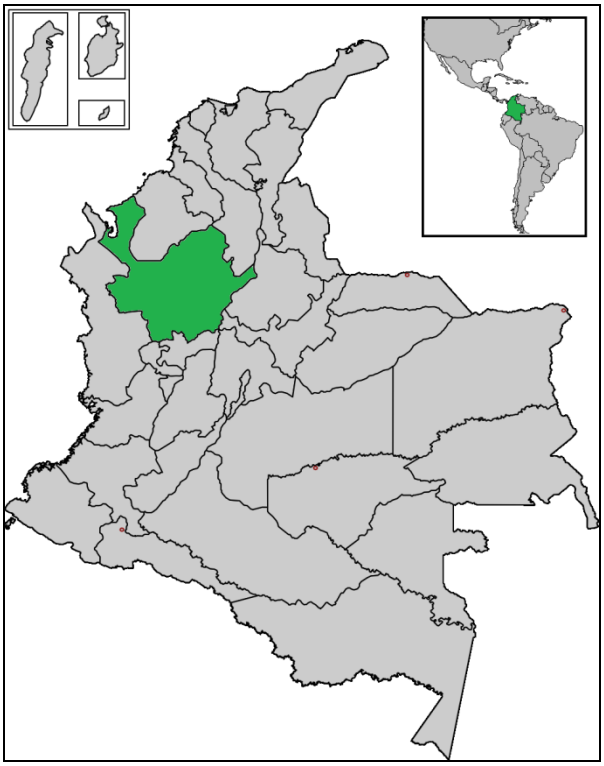
embedding of the VCs. Fourth, the differences in societal embedding of the VCs and their influence on the outcomes of VC competitiveness agreements are discussed taking into account business systems' variables such as the role of the state, the role of the regional elite and its connections and, the state-business relationships. Fifth, the quality of the CAs and the regional factors are discussed. Sixth, a synthesis of the influence of regional factors on development outcomes is presented, to end with the concluding remarks.

Table 6.1
Value Chains and Regional Trajectory

Region/ VC	Trajectory	Colonial period-1900	1900-1989	1990-2005
Antioquia -Cocoa-chocolate	-Toward a modern industrial and financial conglomerate.	-Gold mining, trade, coffee and rapid expansion of the regional economy in sheer size.	-Transition to manufacturing in early industrialization period, which provided a boost for later import substitution period; and the consolidation of the 'Antioqueño entrepreneurship'.	-Positioning of large financial and industrial conglomerates. Consolidation of Antioquia as a diversified and export-oriented regional economy. It is the second largest economy of Colombia. Solid public finances; strong government and institutions (e.g. business incubators, competitiveness plan for Medellin and Antioquia).
Santander -Cocoa-chocolate	-Toward a bifurcated economy: fast growing oil related industry and family based SMEs in farming and manufacturing.	Cocoa, tobacco, small-scale manufacture.	-Oil exploration and refinery, petrochemical industry. - Family-based SMEs in agricultural and livestock production. -Largest cocoa producer in the country. Other crops (oil palm, coffee). -Family-based SME in manufacturing: textile, garments, leather.	-Creation of support mechanisms for regional competitiveness in the areas of research, technological development and science and technology. -Stronger manufacturing VCs than agro-food VCs. Agricultural production (cocoa, oil palm, coffee).

Source: This research.

Map 6.1
Geographical location of Antioquia (Colombia)



Source: This research based on IGAC, 2011.

6.2 Regional Economic Trajectory

The analysis of the evolution of the regional economy contributes to the understanding of the relative importance of a VC in relation to that economic structure. In fact, the nature of a regional VC is molded by the *historical regional development trajectory*. As Andriesse et al. (2011) observe, 'different development trajectories are matched by different regional institutional arrangements [which include] different regional networks of inter-firm cooperation'.

The analysis of the development trajectories contributes to the explanation of issues such as why a region is specialized in the production of a given raw material that supplies the input requirements of industrial VC

governors located in other regions and why a VC's major industrial firm is located in one region. In addition, why is a regional government so active and why is a regional government so passive in a CA. Finally what has been the nature of its historical relations with the other links of the regional VC, including backward and forward linkages and the regional organizations.

6.2.1 Economic trajectory of Antioquia

The development trajectory of Antioquia has led it to become an industrial and export region based on a strong entrepreneurial leadership and public-private sector cooperation schemes.

Transition to manufacture in early industrialization period

The early development of the industry in Antioquia arose at the end of the 19th century and beginning of the 20th century. Antioquia lived an early industrialization in the 20th century in advance of other places in Colombia and before other Latin American cities except Monterrey (Mexico), Sao Paulo (Brazil) and Buenos Aires (Argentina) (Poveda 2005: 218).

The industrial activity during the first two decades of the 20th century was oriented toward the production of final non-durable consumption goods such as processed foods, soft drinks, and goods such as soap, candles and matches amongst others (Poveda 2005: 125). In 1910, Antioquia had a textile factory with more than 500 employees and had around 200 looms located in Bello,[1] the Colombian Textile Company (Coltejer) in Medellin and other firms located in this sector though on a smaller scale. In addition there were firms in sub-sectors such as foundries, crockery and glass, and a brewery in Bello (Tirado 2008: 18). In 1916, the industry experienced a significant technological advancement. The factories used steam boilers and steam engines and many of them were introducing electrical power (Poveda 2005: 125). The textile industry had about 20 firms in 1925 including Fabricato.

The early industrialization provided a boost for later import-substitution industrialization, especially in the 1940s, first with production of non-durable goods and then from the 1950s on to consumer durables and intermediate and capital goods. In 1945, Antioquia was the first large industrial center in Colombia with a participation of 28.9 per

cent of the total patrimony and net investment, followed closely by Cundinamarca (including Bogotá), Valle del Cauca and Atlántico (Kalmanovitz 1985: 376). Years later, Bogotá became the major economy of the country and Antioquia consolidated as the second largest economy of Colombia.

Consolidation of Antioquia as a diversified and export-oriented regional economy

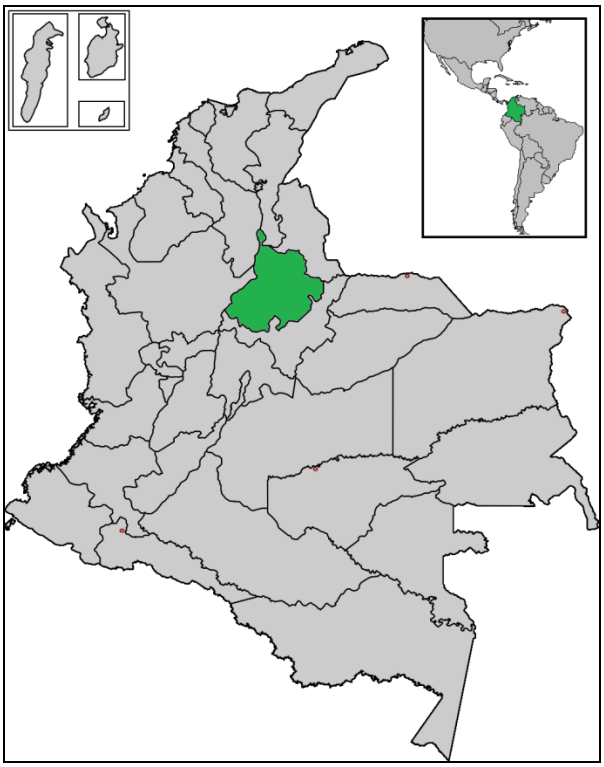
The Department has a very dynamic and diversified economy and has been consolidated as the second largest economy in the country after Bogotá. In 2005, it participated with 15.05 per cent of the national GDP.[2] The food and beverages industry had the largest gross production with about 25.3 per cent of industrial output. It is important to note that there is a well-established chocolate industry in Antioquia, which is a clear example of the main traits of the regional economy as described in its trajectory.

The regional economy is very oriented toward exports. According to DNP (2007b: 15), Antioquia 'is the largest producer in the country of primary goods for export such as gold, bananas and coffee and is the second exporter of flowers after Cundinamarca'. The regional per capita exports including coffee and petroleum in 2003 were US$349, above the national average.[3] In 2004, about 80 per cent of the total exports were of industrial origin; the SME firms participated with 15.5 per cent of those exports. The textiles industry participated with about 32 per cent of the regional exports in 2004. Other important exports originated in the garment industry, food products, chemical and transport material amongst others (DNP 2007: 19-20). The average participation in the industrial exports of the chocolate products and confectionery was about 9.9 per cent during the period 1987-2003 (DNP 2007b).

In summary, the historic regional development trajectory of Antioquia has led it to become an industrial and export region with solid entrepreneurship and an outstanding history of public-private sector cooperation. Several factors characterize this trajectory: the sheer size of the expansion of the regional economy; its transition to manufacturing in the early industrialization period, which provided a boost for later import substitution period; and the consolidation of 'Antioqueño entrepreneurship'. Currently, the department has a very dynamic and diversified economy and it has consolidated as the second largest economy in the

country after Bogotá. As stated above, the chocolate industry in Antioquia is a clear example of the main traits of the regional economy as described in its trajectory.

Map 6.2
Geographical location of Santander (Colombia)



Source: This research based on IGAC, 2011.

6.2.2 Development trajectory of Santander

The development trajectory of Santander is divided into four key periods beginning with a prosperous agricultural and specialized artisan manufacturing industries during the colonial period. Second, came integration to the national economy and economic restructuring (1900-1950). Third was petrochemical import substitution industrialization and the rise of

SME manufacturing. Finally toward a bifurcated economy: fast growing oil related industry and family-based SMEs in farming and manufacturing. The analysis of the economic trajectory of Santander shows that for that region the cocoa-chocolate VC in relative terms is not of great significance. Thus, the contribution of the business systems to the CA is less than in Antioquia.

Prosperous agriculture and specialized artisan manufacturing during the colonial period

The most dynamic territories during this period were Velez, San Gil, Socorro and Girón. Later, the center of economic and political activity shifted during the Republic toward Bucaramanga, its current capital. During the 18th century and part of the 19th, Santander had a superior economic performance, explained by greater development of its productive forces in relation to the other regions of the country. It included a well-articulated division of labor based on dynamic specialized artisan manufacturing (textile manufacturers) whose raw material, in particular, cotton and wool came from smallholders and tenant-peasant production and to a much lesser degree large haciendas (Kalmanovitz 1985: 65).

Accounts of the dynamic economic activity in Santander can be found in the production of cocoa, which was cultivated in the region in significant amounts from the 18th century. In addition, coffee was first introduced in Santander and was cultivated in an important scale during the second half of the 18th century. Manifested differences in agrarian structure in coffee production are some of the reasons why the center of coffee production changed from large holdings-based coffee production in Santander to smallholdings peasant-based coffee production in Antioquia and other regions.

In addition, the Thousand Day War (1889-1903) severely disrupted the social and economic activity of Santander, while other areas such as Antioquia were not affected.

Integration to the national economy and economic restructuring (1900-1950)

During this period, the region experienced a process of economic restructuring. The oil industry's infrastructural needs became an important driver of change in the region. In 1919, a previous contract for the oil exploration in the region, *The Mares Concession,* was transferred to the

Tropical Oil Company, which built in 1921 a small refinery in Barrancabermeja (Kalmanovitz 1985: 254). Once the construction of a 538 km pipeline to Cartagena was completed, in 1926 the first oil export shipment took place (Santiago 1986). The contribution of the oil industry to the regional development during this period beyond infrastructure (roads, railways, oil pipelines) fell short given the precarious terms negotiated by the national government and the American oil companies characterized by the non-payment of royalties, taxes and non-compliance with minimum labor standards. However, the oil industry promoted the creation of oil-related businesses such as mechanical workshops, complex and modern metal foundry and forging, carpentry, brickyards, modern refrigerators and a slaughterhouse (Santiago 1986: 52).

In 1945, Santander was the fifth largest industrial center in Colombia with a participation of 3.3 per cent of the total patrimony and net investment, after Antioquia, Cundinamarca (including Bogotá), Valle del Cauca and Atlántico (Kalmanovitz 1985: 376). The weight of oil investments in total industrial activity supported the position of Santander in this industrial ranking. In addition the oil industry promoted the development of high quality regional human resources. In 1948, the Universidad Industrial de Santander was created and began teaching petroleum engineering; it soon became the leading educational and research institution of the eastern part of Colombia.

Petrochemical import substitution industrialization and the rise of SME manufacturing

Throughout the second half of the century, Santander gained importance in the industrial production of chemicals, oil and oil derivates thanks to the strengthening of the petrochemical complex created in Barrancabermeja after the oil complex was returned to national control. Finally, Ecopetrol, the national oil company, undertook its administration in Barrancabermeja in 1961. Ecopetrol established the first petrochemical plant in the country (Ferticol), which began producing ammonia and urea to supply agricultural producers throughout the nation. Likewise, factories were built in Barrancabermeja to produce a wide range of goods such as ethylene and polyethylene, paraffin, sulfur and similar chemicals (Poveda 2005: 595).

Meanwhile, through the 1970s, the Financial Corporation of Santander and the Bank of Santander supported the modernization of

the regional economy and were crucial to facilitate the constitution of SME businesses in different economic activities by linking the financial capital to the production sector. The manufacturing activity stretched from SME garments (e.g. el Roble) and textile production, leather products, especially shoes, as well as wooden furniture, tobacco and processed food such as table chocolate. Enrique Ogliastri (2005) argues that the inhabitants of this region had an individualistic, aggressive, frank and industrious mentality consistent with the artisan, smallholding and small firm structures that had accompanied the historical social, economic, political and cultural evolution of Santander.

During the 1980s, the oil industry strengthened its role as a vital economic source for the regional economy of Santander and promoted its development through investments in infrastructure, research and education among other areas. Throughout the last 15 years, Santander has been one of the most dynamic economies of the country, displacing Atlántico to become the fourth largest economy in Colombia. The boom of international oil prices has boosted the regional economy. The percentage of regional GDP to total national GDP increased from 5.1 per cent in 1990 to 6.4 per cent in 2005. Likewise, the regional per capita income is one of the largest of the country and is higher than Valle del Cauca and Antioquia and close to Bogotá (DNP 2007). The economic performance of Santander is also explained by the important contribution of its manufacturing and in particular its agricultural sector. In 2005, the regional industry accounted for about 25.6 per cent of GDP while agriculture and livestock 14.2 per cent. Santander is 'the first national producer of brown sugarloaf, black tobacco, blond tobacco, cocoa and yucca. It is the second producer of poultry (eggs and chicken) and is the 6th producer of livestock in the country' (DNP 2007: 15).

Finally, it is important to recall that the region has experienced conflict and illegal crop production across the decades. Most of the illicit crops were located in sloped zones, which historically have been areas of conflict. Paramilitary groups and guerrillas became a risk factor for investment in the region. In this context, international and national resources poured into the region and supported the development of cocoa to substitute illicit crops and promote employment and income among impoverished inhabitants.

In summary, the regional trajectory shows Santander as a diversified economy whose main item is oil production and petrochemical industry.

The economy of Santander is bifurcated. On the one hand the fast growing oil-related industry, based on FDI and Ecopetrol and on the other hand, family-based SMEs in farming and manufacturing, which formed before national market integration. The great regional biodiversity and the availability of land have consolidated solid regional agro and livestock sectors. Permanent crops have an important place in the agricultural and livestock structure; many of them have been historically cultivated in smallholdings and in mountainous areas. Most of these crops have followed a long trajectory since the colonial period playing a key function in the regional economy and consolidating Santander as the main producer of such commodities at the national level.

6.3 Territorial Embedding

Concerning territorial embedding, it 'considers the extent to which an actor is "anchored" in particular territories or places. Economic actors become embedded there in the sense that they absorb, and in some cases become constrained by, the economic activities and social dynamics that already exist in those places' (Henderson et al. 2002: 452). Territorial embedding is analysed taking into account features of the regional economy such as sectoral composition, dominant interests, natural resources, violence and conflict.

A brief description of the regional nuclei of the VCs included in the study shows that the northeastern region is rich in natural resources, has the largest oil refinery in the country, accounts for about 70 per cent of the domestic production of this industrial sub-sector, and shares an extensive common border with Venezuela. Historic violent episodes (armed conflict) and the production of illicit crops take place in the region. Second, Antioquia is host to the largest economic conglomerate of Colombia, has an outstanding history of public-private sector cooperation and a very dynamic and diversified economy, which is primarily orientated toward exports (table 6.1).These aspects consolidate it as the second largest economy of the country after Bogotá. A solid regional institutional thickness has accompanied its strong industrialization history. Antioquia has been affected by decades of political violence and has been the scene of armed conflict due to the presence of guerrilla and paramilitary groups. The cultivation of illicit crops and processing of illegal drugs is also a distinctive characteristic of the region.

Table 6.2
General aspects of the departments of Antioquia and Santander (2005)

Regional aggregates	Antioquia	Santander
Extension	63,612 km^2	30,537 km^2
Population	5,682,276	1,957,789
Regional population/ national population	13.25%	4.56%
Regional GDP US Dollar (million)	US 18,503	US 7,812.50
Regional GDP / National GDP	15.05%	6.35%
GDP per-capita	US 3,256.26	US 3,990.42
-VA Agro-livestock –fishing, forestry	12.3%	14.2%
VA industry	20.1%	25.6%
VA commerce	6.7%	8.3%
Unemployment rate	14.0%	14.3%
GINI Coefficient (2000)	0.56	0.50

Source: DNP, Agenda Interna Regional Antioquia and Santander, 2007. DANE, Departmental accounts of Colombia; Great Integrated Household Survey, Population Census, 2005.

6.3.1 Sectoral composition of the regional economies

The regional economies have presented changes over the period (1990-2004), which denote the growth and/or decline of them. Antioquia economy is larger than Santander's. In general, the economy of Santander had the best performance of the two regions during the period and presented significant gains in the regional composition of the GDP of the nation, particularly in agriculture and industry. Santander also held the greatest per capita GDP growth (47.2%) during (1990-2004). The agriculture in Antioquia presented difficulties during the period, having an important drop in 1998, during the time of the economic crisis, though at the end it grew in relation to 1990; the industrial sector had a steady participation with a small reduction at the end of the period. In terms of production, the contribution of the two regions to the gross domestic product of Colombia (GDP) presented a slight decrease in Antioquia and a steady increase in Santander during the period (1990-2004) (see table 6.3).

Antioquia is an export-oriented economy and participates with around one-third of exports and imports nationwide. Santander pre-

sented an increase in its participation in the total imports and exports during the period (2001-2004). In 2004, it participated with 3.50 per cent in exports and 2.50 per cent of the total imports of the country (see table 6.3).

Table 6.3
Comparative economic structures by Departments (1990-2004)

Regional Aggregates (%)	Year	Antioquia	Santander
Regional GDP/GDP COL.	1990	16.47	5.06
	1994	15.11	5.09
	1998	14.51	5.44
	2000	15.17	5.88
	2004	15.41	6.11
Per capita GDP growth	1990-2004	11.41	47.2
AGRICULTURE* Regional GDP/GDP COL.	1990	14,52	3,84
	1994	14.42	3.73
	1998	11.88	5.07
	2000	13.94	5.73
	2004	14.92	6.08
INDUSTRY: Regional GDP/GDP COL.	1990	19.50	5.09
	1994	19.47	5.14
	1998	19.63	6.00
	2000	19.42	7.41
	2004	18.81	7.80
IMPORTS* Regional imports/Nation	2001	30.26	2.98
	2002	32.13	3.13
	2003	34.67	2.94
	2004	30.15	3.54
EXPORTS** Regional Exports/Nation	2001	29.46	2.20
	2002	29.89	1.81
	2003	34.16	2.10
	2004	32.05	2.50

Source: DANE, Banco de la República de Colombia

*Data provided by DANE and BR does not include imports and exports (FOB) from Bogotá and Cundinamarca. **Non-traditional exports FOB.

The evolution of the regional trajectory in terms of competitiveness indicators for the different Colombian regions between 1992 and 2004

shows that: first, Antioquia is consolidated as the second leading region in the country after Bogotá. Second, Santander has a high global competitiveness ranking and has been gradually improving its competitiveness, upgrading its position from 9th place in 1992 to 4th in 2004.

Table 6.4
Ranking of regional competitiveness (CEPAL)

Factor of Competitiveness	Year	Antioquia	Santander
Economic strength	2000	3	6
	2004	2	6
Human capital	2000	4	5
	2004	3	4
Infrastructure	2000	3	8
	2004	4	8
Factor science and technology	2000	2	3
	2004	2	5
Factor public finances	2000	11	18
	2004	2	20
Factor environment	2000	19	18
	2004	15	17
Global competitiveness ranking	1992	2	9
	1998	3	7
	2000	2	5
	2004	2	4
Ranking position	*	Leading	High

Source: Parra –Pena Rafael y Ramírez Juan C. (2009) Escalafón de la competitividad de los Departamentos en Colombia. CEPAL, 2009.

