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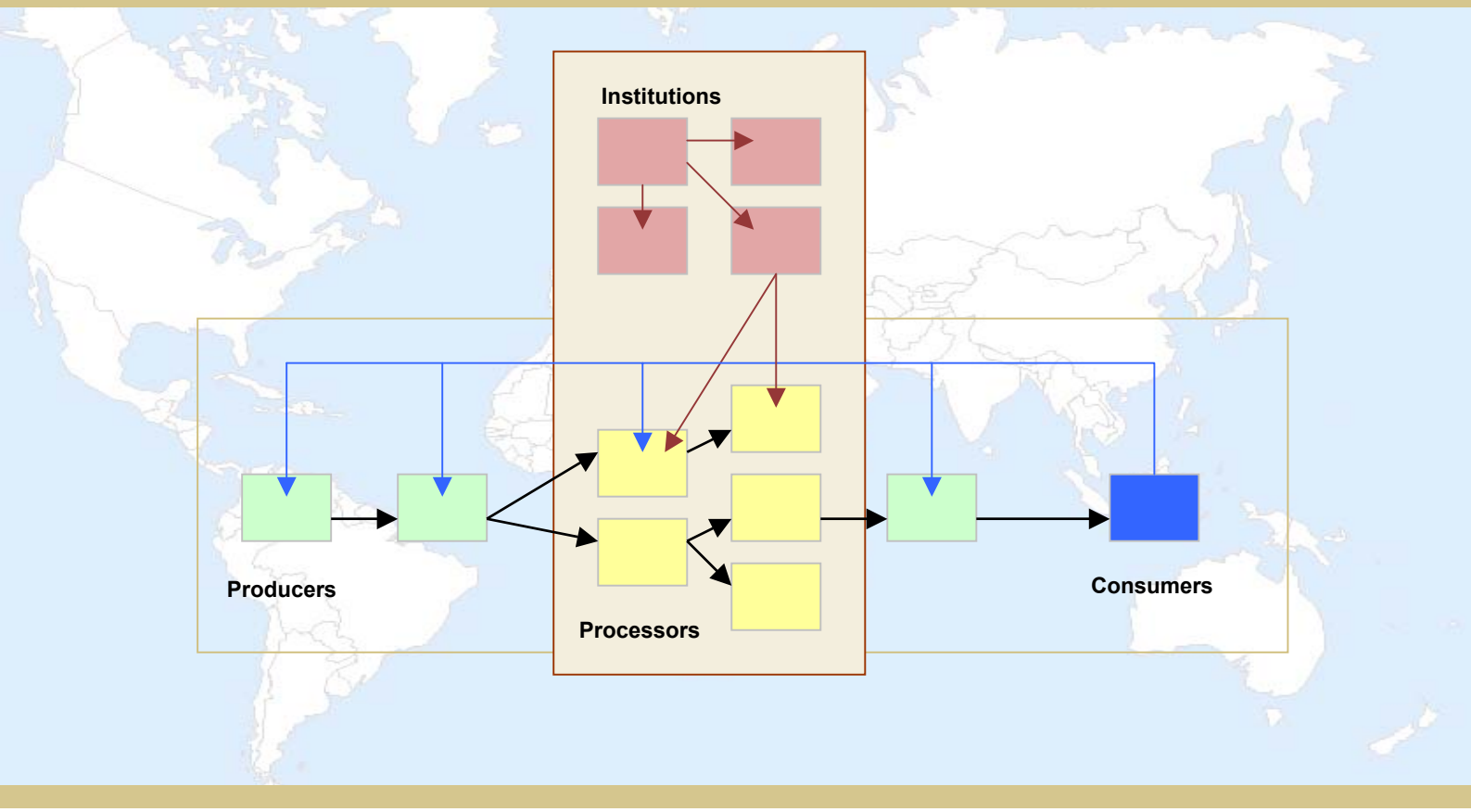

Andreas Stamm

Value Chains for Development Policy

Challenges for Trade Policy and the Promotion of Economic Development

Concept Study

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Table of contents

Tables

Boxes

1 World market integration with broad social impact – a problem that must be solved time and again

At the Millennium Summit of the United Nations in 2000, the international community agreed upon extremely ambitious development goals. These Millennium Development Goals (MDGs) were confirmed at the 2002 World Summit on Sustainable Development in Johannesburg and ratified by many governments as binding guidelines for their own policies, for example, by the German government in 2001 within the framework of the Program of Action 2015.