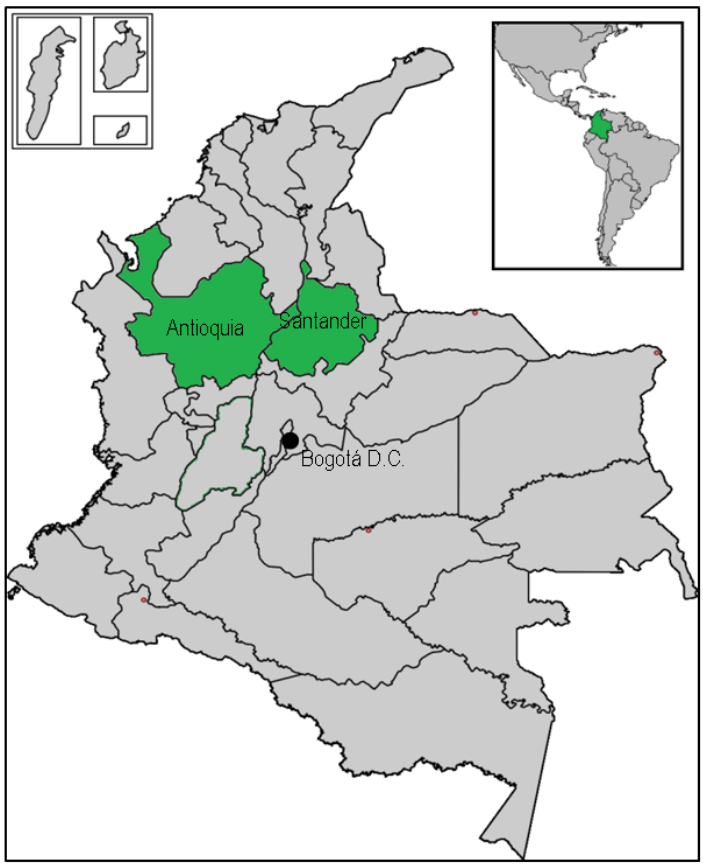
* Ranking position among 23 departments (CEPAL).

6.3.2 Natural resources and geography of Colombia

Colombia is an Andean country whose economy is still resource based and though exports have increased since the economic opening (1990s-onwards), it has opened its doors to competing imports. The country has a vast geography, a privileged geopolitical location and is endowed with different ecosystems. It is amongst the 30 largest countries in both population and geographical size. It has coasts on the Pacific and Atlantic oceans, and a large expanse of Amazon Jungle. It is divided into 32 administrative departments. Most of the Colombian population is located in the Andean region. The country is rich in natural resources including

oil, carbon, nickel, emeralds and gold and has large areas dedicated to agriculture and livestock. In 2004, it was the fifth largest Latin American economy in terms of GDP after Brazil, Mexico, Argentina and Venezuela. However, measured through the purchasing power parity, the per capita income of Colombia was US$6498 in 2005; below the Latin American average and places it amongst low-medium income countries (Cardenas 2009: 31).

Map 6.3
Geographical distributions of the case studies (Colombia)



Source: This research based on IGAC, 2011.

Natural resources offer the leading industrial firms of a VC the opportunity to benefit from rents in a given region endowed with exceptional natural agricultural resources compared to other regions of a country. The leading firms can consolidate their competitive position in the region through the location of their factories or by means of the establishment of comprehensive commercializing schemes. According to Kaplinsky (2008: 287-300), 'rents arise from the control of scarce valuable resources, and to be appropriated, require protection from competition. This is reached by taking advantage of, or by creating, barriers to entry…. [Resource rent] arises as a natural bounty of nature, in which natural resources of varying yield are unevenly distributed spatially'. The public-private partnerships for VC development in a region with a natural resource competitive advantage generally draw the participation of the leading industrial firms since they want to enhance their control over the supply of raw materials or at least to maintain and/or avoid the weakening of their initial position by agreements that might involve other firms. The absence or limited availability of natural resources that support the sourcing of raw materials by the VC governors limit their support to a CA of a regional VC. The VC cocoa-chocolate in Santander and Antioquia provide key examples (see case studies 1 and 4 in chapters 9 and 12 on CD ROM).

Santander counts with large areas specialized on cocoa production, and a long-standing tradition of cultivating the crop. This advantage attracts support from the leading companies toward the CA. Meanwhile, the cocoa production in Antioquia is less concentrated and dispersed around its geography. The lead firms of the VC cocoa-chocolate in Antioquia do not enjoy natural rents. However, the largest companies in particular CNC S.A. support the CA in Antioquia based on the potential natural rents they can enjoy from the consolidation of the region as a key player in the production of cocoa. It is important to point out that there is a large supply of land for cocoa programs in the 'Cordon-rubber-cocoa', which encompasses northeastern Antioquia to the Uraba Region (part of Zaragoza, Nechi, Maseo) and stretches up to the northern part of Antioquia through Caucasia reaching Arboletes and some areas from the Department of Cordoba (MADR 2002).

Table 6.5
Natural resources and VC competitiveness agreements

Region	Natural resource endowment	Natural rent	Influence on the CA
Santander	-Large supply of high quality land for the expansion of the crops. -Some areas have been certified for cocoa of origin. -Enough availability of land, water supplies from rivers, rain, sun and shadow.	-It originates in the geographic concentration of quality cocoa crops in the region. -The large manufacturing firms are positioned in the region with large cocoa purchasing points.	Leading firms (CNC S.A. and Casa Luker S.A.) support the development of the input supply base, which is in their own interest.
Antioquia	-Large supply of land for cocoa programs. -Production is not concentrated geographically and the farms are dispersed in the region. - The yields are likely to increase as the new areas consolidate their production activity.	The leading firms do not have natural rents in the region in the short term but potentially might enjoy them in the long run given that some of the new planting projects are specialized in the crop and have an entrepreneurial foundation.	CNC S.A. supports the CA since the company wants to develop a regional supply base where its key chocolate manufacturing factory is located.

Source: Own construction

The natural resources influence the outcomes of a CA in the sense that the different natural resource endowments across regions support or hinder the achievements of the agricultural and livestock production targets, and the productivity goals in the short and medium term. The availability of good quality land facilitates attainment of the production goals of the CA since natural resources are not a constraint to reach them. The leading firms of the VC exert direct control over the yields of these natural resources through production of the crop in their own farms. Moreover, indirectly through comprehensive commercialization schemes such as the cases of CNC S.A. and Casa Luker S.A., which purchase most of the cocoa produced in the country. The positioning in the commercialization link of the VC provides the VC governors with additional rents in relation to their competitors (see table 6.5).

6.3.3 Violence (armed conflict and illicit crops)

Security is a key issue to ensure peace and prosperity in a region and to promote competiveness improvements in agro-industrial VCs. According to van Wijk et al. (2009), stability in the socio-political environment is crucial to the proper functioning of VC development intervention for two main reasons. '[F]irst, wide social divides among the population could hamper agricultural production, generate distrust among market actors, and may render market institutions less effective.... On the other hand, as far as instability is related to poverty, increased commercial opportunities for agricultural products may have a mitigating effect on social divides' (van Wijk et al. 2009). This outcome depends on whether poor agriculturalists are included or excluded in the CA of the VC, and if this inclusion actually improves their living standards. In other words, violence hampers the process effectiveness of development interventions at the VC level, though it is acknowledged that, in spite of the presence of political instability, armed conflict and other manifestations of violence, there is a need to promote socioeconomic development in affected areas, hence, VC interventions and CAs within them can support this endeavor.

Indeed, a violent environment introduces uncertainty to the regional production system and above all, it makes adequate market functioning and the overall economic activity along the VC more difficult. In general, violence hits rural areas the hardest; hence, the agricultural link in particular is affected, and hampers adequate VC links' integration. In this case, there is a twofold justification for the establishment of public/private partnerships for VC development. First, the promotion of peace and poverty reduction in the rural sector, for example, productive projects of income and employment generation, provide alternative options to people involved in the armed conflict in rural areas. Second, VC level interventions promote the improvement of smallholder bargaining power and productive conditions and through that foster VC integration and rural development. By and large, the VC and related types of partnerships become a great option to support peace and security through a systemic approach, which involves several societal actors and economic sectors instead of having a mere sectoral view. In other words, the VC analysis framework becomes a potential policy option to develop peace policies in armed conflict areas.

As pointed out above, Colombia's case is unique in Latin America since Colombia is the only country that had a guerrilla war and a strong presence of paramilitary groups in several areas of its territory. The situation becomes even more 'country specific' when the topic of the illicit drugs is taken into consideration. These two interrelated extra-economic factors have struck Santander and Antioquia (which have a common border) for several decades. Largely, these specific regional conditions influence the outcome of the CA and are an example of an unusual localized factor in the territory. Indeed, it is not incorporated in the global VC literature.

Since armed conflict affects rural areas and their productive activities relatively more than those in the urban sector do, it is expected that violence and instability would affect a VC's agricultural and livestock links to a greater degree. Hence, public, private and collective actions should target the problems experienced in the rural areas to promote VC integration, income and employment generation and overall peace and security. Given that the VC governors are located in the urban areas and operate on a national scale, they have the opportunity to maintain their raw material supply even during domestic supply shortages, when they might resort to imports from other countries. The rural smallholders have, on the contrary, less means to defend themselves from this phenomenon. As the late Jesus A. Bejarano pointed out, 'it is a fact that the agricultural sector bears the brunt of the impact of guerrilla violence from an economic standpoint, especially in the form of costs imposed on private agents: "protection" fees, extortion, kidnapping and all kinds of interference in economic activity' (1997: 54). It might be one of the reasons why most of the actions of the VC's CA are aimed at improving agricultural supply and promoting income and employment generation in rural areas, in particular those affected by armed conflict, which is the case of cocoa VC.

Illicit crops have a relative low incidence in the Departments of Antioquia and Santander in relation to other geographic areas of the country such as Guaviare, Caquetá, Cauca, Huila and Tolima. The last three regions contain most of the poppy production in the country. Illicit crops have caused exceptional socioeconomic and demographic impacts at the regional level. The coca boom allowed the settlement process to advance during the period 1978-1985 more than throughout the previous three decades, such as in the case of the area of Caguán.[4] Coca production,

processing and commercialization promoted new jobs and the generation of income in different activities associated with this illegal VC and prompted a great influx of migrants and the establishment of new towns and the growth of others. This process was accompanied by the presence of guerrilla or paramilitary groups (Echandia 1999: 79). The long-term economic impact of illicit crops in cultivation areas is negative, since, as Echandia points out, the activity's surpluses don't stay in the producing region and generally are allocated to other areas. Thus, after the boom, production sites are left with an environment prone to violence and conflict and with a lack of social infrastructure (1999: 81) to support the minimum living conditions of their inhabitants.

Box 6.1
Plan Colombia

Plan Colombia is a comprehensive anti-illegal drugs program proposed by the Colombian government during the administration of President Andres Pastrana and supported by the international community, essentially the U.S. whose Congress approved the initiative in mid-2000. Plan Colombia is the official name of a program that, among other things, 'provides the institutional framework for the military alliance between the US and Colombia in the war against illegal drug production, trafficking, and the organized criminal groups associated with these activities' (Mejia et al. 2008: 2). About $10.7 billion were spent in development of the plan during the period 2000-2005, nearly one-third contributed by the US, and the remaining part by the Colombian government (2008). The Plan has several components, though the military part is by far the largest. 'The total expenditures per year in the military component of Plan Colombia have been, on average, about $1.2 billion between 2000 and 2006, which corresponds to about 1.5% of Colombia's yearly GDP during the same period' (Mejia et al. 2008: 2). About 80 per cent of the U.S. assistance is directed to the military component in the fight against drugs, while the rest is allocated to programs such as the recovery of areas in which illicit crops have been cultivated in Colombia, judicial reform, the strengthening of human rights and the peace process in Colombia. The support for alternative development programs, including crops substitution (agricultural and livestock), accounts for about 3% of the total expenditures of Plan Colombia (Ramirez 2003).

There was an especially strong presence of armed conflict in Santander and Antioquia during the period 1987-1995 with a high frequency of conflicts between guerrilla and paramilitary groups. These regions were highly affected by killings, kidnapping and population displacement, including agricultural producers. Throughout this period, the conflict affected cocoa cultivation and other economic activities, such as cattle ranching. Because of great improvements in security during the last decade, investment has increased in cocoa regions, along with the recovery of cocoa plantations, the renewal of crops and the planting of hundreds of new cocoa hectares, including those from peace schemes and illicit crop substitution projects.

In the northeastern region, the role of public/private sector and NGO partnerships has been crucial in particular in the cocoa production projects by means of 'Plan Colombia' and other public programs and NGO-led projects funded by international donors. The general aim of such programs is to substitute illegal crops (coca and poppy) for legal crops and to incorporate guerrilla and paramilitary militants that are part of peace deals with the government into civilian life. In this environment, public-private partnerships for VC development have been crucial to promote the inclusion of small agro producers in the VC. The national administration has undertaken programs such as PLANTE, 'Alliances for Peace'; the Program of Alternative Development (PDA) and the Peace Investment Fund (FIP) of Plan Colombia to develop the above policy. For example, a 900-hectares project was carried out in the municipalities of San Vicente de Chucuri, Landázuri and Carmen de Chucuri in Santander by the consortium Ecocacao-Corporación Desarrollo y Paz Magdalena Medio. The investment was US$1.7 million and benefited 450 families. NGOs such as Fundescat, Asocacao and FUPAD have played a significant role as operators of large-scale national and international resources in several cocoa projects in the region. Fedecacao has also been a vital operator of resources. CNC S.A. and Casa Luker S.A. have committed to buying the cocoa yielded in the 6,900 hectares cultivated in the country with incentives from 'Plan Colombia' to replace illicit crops (MADR-IICA 2006b).

The most important regional factors that contributed to the formulation and outcomes of the CAs in Antioquia related to the favorable regional business system and the presence of armed conflict and illicit crops. These factors have prompted the development of cocoa projects

with the support of NGOs, Fedecacao and funding from regional, national and international sources. Surprisingly, the specific regional characteristics in terms of armed conflict and illicit crops have facilitated the influx of resources to the development of cocoa cultivation projects. Additionally, the availability of adequate natural resources, existing infrastructure and qualified human resources has provided an adequate environment for the undertaking of such projects. About 600 hectares were cultivated in the context of the 'Forester Families' program and around 200 hectares were part of the 'Colombia Forest' program. CORPOURABA supported the project and provided accompaniment.[5] Second, a five-year project to cultivate 500 hectares in cocoa incorporated 125 producers. The beneficiaries were composed of demobilized members of the 'Bloque bananero' paramilitary group, displaced families and small producers settled in the sub-region.[6] Thus, on the one hand, the illicit crops are a curse, undermining the local economy, its institutions and social capital; on the other hand, the resources to contain or eliminate these crops help the rebuilding through CA.

In short, the fact that there have been additional facilities for reconstruction (an influx of financial and technical resources) and an opportune response on the part of NGOs and other VC stakeholder, suggest that the net influence of the *violence* factor or *security policies* on the CA outcomes has been positive, such as in the case of cocoa planting and production targets. Simultaneously, there has been a drastic reduction of violence during the government of President Alvaro Uribe because of its peace strategy, called *democratic security*.

Paradoxically, violence has created economic opportunities in certain rural areas affected by armed confrontation between rebels, paramilitary forces and/or the army. The peace deals between government and rebels have opened the path to promote income and generate employment through crops such as cocoa, which are in high demand and have the potential to be cultivated in most of the conflict regions. Likewise, the presence, in the same or other geographic areas, of illicit crops such as coca and poppy, which in one way or another are linked with actors involved in the conflict, has also opened opportunities for the cultivation of alternative crops to substitute the illegal ones in Antioquia and Santander. As we can see, the VC development interventions are responses to issues from two trajectories: violence to poverty and poverty to violence. The former trajectory might be a partial explanation to the

situation created in certain regions by the influx and development of illicit crops that attract violent actors and distort the legal economic activities, and, in the boom's aftermath, the region is left with severe social and economic problems (a dismantled economic base and poverty). The second trajectory (from poverty to violence to productive development interventions) is more difficult to document since according to the experts (Echandia 1999), there are few comprehensive studies focused on areas free from illicit crop cultivation and long-standing presence of guerrilla groups.

Table 6.6
Regional Business Systems and the CAs

Region/VC	Trajectory	Nature of the firm and inter-firm relations	Intentions and capacities of the State to shape economic development	Relationships between State and firms
Antioquia -Cocoa-chocolate	Toward a modern industrial and financial conglomerate.	-Antioqueño entrepreneurship -Export orientation -Strong competition along with solid cooperation schemes -Fluid inter-firm relationships (joint efforts) -Ec. conglomerates	-Strong government with financial and administrative strengths and a comprehensive institutional endowment -High support for the CA	-Public-private sector partnership-culture -High technological support through business incubators, technological development centers, strong financial conglomerates
Santander -Cocoa-chocolate	Toward a bifurcated economy: a fast growing oil related industry and family based SMEs in farming and manufacturing	-Small and medium scale manufacture -Rivalry among firms -Medium degree of cooperation amongst firms	-Strong public finances -Low support to the CA but support for other cooperation schemes	-Support mechanisms for regional competitiveness in the areas of research, technological development and science and technology

Source: This research.

6.4 Societal Embedding

According to Hess (2004: 165), 'embeddedness is mostly conceived as a "spatial" concept related to the local and regional levels of analysis'. In this context, the regional business system framework is very useful. Hence, in this section, the differences in societal embedding of the VCs in various regions are analyzed taking into account *business system* variables such as the role of the state, the role of the regional elite and its connections and the state-business relationships.

6.4.1 Role of the state

The leadership exerted by local-regional governments in the business system enables the establishment and development of public-private partnerships especially when accompanied by political commitments and resource allocation within a regional public policy framework. Regional government participation is crucial to assure the continuity and policy process effectiveness of a CA because it helps to institutionalize the process. Public resources are systemically enhanced by cooperation with other stakeholders involved in the CA including universities, firms, agro-producer associations, business interest associations and decentralized agencies, as well as co-funding from national government, NGOs and international donors. Likewise, regional government can mobilize local actors to access national policies, which provide important resources and opportunities for local development initiatives. Within this scheme, the regional government must signal the other members of the council that its coordination or active participation in the CA does not mean any loss of independence on the part of the regional council. In fact, this collective body is conceived as an independent, non-bureaucratic network of public/private sector organizations.

One of the key functions of the regional government is the promotion of economic development in its territory. Since government participation is not meant to substitute or overshadow the role of the other VC stakeholders, local and regional governments play a proactive role but not a leading role in the multi-stakeholder development partnerships at the level of VC. On the contrary, the leading firms of the VC and in general of the private sector must have greater participation in the CA, since it is the direct beneficiary of the meso-level policies for VC development. This facilitates and increases the coherence and integrity of the sectoral

and regional policies aimed at improving the conditions of the agricultural sector, which have a great influence on employment and income generation. Hence, the synergies obtained in the CA with other social and economic sectors from different VC's links enhance regional government capabilities and the pertinence of its policy interventions and, in general, promote the competitive integration of the agricultural sector in the VC.

Above all, a CA cannot be reduced to occasional information exchanges and it is necessary to assure sustainable VC linkages. The lack of active public sector involvement in the regional competitiveness council for a given VC does not mean that the VC's coordination won't work, even though this participatory scheme would be strengthened by the qualified participation of the key regional VC stakeholders including the regional government.

The role of the government in the regional VC shows several differences according to the region. For instance, the regional government of Santander played a marginal role in the CA. Indeed, it did not participate regularly in the meetings of the regional council and did not coordinate adequately its agricultural policy (cocoa) with the VC's technical secretariat. Consequently, the technical secretariat took the leading role. Antioquia, on the contrary, had a strong will to participate in the CA based on the need to develop its social agenda (employment and income generation in conflict areas of the region). The regional and municipal governments of Antioquia played a proactive role and participated with resources in cocoa production projects. They co-financed projects especially in areas with armed conflict and the presence of illicit crops. During the first semester of 2005, the regional government was involved in cocoa projects in 22 municipalities of Antioquia. It contributed around US $1 million, equivalent to 21 per cent of the total costs of those projects. The remaining resources were raised by co-funding schemes with the municipal administrations (11%), communities (60%) and other sources (8%).[7]

The historically well-established relationship between the government and the private sector (in this case, the chocolate companies) also contributed to the functioning of the CA. The most important producer association is Fedecacao and there are few other producer organizations. The culture of association has been promoted through a type of contract agriculture schemes in the context of the CA.

Although the regional government of Antioquia through the Agricultural Secretariat played an important role in the CA, the institutional development of the region provided opportunities for more participation of the VC's stakeholders. In this sense, the administrative organization of the cocoa-chocolate VC in Antioquia was different from the traditional scheme of a regional council for competitiveness and a technical secretariat. The Cocoa-Chocolate Regional Council for Competitiveness (CCRCC) is seen as the institutional articulator of the cocoa development promotion in Antioquia.[8] The regional government helped increase confidence within the business environment. Given cocoa cultivation's large geographical spread and dispersion, the CCRCC was decentralized to other areas of the region such as Uraba and Bajo Cauca. These councils have the participation of local producers and have the support of local institutions, and coordinate and report to the main office of the regional council in Medellin. The fact that the technical secretariat is in the regional government premises (Secretariat of Agricultural and Rural Development of Antioquia) indicates the leading role that the regional government has played in the CA.

The institutional support provided by the regional government to the CA shows how the regional competitiveness councils can become policy advisers to the regional government as well as key meso-level institutions. The regional administration has the potential to enhance the job done by the council by means of institutionalizing its decisions at the regional level through the available legal, financial and administrative tools. In fact, the Regional Agricultural Secretariat sent a memo to the different operative directors in the different regions of Antioquia in 2005, which stated the technical procedures to operate cocoa projects in which the department participated with co-funding resources. Sergio Trujillo, Secretary of Agriculture and Rural Development of Antioquia (2005) stated that new cocoa cultivation projects:

> [S]hould be technically managed under the "new technology" criteria suggested by the cocoa productive chain organization at the national level, through the cocoa national council and adopted by the technical committee of Antioquia and Cordoba. Those criteria are: an agro-forestry system involving cloned cocoa and permanent and transitory shade tree, high planting densities (1.100-1.200 trees/hectare), fertilizing programs, sanitary management programs, weed control programs. It is also defined by the National council and the departmental technical committee that the plant-

ing material should be produced in bio-fabrics and cloning gardens duly certificated by ICA.9

Meanwhile, in Santander, there was a lack of commitment on the part of the regional governments regarding the CA. In this case, alternatively, the NGOs and Fedecacao fulfilled key functions in the implementation of the CA.

Finally, 'the extent to which the state is actively involved in coordinating and steering economic development, especially in helping to construct particular kinds of organizational capabilities' (Whitley 2007: 38) is greater in Antioquia, followed by Santander. This situation influenced the outcomes of the CAs and in particular supported the development of the CA in Antioquia.

6.4.2 Role of the regional elite and its connections

The role of the regional elite and its connections has been of great importance in the development process of Antioquia, and to lesser degree in Santander.

An important characteristic of the Antioqueño entrepreneurial trajectory is the conformation of large and influential economic conglomerates, which at present are amongst the largest in the country. The process of concentration by means of mergers and takeovers of firms began taking place in Antioquia and then stretched to the national level as early as 1920. In addition, there was a process of vertical integration undertaking by different firms such as Cementos Argos (cement), Compañía Nacional de Chocolates S.A. and in the textile industry, it took place in firms such as Coltejer, Fabricato and Tejicondor.

The CNC S.A., the largest chocolate firm in the nation, is part of the largest economic conglomerate of Colombia, the Sindicato Antioqueño.[10] The conglomerate is organized in three holdings with the National Chocolate Group one of them. The latter was the 8th largest firm in the country in 2005, with assets worth about $1,733 million US (Semana 2006). The textile and garment industries also play a major role in the regional industry.

Antioquia is a region with solid institutional thickness and a long history of public-private sector cooperation. The role of the state has been paramount to the economic and institutional development achieved in the region. The configuration of the *Paisa entrepreneurial spirit* and consoli-

dation of the Antioqueño elite can be traced back to colonial and post-colonial times. The Antioqueño capital accumulation cycle began with both small gold mining and trade (mainly imports) and their economic links. Helmsing (1986: 237) points out another important landmark in the consolidation of the Antioqueño elite: 'Independence and the abolition of colonial trade monopolies early in the nineteenth century turned the gold-processing merchants of Antioquia into the principal bankers and traders of the Republic, enabling them to obtain considerable privileges and powers'. The land settlement was indeed another distinctive feature of the entrepreneurial activity of the Antioqueño commercial elite. The entire economic trajectory followed by the elite is responsible, in particular, for the urbanization and industrialization of Medellin and other regions in the country. Psychological and cultural factors also fulfilled a key function in the consolidation of the Paisa entrepreneur: personality features such as hard work, frugality, innovation, risk taking, very high diversification, social openness and respect for manual labor (Davila 1987: 139).

Other factors facilitated the early economic rise of Antioquia as reported by Poveda (2005). First, the region was not involved in the last three civil wars during the period 1885 to 1903. These armed conflicts ruined the solid economic base of prosperous regions during the colonial period such as Santander and Boyacá. Second, coffee production was based on smallholdings and medium scale farms, which facilitated the shaping of a large regional demand for manufactured products. Third, the capital accumulation cycle followed by the region through gold, coffee and trade generated a meaningful capital market, which did not happen in most of the other regions of the country. Finally, 'From the XIX century there was an important number of mechanical workshops, of foundries, and of machinery repair, that turned out to be of great aid to the installation and maintenance of the new factories' (Poveda 2005: 274).

Taking into account the gains accumulated along its economic trajectory during the previous centuries, the regional elite of Antioquia was the group that took more advantage of the industrialization policies and public works promoted by the successive conservative governments during the first three decades of the 20th century. The industrial activity also had a great dynamism during the following decade of liberal governments,

which shows a great degree of political adaptability of the entrepreneurial Antioqueño elite.

In short, large economic units control part of the economy of Antioquia and in the case of the chocolate industry; CNC S.A. is part of a 'financial conglomerate' type of business system with low degree and high scope in the level of ownership cooperation and low level of alliance integration (Whitley 2007:13-15).[11] The societal embeddedness of CNC S.A. is based on strong relations with members of the Antioqueño community and with other actors including the government and firms associated with the conglomerate in which it is immersed specifically in its place of origin (Antioquia). 'Local companies that have emerged from particular social and institutional contexts evolve over time on the basis of trajectories that are in part a reflection of these contexts' (Henderson et al. 2002: 451). The history of the company is closely associated with the trajectory of the business system in Antioquia. CNC S.A. evolved from a region (Antioquia) that undertook an early industrialization process in the country based on a tradition of entrepreneurship supported by close public-private sector cooperation, and at present is one of the leading firms of the largest economic conglomerate in the country.

Santander had a flourishing agriculture and specialized rural household manufacturing throughout the colonial period, largely based on free labor carried out by independent settlers. During the period 1900-1950, the region experienced a process of economic restructuring. Commercial elite grew in Bucaramanga because of the capital accumulated by tobacco and bluing exporters and invested in imported goods. These imported goods have adversely affected traditional regional manufacturers (artisans) in subsectors such as furniture, shoes, textiles and garments (Kalmanovitz 1985: 205). In this phase, activities such as tobacco exports and cultivation of agricultural (e.g. cotton, cocoa, sugar cane) and extensive livestock production played key function in the regional economy.

During the last decade of the 20th century, strategic alliances between the private and public sectors, and academia to promote regional competitiveness became a key feature of the region, which shows the capabilities of the business system of Santander.

6.4.3 State-business relationships

In Antioquia, the state is more proactive and relations between state and businesses are strong and interlocking. The way of doing business in Antioquia differs from the rest of the state where Antioqueño families are used to engaging in joint ventures. Santander is somewhere in between (e.g. SME family-owned enterprises). For instance, the government of Antioquia had a crucial role in the regional CAs allocating resources to their development and contributing to the operation of the regional councils for competitiveness. Conversely, the regional government of Santander had a passive attitude toward the CA and did not commit meaningful resources to its implementation. Although it is important to point out that the support of the local/regional governments of Santander to other meso-institutions such as the Productivity and Technological Development Centers, the Metropolitan Corporation for Planning and Development of Bucaramanga, indirectly provide vital aid to VC development. Certainly, these institutions support product and process upgrading of the local and regional micro and small firms through the adoption of new technological innovations, the development of built structures and the promotion of business support services to support the regional competitiveness.

The public-private sector partnerships have yielded important outcomes in Bucaramanga (Santander), in spite of the limitations that persist in the culture of cooperation between regional stakeholders. According to Vargas and Prieto (2000), they have contributed to the creation of support mechanisms for the regional competitiveness in the areas of research, technological development and science and technology. The projects have originated with and are maintained by government participation (regional and local), the private sector and universities. The inventory of results include a business incubator, the creation of four productive development centers (textiles, meals, leather and jewelry), the creation and strengthening of research centers, the creation of the Metropolitan Corporation for Planning and Development of Bucaramanga in 1999, technology parks in Santander, the Digital City project and the CITI (Corporation for Technological Innovation) (2000: 24). Of note, during the fieldwork period (2005), the participation of the local and regional governments in the regional council for competitiveness of the VC cocoa-chocolate was minimal. The lack of direct participation of the government in the Competitiveness Council does not mean its lack of

support to the VC development. It might show a different strategy adopted by the newly elected regional government to foster the economic activity by other means, given its participation in alternative (not directly promoted by the VC regional council) cooperation schemes with the private sector to improve the overall regional competitiveness.

6.5 Quality of the CAs and Regional Factors

While the CA of the VC cocoa-chocolate in Santander is considered an outstanding agreement (high policy process effectiveness and relevance), the CA of the VC cocoa-chocolate in Antioquia is an average CA (intermediate policy process effectiveness and high relevance).

The differences within the regional business systems of Antioquia and Santander manifested in the contribution of the regional business systems to the quality of the CAs of the VCs embedded in their territories. There are differences at the regional level in terms of stronger regional governments as with Antioquia and to a lesser degree Santander and marked differences in terms of the participation of the regional and local governments in the CAs. The case of Santander shows less participation of the regional government though it supports the VCs through other participatory schemes (for more details see table 6.6). In terms of policy process effectiveness, the financial cooperation of the Ministry of Agriculture and Rural Development to the Regional Council on Competitiveness of the VC cocoa-chocolate in Santander has been important to assure its continuity. This cooperation was suspended in the case of Antioquia. However, a key distinctive feature of the regional business system in Antioquia emerged since the regional government undertook the technical secretariat of the CA and was trying to invigorate the CA after it lost its funding and was dismantled.

The natural resources are another regional factor that helped the CA of Santander to fulfill its goals. The availability of high quality land and appropriate weather for the crop is better than in Antioquia. It was reinforced by another localized factor such as 'violence and illicit crops'. This factor promoted the influx of important resources in the two regions, primary to incorporate guerrilla and paramilitary militants that are part of peace deals with the government into civilian life, and to substitute illegal crops (coca and poppy) for legal crops.

6.6 Influence of Regional Factors on the Developmental Outcomes of CAs

This section presents a synthesis of the analysis on the influence of regional factors on the developmental outcomes of competitiveness agreements. It discusses the differences in outcomes between the two regions (Antioquia and Santander) and to what extent regional factors can explain these differences.

6.6.1 Main developmental outcomes

The main developmental outcomes and its differences between the two regions can be summarized as follows. The value chains cocoa-chocolate in Santander and Antioquia improved their degree of VC integration. In addition, the cocoa-chocolate VC provides important examples of collective learning. It was more fluid in Santander than in Antioquia. By initiative of the Cocoa National Council for Competitiveness, the technology for the integrated management of plagues and diseases in the cocoa plantations was developed; including the undertaking of a *monilia campaign* in its first stage in Santander. In addition, a manual of labor competencies for cocoa production was created by a public-private partnership led by the Regional Competitiveness Council and SENA in Santander.

In terms of process upgrading, the cocoa-chocolate CAs had the introduction of new technological packages for cultivation and entrepreneurial farming though it was stronger in Santander than in Antioquia given the cocoa cultivation expertise in Santander; improvement in cocoa production techniques and in primary processing (fermenting and drying); gradual introduction of contract agriculture schemes and the quality certification for seeds. In addition Santander had the pilot of the implementation of a project for the development of technology for the integrated management of plagues and diseases. There were gains in productivity in cocoa in the two regions though the productivity gains were larger in Santander.

In terms of product upgrading there has been increasing availability of certified genetic material. Consequently, the regions are gradually attaining a more homogeneous product for the industry and the production of selected material has become more organized and permanent. This process is more intense and presents larger development in Santander than in

Antioquia. In addition, there has been a gradual introduction of organic cocoa in the two regions though it is not meaningful yet.

6.6.2 Influence of regional factors on the developmental outcomes

The regional factors contribute to the explanation of the outcomes of the competitiveness agreements and the differences in the two regions. First, the different economic trajectories partially explain the spatial division of labor and the economic and governance structures of the cocoa-chocolate VCs in both regions (Antioquia and Santander) and in general characterize the regional business systems in which the VCs are embedded. For instance, while Santander became the first cocoa producer nationwide, Antioquia became the first chocolate manufacturer and exporter of the country. In addition, Antioquia hosts several economic conglomerates with a national and international reach, which is not the case of Santander. The presence of large economic conglomerates in Antioquia means larger private sector contributions and tax incomes for the region, hence larger revenues than the non-oil revenues of the other region. There are greater historical links of cooperation between public and private sectors in Antioquia than in Santander. There is a proactive regional government in Antioquia with a high degree of involvement in regional affairs underpinned on a large public budget, while the regional government of Santander is by far more passive. These differences especially matter in the implementation stage and outcomes of the CA (see table 6.6).

In the case of the CA of the VC cocoa-chocolate in Santander, the degree of commitment of CNC S.A. (the leading firm of the chain) to the region is rather weak, thus the 'potential for value creation, enhancement and capture' (Henderson et al. 2002: 453) in regards to the chocolate industry is small. The company has a partial degree of territorial embeddedness**.** The northeastern region is seen as an enclave for the sourcing of raw cocoa for CNC S.A., which does not have a factory there. It has commercializing offices where it purchases cocoa from the producers and then sends the input to its factories in Antioquia and Bogotá, aided by the improved national roads that reduced transportation costs and make the commodity ubiquitous. Additionally, CNC S.A. has a comprehensive chocolate distribution network that attends most of the country. The density and intensity of local/regional connections of the

firm with other firms and organizations is low and is focused on the sourcing of raw materials for its factories. First mover advantages of CNC S.A. as a cocoa trade company have given it space to position itself as a leading buyer with a solid and sustainable purchasing scheme in the region. While Santander is positioned as the leading cocoa producer in the country, the regional chocolate industry has not undergone key developments and maintains its small-scale structure without meaningful cooperation schemes with the larger industries. The most likely explanation to this situation is that these firms are primarily 'affected and directed by local embedded social structures… with limited differentiation and specialization among producers and often only a few links in the value chain' (Andriesse et al. 2011: 153). In short, the business system's influence in Santander is much less than in Antioquia given the lesser importance of the VC cocoa-chocolate in the overall region's economy.

The regional government's participation in the CA of the VC from Antioquia, Santander was diverse and to a certain point shows the way a CA is perceived in each area by the regional leadership.

The regional government of Antioquia through the Agricultural Technical Secretariat fulfilled a key function in the development of the CA. It provided logistical support to the cocoa-chocolate regional competitiveness council. The major chocolate companies supported its social policy and the government in one way or another articulated the programs in the context of the CA. It had close relationships with CNC S.A. (see case study 4 in chapter 12 on CD ROM).

Meanwhile, in Santander, there was a lack of commitment on the part of the regional governments regarding the CA. In this case, alternatively, the NGOs and Fedecacao fulfilled key functions in the implementation of the CA.

Finally, it is important to point out that there has been continuity of the CAs in Santander and Antioquia for several reasons: the CA's alternative and complementary public/private cooperation schemes developed in Antioquia and Santander; the leading role assumed by producer associations in Antioquia and in Santander; the meaningful participation of NGOs in both regions; the continuous support of the Ministry of Agriculture and Rural Development (MADR) to the functioning of the VC's regional Secretariat in Santander, and the greater public sector commitment in Antioquia.

The natural resources supported the outcomes of the two CAs in terms of cultivation targets though they are more favorable to the cocoa cultivation in Santander than in Antioquia. Santander counts with large areas specialized on cocoa production, and a long-standing tradition of cultivating the crop. It is the first producer of cocoa in Colombia and has the highest quality crop in the country. This advantage attracts support from the leading companies toward the CA. Meanwhile, the cocoa production in Antioquia is less concentrated and dispersed around its geography and the region is the 6th largest producer of cocoa in the country.

Another much-localized factor, the illicit crops and violence influenced positively the outcomes of the CAs of the VC cocoa-chocolate in Santander and Antioquia. These factors promoted the renewal of crops and the planting of hundreds of new cocoa hectares from peace schemes and illicit crop substitution projects.

6.7 Concluding Remarks

Since, the national state issues and provides the VC policy framework for the different VCs is important to find out about the contribution of the role of the regional state (regional leadership) to the implementation and outcomes of the public-private partnerships for VC development at regional level. The specific regional characteristics (economic and non-economic factors) where the VCs are embedded play a complementary role, preventing or supporting the interventions and their outcomes at the VC level. The regional embedding of VCs presupposes the interplay between VC and non-chain actors and the constructive role of the institutions, including public organizations in the definition and outcomes of VC multi-stakeholder development partnerships such as the CAs of VCs at the regional level in Colombia.

Finally, it is important to point out that the mere localization of a VC in a favorable industrial policy setting, though it is a necessary condition; is insufficient criteria to predict the success of a CA for such VC. Therefore, the analysis of regional factors should be complemented with the study of specific VC characteristics, which at the end could make the difference in regards to the policy process effectiveness of the CAs for VCs located in the same territory.

Notes

[1] Compañía Antioquena de hilados y Tejidos de Bello.

[2] DNP (2007) Agenda interna para la productividad y la competitividad. Documento regional Antioquia. Bogotá, June 2007.

[3] Ministerio de Comercio Industria y Turismo (2004) Estructura Productiva y de Comercio Exterior del Departamento de Antioquia.

[4] San Vicente del Caguán is a large and low density settled geographic area, located in a forest region of the Department of Caquetá, Colombia, which was part of the 'despeje' area, a demilitarized zone that included four other municipalities during the government of President Andres Pastrana (1998-2002) as part of a deal with the FARC to facilitate peace talks.

[5] Cocoa Technical Committee of Uraba, (26 August 2005).

[6] CCRCC Minute 30 September 2005.

[7] Fernando Alberto Arango Díaz (Secretaria de Agricultura y Desarrollo Rural de Antioquia). Acta comité técnico regional cadena agroalimentaria del cacao Antioquia-Córdoba., Julio 8 de 2005.

[8] Minute CCRCC, Medellin, 28 February 2005.

[9] Sergio Trujillo Turizo, Secretary of Agriculture and Rural Development of Antioquia, Medellin 16 August 2005.

[10] The syndicate Antioqueño (Grupo Empresarial Antioqueño) is the largest entrepreneurial group of Colombia. During the last decade, it has concentrated its economic activity in three main sub-groups: meals, cement and finances. The group is organized in three holdings: 'Inversiones Nacional de chocolates' (chocolates national group), Cementos Argos and Suramericana, which constitute the investment matrices for their respective groups. The 'Grupo Empresarial Antioqueño' has adjusted and taken advantage of the economic internationalization of the Colombian economy. It has established alliances with other international firms and has bought other firms in Latin America to support its expansion plans.

[11] According to Whitley, 'Financial conglomerate business systems are dominated by large, diversified holding companies that rarely integrate the disparate activities conducted by subsidiary companies through companywide procedures, routines and careers. Organizational knowledge, capabilities and skills are primary generated and improved through the integrative direction of business activities by the managers of subsidiary firms rather than by those at the holding company level, who focus mostly on financial asset allocation and performance monitoring.' (Whitley 2007:13-15)

7 Influence of Value Chain Factors on Competitiveness Agreements

This chapter deals with the question of to what extent VC level factors influence the developmental outcomes of VC CAs. Data and other empirical information are drawn from the comparison of two VC CAs (cocoa-chocolate and dairy products) in the same region with a favorable industrial policy setting (the Department of Antioquia). We argue, that the VC' regional nuclei have typical features in terms of economic structure (input-output composition, barriers to entry and rents) and governance (authority and power relations)[1], that characterize their functioning and influence the outcome of meso-level policies.[2]

This chapter is divided into four parts beginning with the drivers of change; second, influence of VC's economic and governance structures and systemic efficiency on the developmental outcomes of the CAs; third, quality of the CA and VC factors; finally, concluding remarks.