The question of whether and how the MDGs and especially MDG 1 - halving global poverty by the year 2015 - can be achieved is the subject of a continuing scientific and development-policy debate. The key discussion points in this connection are the significance of high rates of economic growth in developing countries, the strategy that can lead to an upsurge of growth, and the question of how such a pattern of growth can be directed in a socially and ecologically compatible manner. Chapter 1 of the present paper is devoted to this group of issues. Here the view is taken that only a significant increase in economic growth can bring the achievement of MDG 1 within reach. Given the small domestic markets in most developing countries, rapid economic growth can only be achieved on the basis of a greater global division of labor and increasing international exchange of goods and services. A development strategy based on exports must be politically supported by developing countries and the international donor community alike, in order to be designed in a broadly effective and ecologically sustainable manner.

Such a growth spurt will not prevent unequal development of nations, regions, and population groups. However, we must pursue the goal of giving developing countries with different factor endowments (labor, favorable agro-environmental factors) the possibility to expand their productive activities, to create employment and income in the formal sector, and in this way, reduce poverty. This presupposes, *inter alia*, a significant improvement in the international trade regime. For growth to have a widespread impact, it is also crucial for producers in developing countries to be able to assume an important position within value chains on the basis of specific competitive advantages. Information asymmetries between large and small or between powerful and less powerful actors must be reduced, thus allowing the most equitable appropriation possible of value-added generated by the division of labor. The prevalence of resource-conserving and emissions-reducing production processes at all stages of the value chain is decisive for achieving a pattern of growth with the broadest possible impact that is also environmentally sustainable.

1.1 Overcoming poverty through economic growth

The fact that economic growth is a necessary though not sufficient condition for overcoming poverty and underdevelopment is largely accepted today throughout the world. In this respect, the positions of various development-policy actors, such as the World Bank, OECD-DAC, UNDP, and NGOs, have largely converged in recent years.

On the basis of aggregated macroeconomic data, comparative econometric country studies confirm a direct correlation between the rate of economic growth, on the one hand, and the reduction of poverty, on the other hand.[1] Poverty-alleviating growth impacts only result when production growth rates are significantly above population growth rates, so that average income increases. Bruno / Ravallion / Squire (1996) come to the conclusion that a per capita income growth rate of around 1% is necessary for the poverty rate to fall by 2%.[2]

Looking briefly at recent developments in the focal regions of the global poverty problem, we can see that a direct correlation between the dynamism of the macroeconomy and the possibilities of rapidly reducing absolute poverty seem highly plausible. The countries of East Asia recorded average annual growth rates of 5.5% between 1990 and 2001; in the 1990s, the number of the absolute poor in this region fell by over 200 million. On the other hand, Sub-Saharan Africa, with widespread economic stagnation, saw the number of poor rise by over 50 million in the same period.[3]

Nevertheless, the statistical correlation between overall economic dynamism and achieved average income, on the one hand, and poverty reduction, on the other, is not perfect. For example, Ecuador and Sri Lanka have very similar levels of per capita income (US$3280 PPP, US$3180 PPP, respectively); however, they have very different poverty rates (Ecuador: 20.2 %, Sri Lanka: 6.6 %).[4] Thus, the question arises as to the causal relationship between economic growth and poverty reduction and the determinants of the different elasticities of poverty impacts with respect to economic growth.

— The basic social structures that developed over time give population segments of varying breadth access to the productive resources of a country. While economic growth by itself does not necessarily lead to an increasingly skewed dis-

1 Dollar / Kray (2000).

2 Bruno / Ravallion / Squire (1996), also see UNDP (2003), p. 67.

3 UNDP (2003), p. 41 and 281.

4 Per capita income, purchasing power parity, 2001, percentage of poor 1990-2001, <1 US $, see UNDP (2003), p. 68 and 199 f.

tribution of income, as occasionally presumed,[5] on the other hand, the distribution of productive capital during the base period of a business cycle determines which population strata and groups will receive a share of the value added of a country and will thus participate in economic growth and be able to profit from it.