7.1 Drivers of Change in VC Agreements on Competitiveness

We use the term to describe the *economic, social and political factors that either drive or block change* in a regional VC. Likewise, it includes 'political institutions, structures and agents (private sector, political elite, local government)'[3] that play a key role (support or obstruct change) in the regional VC. It is important to point out that GVC theory posits that the drivers for change originate within the VC and that the lead firms are the principal drivers for change, though they in turn face competitive threats. In fact, this theory is confirmed in the current thesis since in all cases included in the study, leading firms are large firms who are primarily interested in developing their own supply chains and when this needs broader actions (that call for other actors); they are able to move in a collective

fashion in a CA. That also means that large firms can block advances whenever they feel that their current relative position in the VC is threatened by the CA, for example the fixing of official minimum prices (reference prices) for their main raw material where they have strong market power (oligopsony). The main drivers of change in the VCs are represented in the interest of the larger industrial companies to assure a high quality supply of the raw material to face growing competition in the domestic market and to upgrade their production to face international markets.

The main driver of change of the dairy products VC in Antioquia was the need for milk processing firms to meet international quality standards for dairy production to become competitive in the few markets they were participating in and to get ready to participate in the TLC (Free trade agreement with the USA) once approved. In this case, industrialists participated in a protected domestic market with seasonal supply variations accompanied by minimal chances to compete abroad; hence, the setting of domestic prices became the major divisive issue within the VC (see case study 5 in chapter 13 on CD ROM).

The main driver of change in the cocoa-chocolate VC was the increasing orientation of the larger chocolate firms toward international markets, which required a steady supply of high quality raw cocoa in order to meet export standards (see further details in case studies 1 and 4 in chapters 9 and 12 on CD ROM). Indeed, the growing internationalization process of the leading regional chocolate industry (CNC S.A.) and of Casa Luker S.A. was a driving factor for the companies to support the modernization of the agricultural sector in the context of the CA, given their need to produce differentiated and highly competitive industrial chocolate goods. Since the main source of cocoa to the chocolate companies was the domestic market, which had a supply deficit, the chocolate firms fostered the development of new crops exploited using modern techniques to satisfy their demand for this raw material. The lack of producer organizations blocked change. In this sense, the cocoa producers did not take the lead in the CA because *they were not appropriately organized* in cooperatives and producer associations beyond Fedecacao, which is a national organization with regional chapters and a major player in the agricultural link.

The drivers of change in a multi-stakeholder agreement are dynamic and their role is influenced by the fulfillment of their individual goals.

When it happens, the mechanism in charge of the coordination of the agreement has to be prepared to reinvent itself or reconstitute its leadership. This could be the case of the regional council for competitiveness of the cocoa-chocolate VC once the cocoa shortage has been overcome, and hence, the main driver for change is fulfilled. In this background, the leading role of chocolate companies such as CNC S.A. and Casa Luker S.A. will diminish and it will be time for cocoa farmers' associations to take over as leading actors of the CA.[4]

The regional government can play a key role in the CAs and its social policy concerns might become a key driver of change in the VC. In Antioquia, the leading chocolate and dairy companies supported the government's social policy and the government in the context of the CA articulated the programs. The social policy was associated with the goal of promoting employment and income in marginal zones of the region, in particular those affected by armed conflict and illicit crops.

Next, we will discuss the influence of the main VC factors, namely governance and economic structures, and systemic efficiency in the outcomes of VC-based development interventions.

7.2 Influence of Value Chain's Economic and Governance Structures and Systemic Efficiency on the Outcomes of VC CAs

7.2.1 VC economic structure

In the context of the Global Commodity Chain framework (Gereffi 1994), a VC's economic structure refers to its *input-output structure*. That is, the set of technical and economical input-output relations that are established among the different VC links. These exchanges take place through the supply of raw materials between links and add value to the final product along each stage of the productive process necessary to bring a product from its conception to its end use. The study of the VC input-output structure supports the identification of key sources of power in vertical networks related to the governance structures that are shaped along the different VCs. In the study of VC economic structure, we give special attention to two issues: first, the nature of the product. Second, the dynamic rents (entry barriers and rents).

Nature of the product influences the CA

The characteristics of the agro/livestock product are likely to influence VC development interventions largely in VCs with an outstanding emphasis on quality because there is a wider scope on VC level action. They are analysed in terms of quality, longevity (expiration), instability in prices and production. Baquero et al. (2000: 14) argue that, based on the institutional theoretical framework, the intrinsic characteristics of products and their markets determine the type of coordination established between the links of the agro-food VC. They examined the nature of these relationships through transaction costs (bargaining, information and monitoring) and the characteristics of the agricultural product. The study found that as the emphasis on quality increases, the efforts of the agro-industry and supermarkets (retailers) to establish agreements with agricultural producers or suppliers of perishable products increase as well, in addition to an increased likelihood for technology transfer from buyers to suppliers (2000: 14). As can be inferred, logistics play a central role in agricultural chains while it is relatively marginal in manufacturing product VCs. In the same vein, we maintain that the agricultural product's characteristics affect the nature of a CA and, in particular, the extent to which the VC stakeholders are willing to coordinate their productive activities in the VC through cooperating schemes. In the event that industrialists are interested in assuring a steady and high quality supply of their key raw material, the quality improvements and the reduction of price instability in the market become determinant factors during the signing and implementation of the CA. In addition the intrinsic nature of the agricultural/livestock products (e.g. perishable and perennial) influences the degree of commitment of the VC stakeholders. Perennial crops such as cocoa, demand asset specific investment, which farmers are not interested in making unless it raises efficiency and comes with a quality premium that is, a case of investment coordination. Finally, containing negative externalities associated with the agro-livestock products promotes collective action and favors the signing and development of the CA in order to overcome issues that negatively affect the whole VC.

In the case of cocoa, the industrialists needed a higher domestic supply of high quality cocoa. The latter was greatly conditioned by the genetic material used by the agro-producers and their post-harvest practices during the primary processing of the crop. When the cocoa-chocolate agreements on competitiveness were signed, domestic prices

for cocoa were highly volatile and influenced by an unstable international market. It is important to note that cocoa is not a perishable product as are milk, vegetables and most fruits. Cocoa is a perennial crop.

Among the dairy products CAs, this factor positively influenced the cooperation along the VC. First, product quality is a major trait of an agro-food processing VC. Second, raw milk has short longevity before any type of industrial processing. Finally, raw milk prices are relatively unstable. Medium and larger producers are better articulated within the industry therefore receive higher prices for their products. Meanwhile, the other producers deal with intermediaries (collectors and transporters) and get lower prices (Baquero et al. 2000).

It is important to take into account that the shorter the product's durability, the higher the coordination degree in the agro-processing VC (Baquero 2000). This factor positively influenced the CA given the need of the dairy processing industries for a steady, high quality milk supply to support the production of differentiated and highly competitive goods in the market. In this background, the industry suggested and supported the use of cooling systems, entrepreneurial production practices and other technologies on livestock farms (Baquero et al. 2000: 65). In practice, the 'characteristics of the livestock product' facilitated the formal and informal generation of agreements among raw milk producers, industry and milk collectors before the CA and it was also important during the process of discussion, signing and implementation of the CA (see case study 5 in chapter 13 on CD ROM).

All of these aspects favored the outcomes of the CA, for example increases in coverage of cooling technology in the farms and collective centers. The Dairy Products National Competitiveness Council with participation of the regional council dealt with the price instability issue. Prices were concerted among the different business interest associations (livestock and industry) and the government, then, finally defined officially. The price setting mechanism was very positive for the raw milk producers and become a high point for the CA.

In the case of the cocoa-chocolate CA, the characteristics of the agricultural product (quality and price instability) positively influenced the CA. Given that the major source of cocoa supply to the chocolate companies was a domestic market, the chocolate firms fostered the development of new crops technically exploited to satisfy their demands for this raw material and especially to meet their quality requirements. The re-

duction of price instability was also a main driver of change that influenced the cocoa producers to participate in the CAs.

The *aim of decreasing negative externalities* promoted collective action and favored the signing and development of the VC CAs. First, a crucial challenge faced by the VC dairy products, before the signing of the CA, was to keep the territory free from hoof and mouth disease, brucellosis and other cow diseases, through vaccination and good productive practices. Second, before the signing of the cocoa-chocolate CA, cocoa had become a low profit crop, and ran the risk of decreasing dramatically since there was a high incidence of monilia, witches broom and other cocoa diseases, which inflicted high losses on crop yields. The best results of the CA were located in this area. For example, improvements in cocoa cultivation with certified material and a sound technological package, and the increased adoption of entrepreneurial practices in the cocoa farms, including the integral management of monilia.

Table 7.1
Rents in the VCs

	VC	Monopoly rents	Resource rents	Endogenous rents	Exogenous rents
Antioquia	Cocoa-chocolate	* Cartelized buyers in the cocoa market and sellers in the table chocolate market.		* New processes and product technologies in chocolate production. * Marketing expertise and branding (chocolate production). * Innovation in chocolate products, seedlings, etc. * Development of several new disease resistant varieties in their research centers.	* Modern financial intermediation. * Effective policy and government. * Export marketing facilities. * Research and technology development organizations.
	Dairy products	* Oligopsonistic market structure in raw milk and livestock markets. * Oligopolistic structure in the industrial milk market.	* Adequate supply of natural resources for livestock production.	* Logistics for milk storage and transportation (cooling tanks) * Supply chain management (Colanta) * New processes and product technologies in dairy products.	* Modern financial intermediation. * Effective policy and government. * Research and technology development organizations.

Source: Adapted from Kaplinsky and Morris (2008).

In general, VC agreements on competitiveness are likely to draw different VC stakeholders to undertake collective action in situations where they are facing negative externalities and managing economic crisis. In contrast, 'managing rapid growth is extremely time consuming for firms. As a result, there is little time for interaction with government or other players which are not directly related to day-to-day business. If orders keep coming in, there is also little urgency for collective action' (Meyer-Stamer 2004: 339).

Barriers of entry and rents: Rents are a dynamic variable, which have a changing composition within the VC and reflect changes in the VC economic structure, rent distribution as well as in the VC governance.

Type of rents controlled by leading firms

These types of rents support the control exerted by the leading firms of the VC and are assured based on entry barriers 'constructed to prevent the entry of competitors' (Kaplinsky and Morris 2008: 299). The latter are anchored in the concentrated market structure, characteristic of the industrial and commercial links of the regional VCs included in the sample. The governance issue is fundamental in this case since larger firms benefit from all sources of rent levered on their monopoly or political rents. They 'arise from the "political power" to exclude competitors, for buyer cartels or purchasing policies which exclude particular suppliers' (2008: 299). In other words, the largest firms commanding market position and governance role is strengthened by their appropriation and right to use other rents; natural rents in case they exist, and endogenous and exogenous rents.

The existence of oligopsonistic and monopsonistic market structures in the agro/livestock markets in the VCs for cocoa-chocolate, dairy products generate 'cartel buying power' (Kaplinsky 2000). On the one hand, so-called captive chains show the greatest dynamism in terms of rent creation, including large endogenous rents as lead firms can control these. On the other, in terms of prices, this scheme has a negative influence on the CA since VC's leading firms might block any price setting managed by the government (reference prices), and marketing initiative that challenge their position such as in the cases of Colanta and CNC S.A. Also, anticompetitive practices like the lobby carried out by agro/livestock producer associations for instance Fedegan, Fedecoleche

to obtain sectoral gains with the approval of import restrictions on commodities and the setting of minimum prices affect negatively the functioning and outcomes of VC CAs. Thus, there is a countervailing power by farmer associations. The reference price mechanism worked briefly in the VC dairy products, but it was abandoned because of the pressure exerted by the largest dairy industries. Consequently, prices become a very contentious issue in the VC CA and the industrialists' reaction is to increase lobby pressures to compensate for losses in their relative position in the market.

Monopoly rents are appropriated by the regional VC governors in the case of the VCs cocoa-chocolate and dairy products in Antioquia.

Resource rents arise 'from access to scarce resources of differential yield' (Kaplinsky and Morris 2008: 299). This natural resource-based rent applies to the VC dairy products in Antioquia and, to a much lesser degree, in the cocoa-chocolate VC in Antioquia. In the former the industry is located in or near key agricultural and livestock producing regions, which perform outstandingly in relation to the other regions of Colombia. The lead firms of the VC cocoa-chocolate in Antioquia do not enjoy natural rents, which makes it unique. Antioquia is the sixth largest cocoa producer in the country. The prototypical cocoa growing operation in the region is a smallholding not specialized in cocoa, and is embedded in a production system that includes one or more different crops such as coffee, timber and fruit trees. The production is not geographically concentrated; on the contrary, there is a great dispersion of producers around the different areas of the Department of Antioquia (MADR 2002).

Endogenous rents are generated at the micro level and provide the private sector with high command over them by means of 'unwritten process know-how, or by formal entry barriers such as trademarks, copyrights and patents' (Kaplinsky 2008: 300). Firms are not willing to cooperate in their core business, but in certain instances, they are ready to cooperate in other activities that might be protected by entry barriers. Indeed, they have the governance to facilitate access to certain VC actors to specific areas whenever they have the upgrading goal in mind. In this sense, endogenous rents under certain circumstances have a positive influence on VC CAs. The 'monilia campaign' in the cocoa-chocolate VC counted on the participation of CNC S.A. and Casa Luker S.A., which have developed several new disease resistant varieties in their research

centers and also developed new technological packages for the crop. Under the CA they were willing to train several producers in their farms and to share knowledge and technology including a supply of certified planting material with new varieties for their new crops (see details in case studies 1 and 4 in chapters 9 and 12 on CD ROM).

The endogenous rents could be large enough for lead firms to share these with suppliers; for example, eliminating disease also reduces costs for suppliers; the storage reduces transaction costs for milk producers; improved seeds have higher yields. Thus even where there are no price increments; there can still be improvements for suppliers.

Exogenous rents are generally reflected in legal frameworks and are largely outside the influence of chain participants (Kaplinsky 2008). Hence, exogenous rents are likely to play a positive role in VC CAs since public-private partnerships increase the pertinence of government interventions at the VC level given that 'efficient financial intermediation, transport and telecommunications infrastructures and responsive design and delivery of specific policies to help production are all factors that contribute to the ability of chain participants to appropriate rents for themselves' (Kaplinsky 2008: 287).

It is important to point out that non-tariff restrictions in the international markets and the need to upgrade by the regional producers to meet them play a positive role in the discussion of the CA, in the short term they affect the outcomes of the VC negatively, particularly regarding production targets. In fact,

[S]tandards have also become a major barrier to entry for small-and medium-sized producers. This is partly because they invariably require a paper trail (and therefore literacy and an IT infrastructure), but also because there are minimum costs of entry in certification. A poverty-focused policy approach to global value chains will thus inevitably have to confront the thorny problem of the impact of standards on small and poor producers (Kaplinsky 2008: 299).

In short, to study the influence of a VC economic structure on the outcomes of a VC competitiveness agreement we have discussed two main factors: the characteristics of an agro/livestock product; and the dynamic rents (entry barriers and rents). Now, we discuss the VC *main sources of power* to set the stage for further study of the influence of governance factors in the outcomes of a VC competitiveness agreement.

VC main sources of power: There are two main power sources originated from a multiplicity of barriers of entry and rents from which VC dominant firms underpin their *governance:* 'their market power …and their positioning in VC segments in which they can create and/or appropriate high returns' (Kaplinsky 1998, quoted by Gereffi et al. 2001: 1).

Market power: It is related to the relative position of a firm in a given market and the degree of control that it has over it. The market power affects the outcomes of a CA regarding the linkage between lead industrial firms and the agricultural/livestock links, and the relationship between lead industrial firms and SME firms. These linkages are mediated by the way domestic prices are determined.

In the first situation, the case studies describe two main options based on imperfect (oligopsonistic and oligopolistic) domestic market structures (e.g. agriculture/livestock markets protected from foreign competition by government policies and deregulated markets) that in one way or another lead to interdependence and a need for coordination between the largest industrial firms and the farmers. The protection from international competition of an agricultural link by government policies, largely based on food security consideration, generates a background in which the processing industries rely heavily on domestic production, and thus, there are several coordinating events between them and their suppliers, though disputes on price determination arise and as a result, the government has to arbitrate. On the contrary, when the raw material is competitive and its price is determined in the international market, price disputes between lead firms and their suppliers are reduced leaving room for increased cooperation in other areas such as in captive VCs.

In the second situation, the market power has a strong influence in the intra-link relationship between lead industrial firms and SME firms in the context of a CA. In general the lead firms are not interested in cooperating with SME firms based on their market power. On the contrary they introduce practices such as collusive price fixing and price wars that put SMEs on the verge of bankruptcy.

In Antioquia, two large firms in each VC exercise market control: CNC S.A. and Casa Luker S.A. in the cocoa-chocolate VC, and Colanta and Proleche-Parmalat in the dairy products VC. The oligopoly behaves differently in the cocoa and raw milk markets. While the former has a private sector company (CNC S.A.) embedded in the largest business conglomerate in Colombia (Sindicato Antioqueño), the latter has a coop-

erative scheme with a highly hierarchical and concentrated management of the largest dairy firm in Colombia (see case studies 4 and 5 in chapters 12 and 13 on CD ROM). The oligopsony buys a great deal of the cocoa and raw milk produced in the region, though they get most of their raw material supplies from other regions.

While the chocolate industry is competitive in the international market, the dairy products industry lags behind. The price formation is different in the two VCs. The cocoa prices have the international markets as a reference while prices of the raw and processed milk are regulated and protected. Taking into account that the dairy market is still protected by government policies, the dairy processing industries rely heavily on domestic production. Although they can find lower dairy prices in the international market, there is no free market for raw milk and imports cover domestic supply deficits. In other words, there is an institutionally endorsed interdependence between raw milk producers and the industry with national government acting as the referee in case of disputes, which mostly arise around the issue of price determination.

The positioning in key segments has to be with the positioning of the main firms in crucial VC segments such as design, marketing, product development and network coordination. The positioning of VC governors in key segments of the VC such as transportation, processing and/or marketing provides them a strong bargaining condition in relation to their suppliers. VC governors of all the VCs included in the study controlled those key segments and based on that in practice blocked various initiatives in terms of price fixing, functional upgrading of suppliers, and product and process upgrading of their small industrial competitors. In the dairy products case, upon signing the CA, Colanta had four milk collecting centers in Antioquia. It also had processing plants where milk was collected (San Pedro de los Milagros and Medellin), as well as plants in other parts of the country and a pulverizing plant in San Pedro Antioquia (MADR-IICA 2001c: 45). In 2005, Colanta was the 32nd largest company in Colombia. Likewise, the cooperative had strong market power; the cooperative purchases around 52 per cent of the total milk traded in Antioquia; it buys all the milk produced by its associates and around 48 per cent of the total produced by non-associated producers (IICA 2001: 54). Based on that, Colanta did not support the CA and in particular, measures such as the concerted fixed price mechanism did

not participate actively in the CA (see case study 5 in chapter 13 on CD ROM).

The need for an *independent laboratory for testing* raw material quality is, largely, a claim common to agricultural and livestock producers. They argue that introducing market transparency is a necessary condition and maintain that concentration of testing laboratories on the market's demand side might lead buyers to manage prices by themselves or indulge in unfair market practices. In general, whenever the independent laboratory question is introduced in a VC CA, the initiative runs the risk of being blocked by the VC governors, who follow defensive strategies. The other option, instead, could be to assist agro/livestock producers with compliance. According to Humphrey and Schmitz (2008), promoting the required certification agencies need not go against the interests of the leading firm. The latter might well be interested in withdrawing from the enforcement of standards and provide assistance in setting up credible certification agencies (2008: 277). In this case, the leading firm of the VC might focus on supporting its input suppliers to meet those standards through what Kaplinsky calls executive governance. Hence, the lead firm might prefer company specific standards rather than all-industry standards. Independent testing means independent standards rather than company standards. In captive VCs, companies would prefer company standards they can manipulate.

The independent testing laboratory is an important issue in making suppliers of local raw materials more autonomous in relation to the existing lead firms; it increases their ability to switch to other buyers, and hence makes them less dependent on the latter.

Generally, large buyers, commonly industrial processors are the owners of the quality testing laboratories of raw materials and perform as VC governors. In spite of the fact that quality norms and price differentials by quality might be agreed on by the VC members and be legally issued by the government, buyers maintain their bargaining power in the price setting stage, since they judge input quality and based on that, establish purchasing prices. This power is based on their market control. In fact, in oligopsonistic markets such as raw milk or cocoa, agro-producers do not have alternative customers for their products so they have to play according to the rules of the game set by the VC governors.

An independent testing quality laboratory was a common demand by suppliers of all VCs included in the study. The proposal was introduced

in the VC agreements and finally none of them was able to develop this project. This is another example of how VC governors, based on their market control, are interested in maintaining the status quo in regards to power relations with their suppliers. From the case studies, it could be stated that the margins on CAs to make local producers less dependent on leading firms are very narrow because of the lack of interest shown by the VC governors.

In short, the largest firms of a VC strengthen their governance based on two fundamental sources of power: the market power and positioning in key links of the VC. Next, we will discuss the influence of VC governance and institutional structures on the performance of a VC CA.

7.2.2 Governance and institutional structure

The governance factor relates to the 'authority and power relations that determine how financial, material, and human resources are allocated and flow within the chain' (Gereffi 1994: 97). 'The question of governance arises when some firms in the chain work according to parameters set by others, when it happens, governance structures may be required to transmit information about parameters and enforce compliance' (Humphrey and Schmitz 2001: 22). Governance refers to the 'inter-firm relationships and institutional mechanisms through which non-market coordination of activities in the chain is achieved' (2001: 20-2) (tables 7.2 and 7.3).

The discussion and implementation of a VC CA is likely to be affected by interest groups and firms that are positioned in the VC's main segments or have high degrees of market control at regional, national or international levels. In other words, the role played by VC governors influences the implementation and outcomes of VC CAs. For instance, a hierarchical governance structure—vertical integration by a firm of two or more links of the VC —gives little room for collective action at the regional level, given the fact that there is very limited autonomy to make decisions at this level if the leading firm is located in another region (Mayoux 2003; McCormick and Schmitz 2002). The *balanced networks*, on the contrary, favor the establishing of relations of trust, inter-firm cooperation and fluid information exchanges. In the case of *directed networks,* the leading firm is in charge of coordination, monitoring and control,

and is generally positioned in specific segments of the VC, such as design and marketing (Mayoux 2003).

The CA of the VC dairy products shows the magnitude of the importance of VC governance in the development of a VC CA. The outcomes of the VC CA illustrate several governance issues: the small producers from marginal areas with bad road conditions and higher transportation costs were marginalized from the upgrading processes frequently. Although, the CA helped industrial producers such as Colanta to meet the competitiveness challenges, it inevitably implied higher demands by the industry on raw milk producers in terms of product quality and processes. Finally, the dairy products VC CA showed how the governance structure might support or hinder the outcomes of a CA depending on the competitive priorities of the leading firm. Colanta did not support the CA since it argued that it had its own VC, and in the opinion of Asoholstein, the cooperative opposed and at the end prompted the collapse of the minimum price mechanism (price regulation). This fact reduced the competitive improvements gained by small raw milk producers (see case study 5 in chapter 13 on CD ROM).

In the meantime, CNC S.A. and Casa Luker S.A. expected, with their participation in the CA of the VC cocoa-chocolate to get outstanding increases in the cocoa supply to cater to their national and international chocolate markets. In this sense, the production and quality improvement targets were a solidifying factor for both agricultural producers and industrialists. It is important to note that in terms of VC governance, the opportunities for functional upgrading of the cocoa-producers and/or process and product upgrading of small chocolate industrialists were minimal. According to the VC's technical secretariat, 'the VC has both sun and shadow. In other words, it has two clearly defined sectors: On one hand, cocoa production and on the other transformation and commercialization (managed by two firms with too much power). What can manage the cocoa regional council has to be with the shadow (cocoa production), the other things are in the realm of the big enterprises'.[5] As we can infer from this quote, the governance structure did not allow the introduction of industrial issues in the VC CA since the main concern of the largest chocolate companies was the strengthening of the cocoa link.

Table 7.2
Governance and multi-stakeholder agreement of VC dairy products in Antioquia

Category / VC Stakeholder	Multi-stakeholder Agreement (Goals)	Stake-holder Behavior (Actions)	Individual Motivation	Outcomes of the Agreement
VC Lead Firm (Industry) Colanta, Parmalat	1	Support	Need of steady high quality supply of raw material.	Quantitative and qualitative improvement of raw milk supply.
	2	Opposition	Preferred market signaling in oversupply seasons.	Minimum price was adopted and then collapsed by pressure of the industry.
	3	Opposition	It had its own laboratory.	Project was not developed.
SME livestock producers and Associations / Independent raw milk producers and **Asoholstein** (small and medium-scale livestock producer-associations)	1	Conditional Support	Improvements in productivity of milk production.	Increase in raw milk production.
	2	Support	Raw milk´s price stability.	The minimum price was established at the beginning of the CA. Then it returned to market relationship.
	3	Support	Promotion of an independent testing laboratory-bonus for quality milk.	Project was not developed.
Government / Regional and national governments	1	Support	Increases in milk production and employment generation.	Increases in milk production of independent producers supported by state projects.
	2	Support	Promotion of the policy of VC CAs. (Improvement in livestock producers' income).	Government supported the price agreement, and then changed the policy toward free market mechanism.
	3	Partial support	Promotion of quality standards.	Legislation was issued.
Goals of the agreement	**1)** Quantitative and qualitative raw milk production improvements. **2)** Setting of minimum price or reference price mechanism. **3)** Constitution of an independent milk-testing laboratory.			

Source: This research.

Table 7.3
Governance and multi-stakeholder agreement of VC cocoa-chocolate in Antioquia

Category / VC Stakeholder	Multi-stakeholder Agreement (Goals)	Stakeholder Behavior (Actions)	Individual Motivation	Outcomes of the Agreement
VC Lead Firm (Industry) CNC S.A., Casa Luker S.A.	1	Support	Need of steady high quality supply of raw material.	Quantitative and qualitative improvement of cocoa supply.
	2	Support	Increase the regional sourcing of cocoa and improve the quality of cocoa supply	Increases in cultivation and production
	3	Opposition	Maintain company specific standards. Supported the introduction of payment differentials by quality	Project was not developed. A cocoa quality norm (ICONTEC) was issued.
SME cocoa producers and Associations (Fedecacao)	1	Support	Improvements in productivity of cocoa production.	Increase in cocoa production and process upgrading
	2	Support	Improvements in productivity and on physical infrastructure with public sector resources	Increases in cocoa production
	3	Support	Reduce their dependence on the leading firms (buyers). To improve their income.	Project was not developed. Legislation was issued on cocoa payment differentials by quality
Government Regional and national governments	1	Support	Increases in cocoa production and employment generation.	Increases in cocoa production and process upgrading
	2	Support	Concentrate the cocoa production in specific zones	Increases in cocoa production
	3	Partial support	Promotion of quality standards	Project was not developed Legislation was issued on cocoa payment differentials by quality
Goals of the agreement:	1) Modernization of cocoa cultivation (Renovation and planting of new hectares) 2) Development of economies of scale in cocoa production, storage and transportation 3) Constitution of an independent laboratory for testing cocoa quality			

Source: This research.

The role of the leading firms and/or other stakeholder of a regional VC in development interventions at the VC level are a matter directly associated with the issue of governance.

Lead firms of the VC and VC level interventions

First, it is important to refer to the governance issue and its influence in the definition of the coordinating role played by the leading firms along a VC. According to Kaplinsky and Morris (2008: 286),

The power of value chain governors is important because, through its coordinating role, it promotes systemic efficiency and meets customer demands for new, differentiated and high-quality products. But chain governance also has important distributional implications, determining the returns received by producers throughout the chain (Kaplinsky, 2000). Because governance limits and shapes the capacity of individual producers to innovate in different spheres of upgrading – process, product, function and chain (Humphrey and Schmitz, 2001), it also determines dynamic capability development (Teece et al., 1992), and thus incomes over time.

The policy process effectiveness of a CA at the level of VC is enhanced by the presence of a leading firm and/or an entrepreneur capable of organizing collective action, mobilizing public action and whose interventions promote the integration and the systemic efficiency of the VC. This perspective suggests that both governance and coordination functions might be concentrated on the VC governor(s), though coordination of activities can be shared with other actors if there is a participatory device such as a regional competitiveness council (public-private partnership scheme). Morris (2001) argues that 'most analyses have focused on the dynamics underlying buyer or producer-driven chains, from the vantage point of view of the location of the "leading" firms "driving" the process and "governing" global chains usually located in the industrial countries' (Gereffi 1994). This follows from the fact that traditional VC analysis is based on the 'realities of where global markets are dominated and where the greatest rents are extracted' (2001: 127). Accounts of this approach can be found in Gereffi (1994, 1999), Gibbon (2001) and Humphrey and Schmitz (2001) who support the idea that most VCs are led by large dominant firms (buyer driven or producer driven VCs). This principle can be extended to VCs at different spatial levels. It differs from scholars such as Morris (2001) and, Kaplinsky and Morris (2000,

2008) who see the potential of other actors to make a difference and of other issues to be considered in the VC analysis.

The leading role of the VC governors do not necessarily mean that they should be directly involved in the coordination of activities. Morris (2001: 127) distinguishes between roles of governance and coordination-management, the role of individual lead firms and the key function played by single nodal points, which exercise various forms of control.

Value chains are governed when parameters requiring product, process and logistic qualification are set that have consequences up or down the value chain, encompassing bundles of activities, actors, roles and functions. This is not necessarily the same thing as the coordination of activities by various actors within the value chain… coordination does not require that a single firm engage in these roles (ibid: 134).

The VC regional CAs promote the coordination of VC activities by various actors through participation in the VC Competitiveness Council, which means that coordination is expected to be a collective role instead of being the work of a single firm.

The VC cocoa-chocolate case support the idea that the presence of a leading firm (and an entrepreneur), which might perform both governance and cooperation functions enhances VC level interventions. Alternatively, the leading firms' lack of interest and leadership in the dairy products VC and the limited results of the CAs contribute to reinforce the last statement. Meanwhile, though there are alternative attempts by other actors to undertake collective action and coordinate some activities along the VC, they have been marginal and the commanding position of the largest firms has proved to be crucial in the development and outcomes of VC CAs.

According to Kairuz (2005:21), a key factor for the success of the CAs is participation in the process of a leading entrepreneur. That is a catalyst who is able to energize work in the regional competitiveness council, to call upon all levels of decision-making, to share his or her vision and to show by means of actual examples in his or her own firm, the advantages that the links throughout the VC bring to the different stakeholders in terms of productivity and competitiveness.

Whenever the leading firm is not interested in the CA, alternative schemes are born that embody creative experiences and alternative paths, though, in one way or another, leading firms ought to be taken into ac-

count in VC cooperation schemes, since they have the potential to influence (support or resist) them. Examples of partnerships for VC development can be found where the regional government has been very active in the VC taking an alternative leadership role through agreements with Colanta and dairy producers from faraway regions in Antioquia. In this background, Asoholstein, a producer association, took the lead in the VC CA and, through collective action, challenged the authority of Colanta and promoted administrative changes in the cooperative. Hence, one could state that the CAs policy of the government effectively opened up opportunities for non-lead firms to succeed in upgrading actions.

If the VC scope is widened, then the governance at the national level might be in another firm or small group of firms (oligopoly or oligopsony). At the international level, there could be a global buyer or producer who exerts governance over VCs like the cocoa-chocolate whereby VC coordination schemes might vary. However, in most instances it is likely that the VC governance and coordination follow a similar pattern to that described above. That is, the potential of VC level interventions is enhanced by the presence of a leading firm (and/or an entrepreneur) capable of organizing collective action, mobilizing public action and whose interventions promote the systemic efficiency along the VC.

7.2.3 Systemic efficiency

It is an important analytical component of VC analysis that focus on the potential efficiency gains that are likely to be achieved as a result of VC integration.

The relative importance of systemic efficiency versus point efficiency is a feature of the product's characteristics of the VC; cocoa and dairy is very important. The leading firms in each VC approach this issue in different ways and with mixed results. The need for systemic efficiency becomes evident when the largest firms come to realize that the growing competitiveness challenges cannot be met by *point efficiency* activities. These involve the actions individually taken by the firm to solve its particular efficiency problems, since they are a part of the whole. Instead, to obtain meaningful competitive gains, firms need, through their coordinating role, to promote cost reductions, efficiency gains and compliance

with process and product standards of its suppliers along the VC (Kaplinsky 2000, 2008).

The influence of this factor, on the discussion, implementation and outcomes of a VC CA is positive whenever the leading firms are experiencing a strong need for introducing systemic efficiency to the VC to achieve meaningful competitiveness gains. In fact, a CA is about VC's systemic efficiency and this result in endogenous and exogenous rents. The promotion of VC systemic efficiency is not only a task of VC governors, VC CAs provide a significant coordinating tool that involves public-private partnerships for VC development. In accordance with Kaplinsky and Morris (2008: 300): The central importance of trust in coalitions within VC policy highlights the key role played by the VC facilitators. As Rodrik observes, the key issue is that public and private actors cooperate to reach systemic efficiency.

The systemic efficiency issue is illustrated by the cases of VC dairy products and cocoa-chocolate in Antioquia.

Table 7.4
Leading Firms' Competitive Challenges, Goals and Support to the Agreement

VALUE CHAIN	Lead firms' main competitive challenge	Goals of leading firm in CA	Support for CA
Cocoa-chocolate Antioquia	Internationalization of the economy Free trade agreement with the USA	Assure a steady high quality cocoa supply	High
Dairy products Antioquia	Internationalization of the economy TLC (Free trade agreement with the USA)	Product and process upgrading in milk production Price fixing of raw material is a contentious issue	Intermediate

Source: This research.

The most important competitive challenge that the VC dairy products in Antioquia faced before the CA was the need of the milk processing firms (Colanta and Proleche-Parmalat) to prepare to participate in the

TLC (Free trade agreement with the USA) once it was approved. This issue implied introducing systemic efficiency to the VC. In other words, the leading VC firms wanted to promote milk production upgrading given that it should have more protein and solids and there should be widespread use of cooling tanks for milk collection. Hence, there was growing pressure for a segment of milk producers to certify their production since the industry was demanding quality for the fabrication of spin-offs such as kefir yogurts and cheeses. However, price fixing of raw milk and upgrading costs in this link was a very contentious issue that diminished support from the leading firm to the CA.

Realizing systemic VC efficiency requires inputs from a range of institutions that are not direct participants in the VC themselves, for example service providers to producers, scientific institutions and the education sector (Kaplinsky 2000: 131). Besides strengthening the regional systems of innovation, the leading firms might find an adequate instrument for dialogue, coordination and concerted action with other actors in the CA that potentially could support the systemic efficiency efforts promoted by them.

An executive of CNC S.A. explains its role as VC governor of the cocoa-chocolate VC in the northeastern region and Antioquia. 'The CNC S.A. has great credibility in the region and good relationship with the regional government, which heightened the progress of the agreement. CNC S.A. has facilitated technological transfers and training of cocoa producers. The regional council for competitiveness has not endorsed any cocoa project that does not count on the new technological package' (J.F. Valenzuela, personal communication, July 2006). Likewise, 'CNC S.A. provided financial resources and training in response to the requirements of the technical secretariat of the cocoa-chocolate VC's regional competitiveness council in Antioquia'.[6] The need for efficiency gains along the VC is clearly stated by Juan Fernando Valenzuela, National Director of Purchases and Supplies of CNC S.A.

> The CA was important since it integrated organizations such as Fedecacao, Corpoica, ICA, SENA and Universities around the VC. Hence it allowed the generation of synergies, which was essential in regards to promotion of cocoa development in the region. The company participated in the CA through contract agriculture schemes, the company issued letters of intention in which it gave a certification to a cocoa producer association that their product would be bought when it was harvested. This certification is

important for agriculturalist to access institutional credit and to be able to undertake new cultivations. The company also provided technical assistance and supplied planting material to cocoa producers at cost price.

The importance of systemic efficiency for the promotion of VC development is crucial and this is why it is important for the success of a VC CA to count on the interest and active participation of the leading firm(s) of the VC.

By working together, as a system of chain participants, the key chain actors develop a common perspective on the determinants of their individual and national competitiveness in a sector. They come to realize that isolated and uncoordinated actions by individual parties are unlikely to address the externalities through which collective efficiency determines the efficiency of individual parties in the chain (Kaplinsky and Morris 2008: 305).

We have discussed the influence of the main VC factors on the outcomes of a VC public-private partnership. Namely, we have elaborated on the way VC factors (e.g. economic structure, governance and systemic efficiency) make the difference in a VC competitiveness agreement. The analysis was carried out through the comparison of two different VCs in the same territory (i.e. cocoa-chocolate and dairy products in Antioquia).

7.3 Quality of the Agreements and VC factors

The *quality of the CA* of the VC cocoa-chocolate in Antioquia is average while the VC dairy products, embodies a CA whose quality is less than average. It is important to point out that the CA of the VC cocoa-chocolate in Antioquia was one of the most relevant CAs for the development of the VC and of the region, while the CA of the VC dairy products had an intermediate relevance (see chapter 4).

The cocoa-chocolate case represents a CA with intermediate 'policy process effectiveness' and a high relevance, which means that although it fulfilled the goals of the agreement partially, most of its outcomes are deemed relevant by the primary stakeholders of the VC.

The case of the VC dairy products constitutes a CA characterized by intermediate 'policy process effectiveness' and relevance. The objectives of the CA were not fully developed. In addition, a fraction of the out-

comes of the CA is not considered relevant by the livestock and/or industrial producers.

Both VCs had an intermediate 'policy process effectiveness'. The process carried out during the implementation of the CA did not lead to the consolidation of the coordinating capacities of the regional VCs. However, the VC cocoa-chocolate developed more coordinating capabilities than the dairy products VC due to its unique decentralized structure of the regional council for competitiveness.

The difference in *relevance* between the cocoa-chocolate and dairy products CAs can be explained in terms of the degree of commitment to the CA of the VC governors in both chains. The similarity in terms of 'policy process' effectiveness of the two CAs is related to the fact that the Technical Secretariat of the CAs was dismantled due to lack of funding among other reasons and that the regional government undertook the leading role of the CAs after a period of inactivity and was trying to promote their reactivation.

As it was elaborated in the previous section, the VC factors, in particular governance, are determinant in the quality of the agreement (see tables 7.2 and 7.3). First the VC cocoa-chocolate characterizes a captive VC. The dominant position of the largest chocolate firms in the market allowed them to position their agenda in the discussion and signing of the CA. Also, the outcomes were finally reached depending on their main competitiveness objectives. The less competitive cocoa producers were excluded from the upgrading processes. Second, the VC dairy products is a captive VC and the CA is a reflection of it. The main interests of the largest industrial firms (VC governors) prevailed over those of the small livestock producers. Issues were agreed upon and outcomes were finally reached depending on the lead firms' competitive objectives facing their internationalization goals. They supported or blocked initiatives and introduced standards (quality and processes) to participate in the VC according to their own goals. In this process the less competitive raw milk producers were excluded from the upgrading processes.

7.4 Concluding Remarks

The main driver for change is the same in the two VC CAs and is associated with the need of the largest companies to improve their ability to meet their competitiveness standards in order to cope with the chal-

lenges posed by negotiations of the free trade agreement with the USA. In addition to recovery of the agricultural and livestock sectors, which were in severe crisis.

The VC factors, in particular economic structures, governance and systemic efficiency, fulfill a key function in the performance of VC-based development strategies and they might determine and be crucially definitive in the outcomes of such intervention irrespective of the territory where they are located.

This chapter included concepts developed within the realm of GVC literature (e.g. VC economic structure and governance) to study the influence of VC factors on the outcomes of multi-stakeholder development partnerships at the level of VC. To study the influence of a VC economic structure on the outcomes of a VC CA, we have discussed two main factors: the characteristics of an agro/livestock product; and the dynamic rents (entry barriers and rents). In the first case, it was established that the characteristics of an agro/livestock product are likely to influence VC development interventions largely in VCs with an outstanding emphasis on quality because there is a wider scope on VC level action. Second, the shorter the product's longevity, the higher the coordination degree in the agro-processing VC, for example raw milk (Baquero 2000). Finally, containing negative externalities associated with the agro-livestock products promotes collective action and favors the signing and development of the VC competitiveness agreements to overcome issues that negatively affect the whole VC. In the second factor, the *entry barriers and rents,* it was found that they constitute important analytical categories to explain the incidence of VC factors in the outcomes of VC CAs as endogenous and exogenous rents are produced, enhanced or maintained thanks to the CAs and the fact that the CA creates barriers to entry for others (non-participating producers or excluded producers). The VC governance helps to explain the distribution of rents. In fact, the CAs provide opportunities for lead firms to enhance their commanding position in the VC whenever they can strengthen or sustain the entry barriers and so to increase or maintain their rents. Firms are not willing to cooperate in their core business, but in certain instances, they are ready to cooperate in other activities that might be protected by entry barriers. Indeed, they have the governance to facilitate access to certain VC actors to specific areas whenever they have the goal of upgrading in

mind. In this sense, endogenous rents, under certain circumstances, have a positive influence on VC CAs.

Notes

[1] Gereffi, Gary (1994) 'Global commodity chains', Kaplinky (2007).

[2] The meso-level is described by Meyer-Stamer in the systemic competitiveness framework as 'a tissue of supporting sector-specific and specialized institutions and targeted policies' (Meyer-Stamer 1997: 369, quoted by Helmsing 2002). They are 'institutions at the level of sector and region' (2002: 85) and in this sense constitute a clear link between the region and the sector.

[3] Governance and Social Development Resource Centre (GSDRC). www.gsdrc.org/go/tupc-guides/drivers-of-change.

[4] This was the case of the Saligna Furniture VC in South Africa and the Saligna VC Group. Morris (2001: 133) points out that 'as the shortage of Saligna for the furniture producers eased, partly and index of the success of the group, so the vociferous support for the SVCG of the manufacturers and their role as enthusiastic leader correspondingly diminished. The role of leading firms radically shifted from manufacturers to millers'.

[5] Source: personal communication with a member of the Regional Council for Competitiveness of the value chain cocoa-chocolate in Santander, July 2006.

[6] Source: J. Vasquez, personal communication, June 2006.

8 Conclusions and Policy Implications for Value Chain-Based Development Policies

8.1 Introduction

This chapter presents the main conclusions and policy implications for value chain-based development policy formulation. The research analysed the relative importance and combined influence of value chain factors and regional characteristics that impinge on the degree to which meso-level actions are formulated and implemented and on their likely developmental outcomes. It is divided into five sections beginning with an introduction, followed by a summary of the main empirical findings from the key research questions. The major lessons learned and implications for value chain-based development policy formulation are discussed in section three. Section four comprises review of the main theoretical contributions and finally, the limitations of this study and suggestions for further research are introduced.

8.2 Main Empirical Findings

8.2.1 Colombian policy of VC CAs, an innovative response to the economic challenges posed by globalization

Regarding the national context of the VC policies in Colombia, the study sheds light on the events and change processes that characterized the period of economic restructuring that the country undertook since the onset of the 1990s. It pays a great deal of attention to the role played by VC policies in the search for national and regional competitiveness.

The evaluation of the working process in VCs in the background of the competitiveness and productivity policy determined not only its core achievements but also its main loopholes. The competitiveness policy

has facilitated important learning processes at the national and regional levels and fostered the development of capacities for local action. The national government has built a remarkable managerial capacity to foster the strengthening of entrepreneurial competitiveness. Despite the fact that the competitiveness policy as well as the strategy of CAs have remained throughout the different administrations during the last decade, shifts of emphasis by the changing national administrations have affected the continuity of these policies.

The different instruments developed for the agro, industrial, science and technology and foreign trade policy have fulfilled a key function in backing or supporting projects and programs developed in the context of VC schemes at the national and regional level, given the large amounts of financial resources. Likewise, the sectoral policy has improved in both scope and process effectiveness since it has found a space to promote awareness of these instruments in the different private-public sector cooperation schemes that have developed. It facilitates the *focalization* of those policies that are increasingly associated with the agro-producers and entrepreneurs integrated in VC organizations.

During the period 1996-2004, information flows between local, regional and national governments increased and became instrumental for the different policy interventions. New regional institutional arrangements have emerged, where interaction between private and public sectors and NGOs is more fluid. The universities, regional development centers, productivity centers, training institutions, the Regional Advisory Committees on Foreign Trade and the VC organizations participate in different cooperation schemes to promote regional development. During the study period, the working scheme with VCs reached an important milestone in its process of consolidation, though full maturity will not be reached until the VC regional organizations are strengthened. This is because legislation has given priority to the national chain organizations while the regional organizations are still searching for resources and a more explicit legal framework for their activity. It is important to point out that there have been regional differences to the whole process of decentralization of the competitiveness policy. Some regions have appropriated these policies and instruments, and in general obtained more advantage and benefited from these policies more than others did.

8.2.2 Value chain factors influence the developmental outcomes of multi-stakeholder development partnerships at the level of value chain

Based on the findings of the comparative study of two VC's CAs (cocoa-chocolate and dairy products) in the same region with a favorable industrial policy setting (the Department of Antioquia), it was found that the VC factors, namely economic structures, governance and systemic efficiency, play a key role in the performance of development interventions at the VC level.

The influence of a *value chain's economic structure* on the developmental outcomes of a CA at the level of VC is explained by two main factors—the characteristics of an agro-livestock product and the dynamic rents (entry barriers and rents). First, the characteristics of an agro-livestock product are likely to influence VC development intervention. There is a wider scope of VC level action, largely in VCs with a considerable emphasis on quality. The shorter the product's longevity, the higher the coordination degree in agro-processing value chains, for example raw milk (Baquero et al. 2000). Finally, containing negative externalities associated with the agro-livestock products promotes collective action and favors the signing and development of VC competitiveness agreements in order to overcome issues that negatively affect the whole VC. In the second factor, *entry barriers and rents,* the commanding market position and governance role of a VC's leading firms is strengthened by their appropriation and enjoyment of the other rents; natural rents in case they exist, and the endogenous and exogenous rents (Kaplinsky 2001; Kaplinsky and Morris 2008). The CA provides opportunities for lead firms to enhance their commanding position in the VC whenever they can strengthen or sustain the entry barriers and so increase or maintain their rents. For example, leading firms need consent of public authorities to benefit from natural resource rents and, for exogenous rents; they need the cooperation of non-chain actors. In addition, endogenous rents, under certain circumstances, have positive influence on VC CAs and in the context of multi-stakeholder partnerships are strengthened by exogenous rents coming from government policies and by institutional efficiency improvements.

The governance and institutional structure is the second set of VC factors that influences the discussion and developmental outcomes of a CA at the level of VC. The discussion and implementation of a CA

is likely to be affected by interest groups and firms positioned in the VC's main segments or that have high degrees of market control at regional, national or international levels. In other words, the dominant role played by the VC governors influences the implementation and developmental outcomes of VC agreements on competitiveness and their interests affect the achievements of small farmers and industrialists.

The governance structure might support or hinder the developmental outcomes of a CA depending on the competitive priorities of the leading firm. The developmental outcomes of a regional CA of a VC illustrate several governance issues: the small producers from marginal areas with bad road conditions and higher transportation costs are frequently marginalized from the upgrading processes, the small industrial producers for instance (table chocolate producers) are not involved in the upgrading processes undertaken by the largest agro-food industrialists. Although, a CA potentially helps the largest producers to meet their competitiveness challenges, it inevitably implies higher demands on raw material producers in terms of quality standards for products and production processes from the industry.

A domestic oligopsony of an agricultural/livestock raw material protected by the national government, for example with trade restrictions, reduces the likelihood of success for the expected developmental outcomes of a CA. A domestic market shielded from imports introduces the issue of price determination as a primary contention point between agro-producers and industrialists, and the government participation in multi-stakeholder agreements usually takes the form of regulations, as well as subsidies to guarantee prices for the agro-livestock products (e.g. rice, milk, cotton, sugar). In addition, the lack of access to international markets experienced by most of the small agriculturalist and livestock producers of the VCs included in the study shows how the absence of direct contacts with global value chains and their governors reduces the likelihood of producers at the bottom of the VC to obtain meaningful gains from their participation in a multi-stakeholder agreement and to make a difference in their livelihoods. The government in such particular situation holds considerable leverage; hence, it could push for a more inclusive CA.

By and large, the main goals of the largest firms in a multi-stakeholder agreement define the direction of it. The developmental outcomes of a CA, usually in line with the intervention objectives, are generally related

to the largest firms' own interests, though it might benefit their suppliers too. For example, in the case of the VC cocoa-chocolate in Santander and Antioquia, CNC S.A. and Casa Luker S.A. benefited as well as cocoa producers; however, it could be argued that the former benefited even more than the agro-producers given their increased participation in the international chocolate confectionery markets and their continuous dominance in the raw cocoa market nationwide.

Although a win-win situation resulting from a multi-stakeholder agreement might improve the small holders own position, it does not imply major changes in VC governance. Indeed, this situation does not mean that the initial relative position of the different actors involved in the CA has meaningful changes to the extent that the dominant position of the VC governors is challenged. In other words, a win-win situation does not say anything about the political economy of the change. It is important to note that in terms of VC governance, opportunities for functional upgrading of small raw material-producers and/or process and product upgrading of small industrialists are minimal, and in general, these agreements support those farmers and small industrialists who are in advantageous positions relative to the others when the CA is signed.

Finally, systemic efficiency is the third factor that influences the discussion and developmental outcomes of a CA at the level of the VC. It is an important analytical component of VC analysis that focuses on the potential efficiency gains that are likely to be achieved because of VC integration. The leading firms in each VC approach this issue in different ways and with mixed results. The need for systemic efficiency becomes evident when the larger firms realize that *point efficiency* activities alone cannot meet growing competitiveness challenges. The latter involve actions individually taken by the firm to solve its particular efficiency problems, since they are only part of the whole. Instead, to obtain meaningful competitive gains, firms need, through their coordinating role, to promote cost reductions, efficiency gains and compliance with process and product standards of its suppliers along the VC (Kaplinsky 2000, 2008).

The influence of this factor on the discussion, implementation and developmental outcomes of a VC competitiveness agreement is positive whenever leading firms experience a strong need for introducing systemic efficiency to the VC to achieve significant competitiveness gains. In fact, a CA is about a VC's systemic efficiency. The promotion of VC systemic efficiency is not only a task of VC governors; the VC CAs pro-

vide a significant coordinating tool that involves public-private partnerships for VC development. The central importance of trust in VC policy coalitions highlight the key role played by the VC facilitators. As Rodrik observes, the key issue is that public and private actors cooperate to reach systemic efficiency (Kaplinsky and Morris 2008: 300).

In short, to a certain extent VC factors support a VC development intervention when issues such as the economic and governance structure facilitate collective action and support the undertaking of public-private partnerships. In this case, the attributes of the territory are an important asset that contributes to the functioning of a multi-stakeholder development partnership at the level of VC.

In contrast, the concentration of market power in the VC's industrial link, the positioning of the largest companies on key VC activities (i.e. collecting, processing and marketing), create entry barriers and large rents. These become significant obstacles to the approval and development of a VC competitiveness agreement. Under oligopsonistic conditions, large industrial firms tend to take advantage of their commanding market position and block initiatives that impinge on their core businesses, instead supporting what strengthens their present condition or what safeguards the status quo. Hence, their own interests limit their participation in cooperation schemes along the VC.

8.2.3 Regional characteristics can influence the design, implementation and developmental outcomes of a VC CA

This section addresses the most dynamic regional factors that help or hinder the optimal functioning and outcomes of regional multi-stakeholder development partnerships at the VC level. It was carried out through a comparative analysis of two Colombian regional VCs located in the same sector and with similar VC characteristics, but located in different regional settings (value chain cocoa-chocolate in Antioquia and Santander). It was developed through a theoretical framework that combined the notions *of business systems and embeddedness*. The VC vertical analysis is then complemented with a horizontal analysis taking into account the embeddedness of firms and other actors in the territory.

Embeddedness is one of the issues that determine the influence of regional factors on the policy process effectiveness of VC agreements on competitiveness. The degree of commitment of the leading firm to the

region determines its territorial embeddedness. If it is rather weak, then the 'potential for value creation, enhancement and capture' in regards to the industry is small (Henderson et al. 2002: 453). Thus, the company has a partial degree of *territorial embeddedness*. One possible explanation is that the region is seen as an enclave for the leading firm's sourcing of raw material, in case it does not have a processing plant there. Hence, the density and intensity of local/regional connections of the lead firm(s) with other firms and organizations is low and focused on the sourcing of raw material for its factories. This type of territorial embeddedness does not contribute to the upgrading of local industrialists and in general to the overall local regional development.

The history of the lead company is closely associated with the trajectory of the regional business system where its headquarters are located. For example, CNC S.A. evolved from a region that undertook an early industrialization process in the country based on an entrepreneurship tradition and supported by close public-private sector cooperation, and at present is one of the leading firms of the largest economic conglomerates in the country. In this sense, the lead firm is not far from oligopolistic and oligopsonistic market strategies, which influence negatively the developmental outcomes of the CA whenever these practices take place.

The study of the historical development trajectories is a key analytical instrument to support the above arguments on the incidence of the embeddedness and regional business features to the functioning and developmental outcomes of regional multi-stakeholder development partnerships at the level of value chains. Other regional factors that influence the developmental outcomes of the VC competitiveness agreements are the dynamics of regional leadership, natural resources and the role of typical Colombian variables, such as armed conflict and illicit crops.

The regional government's participation in the CA of the VC from several regions is diverse and to a certain extent shows the way a CA is perceived in each area by the regional leadership. *The role of the (regional) state in the business system* enables the establishment and development of public-private partnerships especially when it is accompanied by political commitments and resource allocation within a regional public policy framework. Regional government participation is crucial to assure the continuity and policy process effectiveness of a CA because it helps to institutionalize the process. Public resources are systemically enhanced by cooperation with other stakeholders involved in the CA including

universities, firms, agro-producers' associations, business interest associations and decentralized agencies; co-funding from the national government, NGOs and international donors. Likewise, the regional government can mobilize local actors to access national policies, which provide important resources and opportunities for local development initiatives. Within this scheme, the regional government must signal other members of the council that its coordination or active participation in the CA does not mean any loss of independence on the part of the regional council. In fact, this collective body is conceived as an independent, non-bureaucratic network of public-private sector organizations.

The lack of a local-regional government involvement supporting improvements in the agricultural sector hampers the expected sectoral outcomes and the competitive integration of the different VC links. The CA as a consensus device requires that regional agricultural policies must be integrated in the context of the VC competitiveness agreement. Otherwise, there is a risk of finding a fragmented and marginalized sector with little direction and support weakened by the likely duplication of efforts and waste of institutional resources. The CA cannot be reduced to occasional information exchanges and it is necessary to assure sustainable VC linkages.

Despite the fact that the *natural resources* are not a dynamic factor such as institutions, human resources and knowledge, this factor offers the leading industrial firms of a VC the opportunity to benefit from natural rents in a given region endowed with exceptional natural resources compared to other regions of a country. Thus, it can trigger further changes, but nobody expects natural resources to be dynamic. According to Porter (1990), it begins with basic competitive advantage but the region needs to develop advanced competitive factors. The leading firms can consolidate their competitive position in the region through the location of their factories or by means of the establishment of comprehensive commercializing schemes. The public-private partnerships for VC development in a region with a natural resource competitive advantage draw participation from the leading industrial firms since the latter want to enhance their control over the supply of raw materials or at least to maintain and/or avoid the weakening of their initial position by the agreements that might involve other firms. The absence or limited availability of natural resources that support the sourcing of raw materials by the VC governors limit their support to a CA of a regional VC. The VC

cocoa-chocolate in Santander and Antioquia provide a key example (see case studies 1 and 4 in chapters 9 and 12 on CD ROM).

Violence (armed conflict and illicit crops). Violence is a key regional characteristic of several developing countries. In the case of Colombia, such violence is seen in Antioquia and Santander. At first glance, we would expect the lack of peace to hinder the implementation of a CA and to influence negatively its developmental outcomes. Accordingly, it largely influences the agricultural link, which is a rural activity, and therefore adversely affects normal functioning and fluid linkages down the VC. However, in practice, the armed conflict, ironically, has caught the national government and international donor's attention. Consequently, they have identified livestock and key agricultural activities such as cocoa as economic alternatives to illicit cultivations (coca and poppy), as well as an income and employment alternative for demobilized members of guerrilla and paramilitary groups and refugees in the context of peace agreements.[1] The fact that there have been additional facilities for reconstruction (an influx of financial and technical resources) and an opportune response on the part of NGOs and other VC stakeholders, suggest that the net influence of the 'violence' factor or 'security policies' on the CA outcomes has been positive, such as is the case of cocoa planting and production targets.

In sum, a CA embodies for a regional government a potential instrument for social and economic policy interventions. First, governments can participate in this scheme, having in mind the promotion of social policies (employment generation and smallholder income improvements), particularly in depressed areas with a tradition or a potential for raw material production. Second, the CA offers the public sector a scope of action to deal with regional economic restructuring processes and to promote endogenous development policies with active involvement and contributions from several regional stakeholders. Likewise, a CA is likely to promote substitution of illicit crops by licit cultivations and livestock economic units, to provide alternative livelihoods for rural populations in targeted areas.

8.2.4 Value chain factors and locational policies

The potential for success of a CA increases whenever the VC factors, namely those associated with power and authority relationships and co-

ordination processes established along the VC, are favorable to the undertaking of contemporary locational policies.[2] The latter involve the establishment of roundtables, collective and concerted action amongst public-private sector stakeholders and other types of partnerships or alliances for local economic development (Meyer-Stamer 2004). 'Locations may or may not be an important issue for those coordinating a given value chain', wrote Meyer-Stamer (2004: 338). The analogy of the behavior of leading firms coordinating global VCs and those at the national level can be applied, since, like global buyers that 'scan the globe for potential suppliers' (2004: 338), national buyers coordinate several agro-industrial VCs at the sectoral and regional level. Thereby they systematically scrutinize a country for current and prospective input suppliers to assure a steady source of raw materials for their processing activity. It is important to point out that this case mostly applies to products with unconstrained product attributes. In Colombia, for example, CNC S.A. and Casa Luker S.A. purchase more than 75 per cent of the total raw cocoa throughout various regions in the country. In addition their key factories are in different areas (Antioquia and Bogotá) than the major cocoa producing region and in this case, they prefer proximity to larger domestic markets of chocolate instead of locating in cocoa producing areas. The case might be different where mobility of agro/livestock product is constrained by its physical attributes (short expiration) or weight, which becomes a mobility barrier over long distances. In all cases, quality improvements call for asset specific investments difficult for growers; hence, they constitute a point in favor of establishing closer relationships between large buyers and regional suppliers.

A mixed situation where both regional and VC institutional factors affect effectiveness of collective action relates to the different degrees of stakeholders' organizations along the VC. The multi-stakeholder development partnership for the VC cocoa-chocolate in the northeastern region illustrates what Meyer-Stamer refers to as the *life cycle paradox of locational policy*: 'industries which might be interested in locational policy are unlikely to be well organized; therefore, it is difficult to establish the policy networks required for policy formulation. Old industries are well organized, but they are not interested in locational policy' (2004: 338). The latter tend to be well organized because they need to maintain the status quo or improve gains amidst opportunities and threats from the adjustment processes. Because of this, they maintain their readiness for collec-

tive action to lobby for defensive measures whenever they feel affected by government lead adjustment processes (Meyer-Stamer 2004). The small table chocolate producers in Santander were not organized before the CA and they are starting to organize and develop their small chocolate firms' producer association. Meanwhile, Casa Luker S.A. and CNC S.A. are long standing firms that belong to the second group described above, though; in addition, they participate in the CA to introduce systemic efficiency to the VC, which they perceive as necessary to increase their overall competitiveness. These two firms saw that being defensive as Meyer Stamer argues in effect means falling further behind, so defensiveness is not an option in the face of international competition.

8.2.5 Policy process effectiveness of CAs of value chains

The analysis of policy process effectiveness was carried out using a set of three criteria and six indicators. The selected criteria to analyse the policy process effectiveness of VC agreements on competitiveness were: 1. Formulation and development of the CA; 2. Composition and dynamics of the regional council for competitiveness; and 3. Life cycle of the CA. Through the evaluation, we concluded that the most effective CA for the development of both the VC and the region was the CA of the VC cocoa-chocolate in Santander. The value chains cocoa-chocolate and dairy products in Antioquia and cotton-textile-clothing in Tolima had an intermediate policy process effectiveness and finally the VC rice-rice threshing in Tolima was the least effective (see section 4.4 and appendix 11).

8.2.6 Developmental outcomes of value chain agreements on competitiveness

Upgrading opportunities

Upgrading is a key criterion to assess the developmental outcomes of VC CAs. It provides a framework to evaluate changes in the position of smallholders and their associations, and small industrial entrepreneurs in the VC because of VC multi-stakeholder agreements. Upgrading refers to a process in which VC actors improve their ability to move to more efficient or more value-added activities, thereby becoming more profitable and resilient commercial producers (van Wijk 2009).

The Colombian cases show that, though upgrading is central to the competitiveness policy and the development interventions at the VC level, the VC's governance structure and regional characteristics are seldom conducive to meaningful changes in the socioeconomic conditions of small farmers and industrial micro-entrepreneurs because of VC development interventions.

For agricultural and livestock suppliers, keeping product and or process upgrading targets set by VC governors might start a new round based on higher demands by VC governors, including changes in the incentive criteria, consolidating and upgrading lock in. The additional costs incurred by input suppliers to meet the new standards set by VC governors might imply economic strain and even bankruptcy for a segment of agro-livestock producers who cannot bear the burden of the VC modernization process by themselves, especially if these changes are not significantly rewarded with higher prices in the market.

The VC competitiveness agreements contributed positively to process upgrading in the agro and livestock links. There were outstanding gains in productivity. Greater productivity gains appeared in the dairy VC. For example, during the period 2001-2004, there was a modernization process of the livestock and dairy processing milk in areas such as cleaner production practices; improvement of infrastructure for milk collecting and commercialization; and increase in the availability of cooling tanks at the level of the farm (individual and collective).

The VC competitiveness agreements have contributed to product upgrading in the agro links of the VC cocoa-chocolate, dairy products and cotton-textile-clothing; in rice threshing it was very limited. The certification by ICA of institutional plant nurseries and cloning gardens and, helping organize the production of vegetable material are good examples. In this sense, the availability of certified genetic material has increased. In the dairy products VC, there has been a positive improvement in raw milk quality in terms of the solids and proteins, which constitutes a positive response to the new specific demands of the industry. Amongst other positive results is attainment of better quality milk, free of harmful substances given the now widespread use of milk cooling tanks and systemization of the cooling process in the collecting stage.

The only VC that reported events of functional upgrading was the cotton-textile-clothing chain in Tolima. It took place in a large industrial firm in the GVC as part of its strategy to consolidate a regional VC. The

company was a traditional supplier and exporter of textiles. Because of market changes, it shifted its traditional scheme. In the context of the CA, the company had a type of functional upgrading in the GVC by means of deciding to enhance its participation in the full package approach. It meant good business for several medium and small-scale regional garment firms. Likewise, they had product and process upgrading as part of the standards set by international buyers.

Value chain integration

The different value chains provide examples of improvements in VC integration because of the VC agreements on competitiveness. The coordination among public agencies supporting agro and livestock production has been enhanced. In addition, rationalization and optimization of the financial and technical resources of the different support institutions through inter-institutional agreements include public-private sector partnerships. Examples of integration can be found in the work of the public agencies in charge of agricultural research, which has become more relevant, since the need for research and different campaigns for agricultural extension are being designed taking into account the opinion and demands of the main actors of the VC in the region.

Collective learning

The policy of CAs for value chains and its key operative instrument (the national and regional council for competitiveness of the VCs) facilitated the collective learning amongst key stakeholders of the VC including support institutions, public agencies, NGOs and others. This policy scheme facilitated the collective learning amongst regional stakeholders beginning with the basics of conformation and organization of public-private partnerships for VC development. Since these partnerships cooperated in terms of the identification of competitiveness needs along the VC, development of a vision and definition of a strategic plan to solve the competitiveness problems of the VC followed. Collective learning was the result of inter-firm cooperation through information exchanges and sharing amongst different links of the VC (e.g. technological and organizational knowledge exchanges amongst support organizations, private industrial firms and agricultural producers).

8.2.7 Relevance of a CA

Analysis of relevance was carried out using a set of three criteria and three indicators. The selected criteria to analyse the relevance of VC agreements on competitiveness were: 1. Characteristics of developmental outcomes; 2. Contribution to corporate goals; and 3. Improvements in VC coordination.

A CA is relevant if it contributes to the solution of the problems that it is supposed to address. To study relevance, it is necessary to deal with the relationship between the objectives of the CA and the developmental outcomes of it. In addition, a CA is relevant when it enhances the economic activity performed by the agricultural and livestock producers and industrialists. Finally, a CA is relevant when its activities promote and have a great influence on the integration of the links of the VC. Through the evaluation we concluded that the *most relevant* CAs for the development of the VC and of the region were the CAs of the VC cocoa-chocolate in Santander and cocoa-chocolate in Antioquia. The value chains: cotton-textile-clothing in Tolima, dairy products in Antioquia and rice-rice threshing in Tolima had *intermediate relevance*. This means that the developmental outcomes of the activities relate partially with the goals of the CA (e.g. some are related and others not), the activities only partly contributed to the achievement of the corporate goals of agricultural and industrial producers, the regional council had an average dynamism and there were few events of coordination among different links of the VC (see appendix 15).

8.2.8 Quality of an agreement on competitiveness

The degree of policy process effectiveness of a CA informs on the magnitude of development of the CA. In this line of thought, the relevance of an agreement used as a criterion by itself is not enough to draw conclusions about the quality of a CA; hence, it should be combined with the policy process effectiveness criterion.

Chapter 4 concludes with a classification of the CAs of the value chains according to their *quality*. It was carried out through indicators that combined the relevance and policy process effectiveness criteria and concluded with five types of CAs (outstanding, good, average, less than average and poor). The CA of the VC cocoa-chocolate in Santander was an outstanding agreement for the development of the VC and the region.

The CA of the VC cocoa-chocolate in Antioquia was of an average quality and the CAs of the VC dairy products in Antioquia and the VC cotton-textile-clothing in Tolima were of less than average quality. Finally, the VC rice-rice threshing was classified in the lowest part of the scale as a poor quality agreement (see table 4.4).

8.3 Major Lessons Learned and Policy Implications for VC-based Development Policy in Developing Countries

8.3.1 Nature of the interactions between VC and regional characteristics finally determines scope and developmental outcomes of VC level action at the regional level

As the case studies demonstrate, the relationship between region and sector (value chain) has different configurations, which affect the policy process effectiveness and developmental outcomes of policy networks of the type constituted in the context of CAs at the level of VC. An awareness of this relationship supports the design of tailor-made policies that enhance the effectives of interventions at the level of VC.

The following *typology of VC policy setting* can be put forward according to the interrelation between VC characteristics and regional factors. The VC factors and the regional factors are labeled individually as a group after the behavior of their main components is analysed. This classification is based on four scenarios.

1. **Optimal policy scenario:** VC and regional factors that support and reinforce each other. There is a win-win policy scenario. It embodies the highest success potential for a VC development intervention at the regional level. The governance structure (e.g. captive VC) favors the need of the VC governors to introduce systemic efficiency to their business and the creation of endogenous rents in 'inter-firms interactions, and in interactions between firms and local Research and Technology Organisations' (Kaplinsky 2008: 287). The VC factors are reinforced by the territorial embeddedness and the regional business system is conducive to the enjoyment of exogenous rents by the main chain stakeholders.
2. **Worse policy scenario:** When both regional and VC factors hinder their development potential. There is a 'loss-loss' situation. The meso-level policies at VC level have minimum chance for success. The gov-

ernance structure does not favor cooperation between lead industrial firms and farmers since the VC operates largely under market relations and is characterized by the existence of cartelized buyers (monopsony rents). In addition, government and other non-chain actors have weak roles in the regional business system, and there is no functional embedding of the VC in the region.

3. **Policy scenario dependent on non-chain local actors (actors external to the chain):** Regional factors that support and VC factors that hinder the development intervention. The governance structure does not favor cooperation between lead industrial firms and farmers since the VC operates largely in arms-length relationships. This policy setting is characterized by a dynamic regional business system with an active participation of non-chain local actors and particularly strong leadership of the local-regional government. The success of VC level policies to promote upgrading of farmers (product and/or process) relies on the ability of non-chain local actors to create exogenous rents for local producers facilitating upgrading and improving their positioning. In line with Kaplinsky and Morris (2000: 103), 'responsibility for ensuring competence in production process skills has shifted to other domestic agents and functions – e.g. to national systems of innovation, local consultants, external intermediaries, business associations…. Governments can facilitate firms (either individually or through sharing collectively in the process) to upgrade their knowledge intensive process competencies'.
4. **Policy scenario based on lead firms governance:** This policy typology is characterized by regional factors that hamper and VC factors that support development intervention. There is a weak role of government and other non-chain actors in the regional business system, the potential for the appropriation of exogenous rents is low and the poor economic performance of the region hinders territorial embedding of the VC. The governance structure favors the need of the VC governors to introduce systemic efficiency to their business and the creation of endogenous rents. Chances for upgrading by regional farmers are minimal and rely on the ability and financial and administrative strengths of the lead firms to manage the supply chain.

It is important to recall that the VC's spatial scope, at least in our case studies, in essence cannot be described as merely regional, since there are

other national and global players whose decisions and actions affect the performance and operational results of the firms and farms along the different links of a given agro-industrial VC. The most effective regional strategies are likely to be those that develop multilevel governance schemes at different spatial levels namely regional and national and even supra-national centers of political power (Cook and Morgan 1998). An example can be found in the adoption of an ICONTEC norm for the purchase of cocoa according to qualities, which improved the bargaining costs and conditions in the cocoa market. The development of the norm was coordinated by the RCC of Santander but included key chocolate companies from other regions, public agencies such as ICA and Corpoica, universities, farmer associations, the Cocoa National Council for Competitiveness and finally the Ministry of Agriculture, which enacted the resolution to make it mandatory throughout the country.

In theory, the geographical vicinity of the different regional actors integrated in a VC's CA provides an optimum environment for collective learning, innovation and overall competitiveness improvement. However, the proximity itself is not enough to ensure success of these processes, since the VC factors play a determinant role in the functioning and outcomes of a development intervention such as a VC CA. As Cook and Morgan contend (2000: 58).

For all the potential advantages of supply-chain partnerships, the greatest single barrier to the development of this concept is the divergence between rhetoric and reality. In many cases, partnerships are no more than rhetoric screen to transfer costs from customers to supplier: in other words, the reality is more power play than a partnership (Kerney 1994).

The common feature of the case studies included in the sample is that upgrading is mostly triggered by lead firms and can be supported or hindered by them; however, it does not mean that only lead firms can prompt upgrading. In this background, alternatively, actors external to the VC (i.e. farmer associations and government agencies) can trigger the upgrading process of regional livestock and agricultural producers as suggested by Kaplinsky and Morris (2000). Upgrading of VC key actors can be assisted through a number of interventions and governments can play a key role in that endeavor. 'Governments can facilitate firms (either individually or through sharing collectively in the process) to upgrade their knowledge intensive process competencies' (2000: 103).

In the first situation, the competitive strategies of the lead firms of a VC are based on their governance strengths and a comprehensive analysis of their competitive environment. These factors determine their willingness to participate in a multi-stakeholder agreement of a VC and support it. Indeed, the initial sign (either 'go ahead' or 'defensive attitude') about the direction that a sound VC development intervention should take comes from the VC governors and is then reinforced by the regional business system and the territorial embedding. In short, captive chains allow for more lead firm driven upgrading; but give less scope for upgrading 'from below' and by non-chain actors if this affects lead firm positioning. This issue relates closely with the need of the lead firms to introduce systemic efficiency in the VC. In fact, to obtain meaningful competitive gains, firms need, through their coordinating role, to promote cost reductions, efficiency gains and compliance with process and product standards of its suppliers along the VC (Kaplinsky 2000, 2008). Lead firms of captive VC can also promote upgrading in their search to enhance their endogenous rents when they have in mind the goal of upgrading their own position. In this 'networks, small suppliers are transactionally dependent on much larger buyers…such networks are generally characterized by a large degree of monitoring and control by the lead firms' (Gereffi et al. 2005: 84). In this background, they have the governance to facilitate access to certain VC stakeholders to specific segments or tasks within the VC. Finally, the capture of rents exogenous to the chain, particularly from government policies (i.e. regulations and infrastructure) and by institutional efficiency improvements also drives the lead firms of captive chains to support the CAs

In the second situation, the upgrading initiative is taken by regional NGOs, farmer associations and regional governments or public agencies. In line with Kaplinsky and Morris (2000), actors external to the VC can assist the upgrading process of regional agricultural producers and small-scale firms. Examples of this scheme can be found in cocoa-chocolate VC in the northeastern region. There is a growing consensus amongst regional stakeholders lead by NGOs such as Procaucho-Asohesan, the regional government, the Federation of Cocoa Growers (Santander) and international donors about the need to promote an associational culture and the generation of greater regional value added to the cocoa activity in the context of the VC cocoa-chocolate. Several projects have been carried out in this direction and directed toward exports such as large

cocoa cultivation projects under new technological packages. The aim of these efforts is to promote large-scale commercial cultivation, upgrade cocoa farmers and turn them into exporters of high quality cocoa. These efforts include the upgrading of small-scale industrialists (table chocolate) who might become key players in the production and exports of cocoa liqueur diversifying their activity from their traditional role as table chocolate producers, mostly for the regional and, to a lesser extent, national markets. Given the low profit margins in the table chocolate market, dominated by the oligopoly, they gained experience as raw cocoa traders to complement their core business. In this sense, another possible scenario is downgrading to become raw cocoa exporters and/or a combination of the last two options.

The potential for *regional factors* to contribute to the overall success of a CA increases whenever the VC factors (in particular governance) align with the regional policy environment. In this case, the synergies between regional and VC factors are likely to yield positive developmental outcomes and generate a significant improvement on the livelihood of the rural smallholders and industrial micro-small entrepreneurs. On the contrary, the presence of adverse VC factors such as monopolistic and/or monopsonistic strategies on the VC governors' side, opportunistic behavior positioning the largest companies in key activities of the VC (collecting, processing and marketing), and their dominant position in a market of a product, which is not competitive internationally, might hinder the combined effect of VC and regional factors for the achievement of policy goals established in VC multi-stakeholder development partnerships. This is the case of VCs where price fixing becomes the main contention issue, thus, the government regulation of VC development becomes unavoidable to mediate between key VC stakeholders, including setting minimum purchasing prices and raw material import restrictions for the industry.

The role of the national government in the regulation of VC development becomes evident in other instances. Such is the case for adoption of quality norms for the establishments of price differentials by quality, the regulation of planting materials (certification of institutional plant nurseries and cloning gardens) to increase the availability of certified genetic material, regulation of illegal practices that might impinge on competition, paperwork reduction and so on. Finally, these actions should be accompanied by the enactment and regulation of a legal

framework to enhance the financial and operational performance of the VC organizations. From the above, it follows that the interaction between VC and regional factors is mediated by an institutional framework developed by the national government and legislative bodies, and that a VC competitiveness agreement has different nodes of governance.

Considering the relationship between VC and regional factors, we would like to state that action ought to be privileged over idleness, and the undertaking of a VC multi-stakeholder development partnerships should not be ruled out given the potential for initiating regional dialogue and collective action processes.

According to Cook and Morgan (2000), the manifested asymmetrical relationships between labor and management, as well as those established between suppliers and customers in both production and supply chains, make 'genuine collaboration' in those production networks almost impossible. Even in this scenario, collaboration takes place though, given the asymmetry issue, the developmental outcomes of it are not expected to be equally shared by the VC stakeholders involved. However, captive chains show significant dynamism as far as upgrading is concerned. There are VCs such as the cocoa-chocolate in Colombia where the lead industrial firms are dependent on the national market since they cannot fully procure their raw materials abroad due to supply shortages and quality differentials in the international markets. In this situation, farmers have a bargaining margin in spite of the imperfect market structure of their crop.

Thus, if a VC development intervention has the potential to benefit most key stakeholders involved, although differentially, it is still worth pursuing. 'There is no contradiction between acknowledging asymmetry and suggesting suppliers often do better within partnerships (through larger orders, tuition, enhanced reputation, etc.) than outside them' (Cook and Morgan 2000: 59).

8.4 Theoretical Contributions to GCC-GVC and Industrial Policy Literature

We expect the main findings and lessons derived from this study would enhance the available theoretical body of VC and industrial policy literature and promote a shift toward local-regional studies in the VC domain.

The first contribution of the study involves scaling down of the GVC analytical framework to the analysis of local-regional value chain-based development policies.

In fact, the study did not carry out conventional research on GVC analysis focused on the wider and complex global context, as with most of the cases documented by GVC researchers. On the contrary, it adapted this framework to national-regional levels, by taking into account the complexities of the functioning of a national agro/industrial VC and its regional nuclei where it is embedded. This is why this research shows alternative options to use the VC analytical framework, shifting emphasis from global to national-local-regional stakeholders and processes, to explore the growing alliances and cooperation schemes generated and operated as a response to the challenges posed by the globalization process and their increasing need to become competitive and gain access to global value chains.

Most studies undertaken by GCC researchers dealt with governance issues, with a strong emphasis on buyer-driven and producer-driven GCCs, of 'how the global economy is governed, of how the links between global companies and local enterprises are structured, and on how upgrading can be achieved or thwarted' (Schmitz 2004: 2). They systematically neglect the local-regional component of the global networks as policy foci. For example, VC research did not systematically analyse options for local action within clusters (Schmitz 2004: 175). The territory as such was not considered in bringing the analysis to a lower level, that is, to the arena of industrial policy formulation, the local-regional level (Schmitz 2004). To overcome such a restriction, this study complements the GVC literature with the GPN literature, which affirms that 'an understanding of the "territoriality" of production networks – namely, how they constitute and are re-constituted by the economic, social and political arrangements of the places they inhabit – is central to an analysis of the prospects for development at the local level' (Henderson et al. 2002: 446). In this line of thought, this research acknowledges that value chains are socially and spatially embedded configurations as recognized by several scholars who have developed or applied the global production networks literature (Bair 2005, 2008; Henderson et al. 2001; Hess 2004).

This study approaches the VC analysis from a different VC policy perspective and in doing so contributes to the policy formulation and outcome evaluation at the local-regional level, where crucial decisions at

the micro and meso-level are taken. The study expands and disaggregates Gereffi's GCC framework and applies analytical categories such as input-output structure and governance amongst others to the study of regional value chains. Moreover, it enhances or complements the GCC framework including the regional factors and their interaction with the VC factors in the analysis of process effectiveness of VC based development policies. It is important to point out that Gereffi's framework is a comprehensive one, though it is necessary to bring it to lower layers of territorial analysis.

In this dynamic field, this study goes further and adds knowledge to previous efforts over the last decade to apply the VC analysis to the study of issues at the local-regional level (clusters-industrial districts). In fact, alternatively, the global value chain approach has been combined with the cluster studies for the analysis of clusters of both developing and lately developed countries. It has also been complemented with the industrial district approach (Halder 2004; Meyer-Stamer et al. 2004; Rabellotti 2004; Schmitz 2004: 11). Likewise the GVC chain framework is increasingly regarded as a tool for policy design and delivery (Kaplinsky 2008), and for the undertaking of contemporary locational policies. The latter involve the establishment of roundtables, collective and concerted action amongst public-private sector stakeholders and other types of partnerships or alliances for local economic development as articulated by Meyer-Stamer (2004). Nevertheless, the public-private partnerships for VC development have been less documented, leading to a literature vacuum on this subject, though there is a growing awareness about their policy potential to promote the improvement of the livelihoods of rural small holders and micro and small industrial entrepreneurs through participatory approaches (Andriesse et al. 2011; Helmsing et al. 2011; Meyer-Stamer 2004; Morris 2001; Ruben et al. 2007; Van Helvoirt 2009; Van Wijk et al. 2009).

The second contribution is related to the finding that VC factors are more influential than the regional factors in the implementation and developmental outcomes of value chain-based development policies. Even where the regional policy environment is favorable to improve the conditions of local producers and where a CA of a VC has been implemented, the governance and economic structure of the VC can prevent that such goal is achieved.

This research developed an innovated approach to the analysis of regional issues in the study of value chain-based development policies. It put forward a more comprehensive approach than those applied by Andriesse et al. (2011), Helmsing et al. (2011) and Van Helvoirt (2009) since it takes two different types of comparisons in the same research to study the incidence of territory as well as the incidence of VC factors in the process effectiveness of VC-based development policies, and then examines the combined influence of both.

Table 8.1
Value chain factors (VCF) and regional factors (RF) Approaches in value chain research

Type of comparison	Value chain (VC)	Regional/national economies	What matters? Analytical scope
Van Helvoirt (2009)	Different VCs	Different regions	General (VCF & RF)
Andriesse et al. (2011)	Different VCs	Different countries	General (VCF & RF)
Helmsing et al. (2011)	Same VC	Different countries	Specific (RF)
Blandon (2012)	1. Same VC 2. Different VCs	-Different regions -Same region	Specific (RF) Specific (VCF)

Bram van Helvoirt (2009) compared different value chains in three different regional economies in the Philippines (Bohol, Cebu and Negros Oriental) to study the 'link between regional economic development and regional institutional arrangements' (Andriesse et al. 2011). In the same vein Andriesse et al. (2011) carry out a comparative analysis of the 'extent of inclusiveness in the development of local business network in South-East Asia' (2011). The study includes different chains in different regions (five regions in three Southeast Asian countries). The approach has as a constraint that the comparison of different chains in different regions is too general to draw specific conclusions on the contribution or influence of regional factors and particularly of VC factors to a certain development issue (e.g. the outcomes of a VC-based development policy). Meanwhile, Monnereau and Helmsing (2011) compared the same VC (lobster chain) in three different countries (Belize, Jamaica and Nica-

ragua) to discover the way territorial factors (variations in local embedding) influence the positioning of local producers and in particular how VC actors were affected by the recent economic crisis. While this study selected countries as the spatial unit, we worked with regions within a country as the spatial unit, configuring a VC local-regional analysis. The importance of our methodological contribution stands on the fact that we incorporate two types of analyses. First we compare the same VC in two different regions and then we compare two different VCs in the same region. In other words, the VC factors remain constant (same value chain) and compare two different regions to study the influence of regional factors in the developmental outcomes of value chain-based development policies. Second, we maintain the regional factors (the same territory) as constant and compare two different VCs to discover the contribution or incidence of VC factors in the process effectiveness of VC policies (agreements on competitiveness).

The study unpacks the VC factors, besides the governance issue, since it incorporates factors such as systemic efficiency and barriers of entry and rents as proposed by Kaplinsky (2000, 2008). The latter factor proved to have a decisive influence in the analysis of the economic structure of a VC and its influence on the outcomes of VC-based development policies. In fact, rents are a dynamic variable that have a changing composition within the VC and reflect variations in the VC economic structure, rent distribution as well as in the VC governance. In this sense, its incorporation in VC studies further enhances their analytical potential and provides a space to study the ways leading firms protect their rents from competition by means of previous or new entry barriers (2008).

Finally, it is important to point out that since the focus of VC analysis framework has been gradually moving toward the study of regional issues, this research contributes to move this endeavor one step forward by studying the influence of VC level and regional level factors on the degree to which meso-level actions are formulated and implemented and on their likely developmental outcomes. Thereby, we expect to pave the way for the new wave of studies in this field, which fortunately constitute our expected contribution to the VC and industrial policy literature.

The third contribution of the study relates the role of lead firms in VC coalitions. In line with Morris (2001: 127-36), 'dominant lead firms exercising a governance role are important in creating and sustaining value chain cooperation'. This thesis supports the view that the effec-

tiveness of an agreement on competitiveness at the level of VC is enhanced by the presence of a leading firm and/or an entrepreneur capable of organizing collective action, mobilizing public action and whose interventions promote the integration and the systemic efficiency of the VC. Although both governance and coordination functions might be concentrated on the VC governor(s), coordination of activities can be shared with other stakeholders and carried out in an organized fashion if there is a participatory device such as a regional competitiveness council (public-private partnership scheme). The governance structure of each VC plays a decisive role in the definition of the coordinating and controlling functions in a VC multi-stakeholder development partnership. Thus, the diverging interests and power asymmetries are key factors to take into account in the study of the functioning of value chain-based development interventions and partnerships.

The fourth contribution involves the inclusion of non-economic factors such as violence and illicit crops cultivation and of country-region specific contextual characteristics in the study of value chain-based development strategies. Peace is a precondition to provide a safe and sound policy environment for VC development interventions. This is because violence hinders the implementation of VC public-private partnerships, particularly in rural areas and affect the improvement of the smallholders' living conditions even more. This phenomenon, in addition to illicit crop activities, worsens the poverty cycle in cultivation sites of developing countries. Paradoxically, the specific social and political conditions of areas with armed conflicts and illicit crop cultivation configure a green field for the creation and implementation of public-private partnerships for VC development and particularly the contribution of NGOs as operators of large alternative crop cultivation or livestock projects financed by national and international donors and resources, and could involve other VC key stakeholders.

Security is a key issue to ensure peace and prosperity in a region and to promote competiveness improvement in agro-industrial VCs. Violence hampers the process effectiveness of development interventions at the VC level, though it is acknowledged that, in spite of the presence of political instability, armed conflict and other manifestations of violence, there is a need to promote socioeconomic development in affected areas, hence, VC interventions and CA within them can support this endeavor.

The policy implication of this contribution is that the VC CA is an effective tool to promote peace and prosperity in conflicting regions. It expands the wide range of options that the framework of VC analysis provides for policy formulation and implementation especially in countries and regions with unique social and political challenges. This approach proved to be effective in the Colombian case, where the VC policy framework has been used to support the implementation of illicit crop substitution and peace negotiations that include demobilization of combatants and economic reintegration into society. In short, the presence of two interrelated extra-economic factors in a given territory (illicit crops and guerrilla war) constitute specific regional conditions that influence the outcome of a VC multi-stakeholder development partnership and are an example of an unusual localized factor. Indeed, it is not included in the GVC literature.

8.5 Limitations and Suggestions for Further Research

The findings of this research support the advancement of VC theory, which is clearly a field under construction, and provides evidence and analytical insights for the enhancement of VC-based development policies. However, other issues remain partly hidden or need further empirical evidence considering that a number of remarks in this study derive from the actual development of five regional value chains in the context of the Colombian national policy for productivity and competitiveness.

8.5.1 VC 'geography dimension' included in the study of the value chain factors was difficult to incorporate in to the study of local-regional value chains

Within the GCC framework, VC 'geography' is not a key analytical category in the regional analysis; it is instead a more descriptive category. The other dimensions developed by Gereffi (1994) were certainly adapted from the GCC framework to the analysis of regional nodes. This shortcoming was overcome by the introduction of a third VC category developed by Kaplinksy (2000), 'systemic efficiency', and complemented with the notion of regional business systems put forward by Richard Whitley (1996).

Jenifer Bair calls attention to two important points in regards to what was pointed out above. First, 'some GCC research has failed to appreci-

ate the territorial dimension of commodity chains and in particular the salience of place in terms of the particular locations in which specific links in the chain "touch down'" (2008: 360). Second, the GPN proponents pointed out as a lacunae of the GCC literature the fact that 'the geographic dimension of Gereffi's framework is underdeveloped, and indicted GCC research as operating at a "very high level of spatial aggregation" (Dicken et al. 2001: 99)' (Bair 2008: 355).

8.5.2 Depth of analysis of regional characteristics

In effect, the study paid considerable attention to the comprehensive analysis of VC factors and to a lesser degree to the regional characteristics because of several shortcomings. There were no theoretical or empirical background studies to support this analysis (sector-region) comparison. As stated, GCC researchers have neglected the territorial dimension and in particular the local-regional context. These limitations were partially dealt with by introducing other strands of literature such as Global Production Networks and Regional Business Systems.

A suggestion for further research is to perform studies where the upgrading initiative is taken and the process is triggered by NGOs, farmer associations and regional governments or public agencies. These efforts have the potential to provide more evidence about how the interrelation between VC governance and regional business systems influences the outcomes of development interventions at the level of VC, and how meso-level policies can promote the inclusion of local-regional farmers in the national and global value chains.

Notes

[1] In the case of Antioquia, another regional situation promoted the cultivation of cocoa. It was the need to reconvert (substitute) some banana and green banana exploitations—production areas in the Uraba region—the main banana producer area in the country to other production crops such as cocoa, oil palm and livestock. As explained by an aide of the Association of Banana Producers of Colombia, there was a 'loss of competitiveness of these producers as a result of their low productivity and circumstantially the revaluation of the Colombian peso against the US dollar...' (Ingeniero Marco Tulio Calvo Sánchez, Asesor de la Presidencia de AUGURA) (Minute CCRCC, 28 March 2005).

[2] Jörg Meyer-Stamer (2004: 326), in his article about paradoxes and ironies of locational policy in the new global economy, defines a locational policy as 'the effort of local stakeholders, both from government and non-government to create a favorable environment for business activities. It aims at improving the locational quality of a region, so that existing companies may become more competitive, entrepreneurs will find it an attractive location to establish a business, and external investors will prioritize it when making locational decisions'.

Appendices

Appendix 1
National agro-industrial VCs, 2005 (Colombia)

A. Value chains with National Agreement on Competitiveness

With working Technical Secretariat

- Citrus
- Cocoa and its agro-industry
- Cotton- textile,-clothing
- Dairy products
- Export fruits (Industrial fruits)
- Guadua bamboo
- Natural rubber and its agro-industry
- Oleaginous (oilseeds)
- Plantain
- Potato
- Rice-rice threshing
- Yellow maize, sorghum, yucca- balanced- poultry and pig breeding.

Without Technical Secretariat

- Banana
- Tobacco

B. Value chains without National Agreement on Competitiveness

With working Technical Secretariat

- Shrimp farming
- Beef
- Fique (Vegetable fibre)
- Forestry
- Vegetables
- Fruits with export potential

Source: IICA, Bogotá, May 2005. Agro-industrial chains coordinated by the Ministry of Agriculture and Rural Development (IICA).

Appendix 2
Regional VCs with agreements on competitiveness (regional agro-entrepreneurial nuclei), 1995

Value Chain (Regional Entrepreneurial Nuclei)	**Regional Nucleus**
Banana	Atlantic Coast *
Citrus	Central western zone
	Tolima **
Cocoa and its agro-industry	Antioquia
Cocoa-chocolate	Northeastern region
Cotton- textile-clothing	Tolima **
Dairy products	Antioquia
Forestry	Córdoba
Forestry, chipboard, plywood and furniture	Caldas
Palm oil	Central zone *
Plantain	Córdoba
	Central western region *
Potato	Antioquia
	Nariño
Rice-rice threshing	Eastern Plains
	Tolima **
Yellow maize, sorghum, yucca, balanced, poultry and pig breeding	Humid Caribbean (Cordoba)
	Northeastern region **

Source: IICA, Bogotá, May 2005. Agro-industrial chains coordinated by the MADR (IICA)

*Without active technical secretariat

**Without active technical secretariat in 2005 but very active technical secretariat before.

Appendix 3
Regional VCs without agreements on competitiveness but with working technical secretariat

Chains	Regional Nucleus
Banana	Uraba Antioqueño
Citrus	Atlantic Coast Eastern Plains Santander West -Central
Cocoa	Huila Nariño Tolima
Dairy products	Cundinamarca Eastern Plains Nariño
Fishery	Eastern Plains Huila Northeastern Tolima
Forestry	Antioquia Caldas Mid Magdalena Northeastern Tolima
Forestry-wood-furniture	Cordoba
Oilseed	Nariño Northeastern
Brown sugarloaf	Northeastern
Plantain	Meta-Caquetá Uraba Antioqueno
Potato	Boyacá Cundinamarca
Poultry	Northeastern Valle del Cauca
Rubber	Antioquia-Córdoba
Tobacco	Huila
Yellow maize, sorghum, yucca, poultry and pig breeding	Eastern Plains

Source: IICA, Observatorio de Competitividad Agrocadenas, Bogotá, May 2005

Appendix 4
Summary of the CAs

		Commodity Chain	Regional Agreement (Year)	Zone Description Departments	National Agreement (Year)
1	1 Central zone (Tolima)	1.1 Cotton-Textile-Clothing	2001	Tolima	2000
2		1.2 Citrus value chain	2002		2000
3		1.3. Rice-rice threshing	2000		1998
4	2. North eastern region	2.1. Yellow maize, sorghum, yucca, balanced poultry and pig breeding.	2002	Santander, Norte de Santander and Arauca)	1997
5		2.2 Cocoa-Chocolate	2002		2001
6	3. Antioquia	Dairy products	2001	Antioquia	1999
7		3.2 Potato, agro-food potato value chain	2001		1999, 2000
8		3.3 Cocoa and its agro-industry.	2002		2001
9	4. Central-western region	4.1 Tropical citrus fruit of mountain	2002	Valle del Cauca, Caldas, Risaralda, Quindío, and Southwestern Antioquia	2000
10		Green banana (Plantain)	2002	Caldas, Risaralda, Quindío , Surocci-dente antioqueño, Norte del Valle del Cauca, Norte del Tolima	2000
11	5. North Atlantic Coast Magdalena	5.1 Banana	2001	Magdalena	2000
12	6. Central-eastern region	6.1 Palm Oil	2001	Santander, Southern Cesar Norte de Santander, and Southern Bolívar	1998 2000

Source: This research.

Appendix 5
National agreements on export competitiveness (Colombia)*

Chains of Goods

* Auto parts-automotive
* Cosmetics and cleaning products
* Appliances and commercial gadgets
* Forestry-wood furniture and wood goods
* Leather, leather manufacturers-footwear
* Metallurgical industry
* Petrochemical
* Professional electronics
* Pulp-paper-graphic industry and related
* Textile-garments

Chains of Services

* Consulting, engineering and construction
* Specialized health services
* Software and associated services
* Vallenato culture

Source: MCIT, Bogotá, June 2005. Export competitiveness agreements coordinated by MCIT.
*Most of them were signed in the period (2000-2002)

Appendix 6
Regional agreements on export competitiveness, 2000-2002

Chain-cluster		Region
Goods	Cluster leather and leather products	Nariño
	Cluster of horticulture and fruits	Antioquia
	Cluster of underwear	
	Electronics of the coffee growing zone	Coffee growing zone
	Textile-garments	
Services	Cluster of the vallenato culture	Cesar
	Cluster of tourism	Cartagena
		San Andres Island
		Santa Marta
	Housing	Antioquia

Source: MCIT, Bogotá, June 2005. Export competitiveness agreements coordinated by MICT.

Appendix 7
Value chain selection

The five VCs included in the study were selected based on a review of the main trends and patterns of 12 agreements on competitiveness. The following criteria was taken into account: 'areas of the chain with potential for improvement', 'types of activities in which regional entrepreneurs were willing to undertake collective action'; 'scope for collective action in core and noncore activities'; 'scales at which collective and public action were agreed upon'.

- Cotton-textile-clothing (Tolima)
- Rice-threshing (Tolima)
- Cocoa and its agro-industry (Antioquia);
- Cocoa-chocolate (North eastern region) and
- Dairy products (Antioquia).

These chains had a medium or high correspondence between scope of action and activities agreed upon; more or less unbiased distribution of activities along the different links of the chain and either balanced distribution of activities between government and private sector or clearly more duties assumed by the private sector. A common element of these chains is the important level of processing of the products of agricultural and livestock origin by the industry in the region or in other regions.

Source: This research.

Appendix 8
Formulation and development of the CA

Indicator	Score	Legend/description
1.1 Quality of commitments	1	Commitments were not formulated in terms of concrete and measurable actions (too general).
	2	Formulation of a mixture of well-structured commitments with other incomplete in terms of financial and administrative responsibilities by the members of the agreement.
	3	Mostly well-structured commitments with clearly defined goals and measurable activities, with allocation of financial resources and time frame set for their development.
1.2 Degree of achievement	1	Less than 20% of commitments were fulfilled.
	2	Between 21% and 60% of commitments were fulfilled.
	3	More than 60% of commitments were fulfilled.

Source: Own elaboration, CEPAL (2003) and CAF (2002).

Appendix 9
Composition and dynamics of the regional council for competitiveness

Indicator	Score	Legend/Description
2.1 Functioning of the technical secretariat	1	Inactive technical secretariat; lacks co-financing schemes by the private sector for its functioning.
	2	Technical secretariat with intermittent funding problems, which threatens its continuity and hinders its normal operation.
	3	Active technical secretariat (a person or an organization) with technical and administrative experience in value chain related issues; adequate funding with private and/or public contributions; and recognition by most of the VC stakeholders.
2. 2 Composition of the regional council	1	Composed of stakeholders of one link and public sector, does not integrate directly agro and industrial producers and depends on the participation of business interest associations. Its members are not endowed with decision-making power.
	2	Includes two or more links. Composed of members of NGOs, universities, public agencies, business interest associations. It has either low participation of local and regional governments or of key agro and industrial sector producers. Most of the participants do not have decision- making power
	3	Comprises most of the links of the VC. It has active public and private sector participation including the leading firm(s) of the VC; includes NGOs, small, medium and large agro and industrial producers, business interest associations, producer associations, universities, centers of productivity. The stakeholders have decision -making power.
2.3. Dynamism of the regional council for competitiveness	1	Low dynamism. There is no periodicity in the meetings; lack of technical committees; deficient information flow, insufficient awareness about the agreement, low degree of commitment of the VC actors.
	2	Average dynamism. Intermittent periodicity in the meetings, appointment of technical committees, average information flow, insufficient awareness about the agreement, asymmetrical degree of commitment among the members of the regional council.
	3	High dynamism. The RCC meets regularly; it has supporting technical committees, solid information flow and high degree of commitment of VC members. The VC actors are aware of the agreement.

Source: This research.

Appendix 10
Life cycle of the CA

Indicator	Score	Legend/Description
3. 1 Trajectory of competitiveness agreement	1	Signing of CA- partial fulfillment of the CA's goals (less than 30%)-dissolution of RCC.
	2	Signing of CA-partial fulfillment of the CA's goals (between 31 and 60%)-dissolution of technical secretariat and loss of functionality of the RCC.
	3	Signing of CA-Fulfillment of more than 60% the CA's goals-renewal of CA and permanence of RCC.

Source: This research.

Appendix 11
Policy process effectiveness of VC agreements on competitiveness: Indicator scores

Value chain	Score	Rank	Effectiveness
Cocoa-chocolate Santander	88.9	75-100	More effective
Cotton-textile-clothing Tolima	66.6	51-75	Intermediate
Cocoa-chocolate Antioquia	66.6	51-75	Intermediate
Dairy products Antioquia	66.6	51-75	Intermediate
Rice-rice threshing Tolima	50	26-50	Less effective

Source: This research.

Appendix 12
Characteristics of outcomes

Indicator	Score	Legend/description
1.1 Relevance of outcomes	1	Most of the outcomes of the activities carried out are not related to the goals of the CA.
	2	Outcomes of the activities carried out are partially related to the goals of the CA (some are related and others not).
	3	Most of the outcomes of the activities carried out are clearly related to the goals of the CA.

Source: This research.

Appendix 13
Contribution to corporate goals

Indicator	Score	Legend/description
2.1 Relevance of activities	1	The activities carried out during the CA did not support most of the corporate goals of the primary stakeholders of the VC, particularly agricultural and industrial producers.
	2	The activities conducted during the CA partially contributed to the achievement of the corporate goals of agricultural and industrial producers.
	3	The activities conducted during the agreement on competitiveness fully supported the achievement of corporate goals of agricultural and industrial producers.

Source: This research.

Appendix 14
Improvements in VC coordination

Indicator	Score	Legend/Description
3.1 Degree of coordination	1	The regional council has low dynamism and there are no events of coordination (program, projects and campaigns) among different links of the VC.
	2	The regional council has an average dynamism and there are few events of coordination among different links of the chain.
	3	The regional council is highly dynamic and there are several events of coordination among different links of the VC.

Source: This research.

Appendix 15
Relevance of CAs of value chains: Indicator scores

Rank	Relevance	Value chain	Score
80-100	High	Cocoa-chocolate Santander	100
		Cocoa-chocolate Antioquia	89
50-79	Intermediate	Cotton textile clothing Tolima	78
		Dairy products Antioquia	67
		Rice-rice threshing Tolima	56
< 50	Low		

Source: This research.

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Alexander Blandón Lopez

Born in Ibagué (Tolima), Colombia, Alexander Blandón earned his BA degree in Economics at the University Externado de Colombia in 1986. He enrolled as a lecturer at CORUNIVERSITARIA, today University of Ibagué. In 1989 he received an US AID scholarship as part of the Andean Peace Scholarship project and in 1991, was awarded a Master of Arts Degree in Public Affairs at the University of Oregon (USA). In 1994, he enrolled as full-time lecturer at the University of Tolima. He received a scholarship from the Netherlands Fellowship Programme (NFP) and in 1997, earned a Master of Arts degree in Development Studies in Employment and Labor Studies with research paper distinction at the Institute of Social Studies, in the Netherlands.

He was commissioned by the University of Tolima to be the director and main researcher of the Observatory of Employment and Human Resources of Tolima from 1998 to 2003. In 2004 he received a scholarship from the NFP to study a PhD program in Development Studies at the Institute of Social Studies.

Alexander Blandón is at present a full-time lecturer at the University of Tolima in the areas of Development Economics and Urban and Regional Economy. He is the director of a research group, 'Value Chains and Regional Competitiveness' and is carrying out various research projects on topics related to value chains and local and regional development.

Contact information

Address:

University of Tolima,
NBHD Santa Helena
Ibagué (Colombia)
Mailbox 546

PBX: (+57) (8) 2 77 12 12 - (+57) (8) 2 77 13 13

Email: blandon2008@hotmail.com
blandon@iss.nl

The above candidate was admitted to the PhD program in the Institute of Social Studies (now the International Institute of Social Studies of Erasmus University Rotterdam) in The Hague in January 2004 on the basis of:

MA in Employment and Labor Studies, Institute of Social Studies (The Netherlands), 2007

MA in Public Affairs, University of Oregon (USA), 1991

This thesis has not been submitted to any university for a degree or any other award.