— The labor market is a central link between economic growth and the breadth of its social impact. Faster economic growth, as a rule, means that a larger number of persons find work in the formal sector. This leads to a decrease in open unemployment and in underemployment, for example, in the informal sector, and thus to a structural reduction in poverty. Given the multiplicity of factors, labor markets in different countries with the same rate of economic growth are able to absorb additional labor to varying degrees.[6]

— The state can contribute to poverty reduction through the use of public funding, particularly in the area of education and health policies. As a rule, economic growth raises the volume of funds available for such purposes by way of tax income. In the short term, public expenditures focus, above all, on the non-income dimensions of poverty (infant mortality, illiteracy, education, and training). However, strengthening human capital directly improves the conditions for growth in upcoming business cycles and thus also leads to a decrease in income poverty in the future.[7] Differences in governance and in the performance capability of the state on the income and expenditure side then have varying effects on the elasticity of poverty reduction with respect to the same rate of growth.

These observations make clear that promising poverty reduction strategies *must* be based on appropriately high rates of growth and the resulting possibilities for the poor to engage in economic activities (*promoting opportunities*) as well as on rising government income with which to provide public goods. However, there is also a broad consensus (World Bank, DAC, UNDP etc.) that it is not *sufficient* to achieve high rates of economic growth. On the one hand, targeted measures are required in order to produce broad-based economic growth; on the other hand, it is necessary to have multi-dimensional strategies so that the indirect impacts of economic growth actually benefit the poor population groups. Thus, the need for structural reforms that improve access of the poor to the productive capital of each country again becomes a central concern.[8]

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5 See Bruno / Ravallion / Squire (1996).

6 For Latin America, see Altenburg / Qualmann / Weller (1999), p. 3-9.

7 See e.g. UNDP (2003), p. 70.

8 See e.g. Gsänger (2001).

1.2 Outward-looking development as a prerequisite for high rates of growth

Rarely has a discussion within economics been longer, more copious, or more controversial than that surrounding the role of international trade in economic development. It was reflected in the similarly controversial theoretical and strategic development debate of the last decades. Also today, trade-policy questions remain at the center of development-policy discussions, international negotiations, and the mobilization of civil society. However, the issues and lines of conflict pursued in this connection have clearly shifted. Today, even emphatic critics of globalization, as a rule, no longer hold the position that accelerated development can or should occur in the framework of an inward-looking strategy. On the other hand, controversial issues include the speed and concrete form of the world-market orientation, as well as the necessary adjustments of the international trade regime.[9]

Theoretical reflections and the empirical results of the last decades confirm that an outward-looking strategy can be a catalyst for "catch-up" development.[10] Static welfare effects (increased efficiency through improved allocation of productive resources), but above all dynamic welfare effects (economies of scale, access to knowledge and new technologies) of international trade can decisively contribute to an increase of overall economic growth and thus to poverty reduction. At the same time, international trade also expands the choices of people on the consumption side – which is also viewed positively, as part of an expanded concept of development.

The "Monterrey Consensus" reached at the 2000 Conference on Financing for Development includes the commitment of the signatory countries to promote "international trade as an engine for development."[11] It posits the model of an open, non-discriminatory, and equitable world-wide trade system, based on fixed rules.[12] Pro-development integration of markets is seen as the central prerequisite for achieving the MDGs, above all MDG 1.

The empirical results of the last decades confirm that rapid development progress of countries and regions is always accompanied by a rapid expansion of exports. This applies to all countries that are today referred to as threshold or newly industrializing countries, such as Chile, Costa Rica, Mauritius, Singapore, or Taiwan. These are often small countries with a limited number of people and thus a very narrow domestic market. Building up a diversified export and industrial structure was here neces-

9 See e.g. Wohlmuth (2003).

10 See UNDP (2003), especially p. 26-28.

11 UN (2002), p. 2.

12 Radke (2002), p. 2.

sarily dependent on access to large, diversified markets and the economies of scale and the competitive effects that were thereby possible. Ireland and Finland are similar in this respect; they succeeded in achieving accelerated, technology-based development within Europe and their macro-economies are decisively characterized by export-oriented industrial and service sectors.

However, also in China, which had a per capital income growth rate of around 8% a year in the 1990s and has a very large domestic market, exports comprise an important motor of growth, with annual rates of increase of around 14%. The volume of Chinese exports amounted to around US$ 320 million in 2001. China has succeeded, like no other developing country, in penetrating significant segments of international production in the area of light industry. While industrial goods comprised only 53% of Chinese exports in 1981, that figure was already 90% by 1990.[13]

1.3 Prerequisites for widespread and environmentally sustainable integration into the world market

As outlined in Sections 1.1 and 1.2, both theoretical reflections and empirical evidence indicate that developing countries must take advantage of the potential of world-market-oriented development, if they wish to achieve permanently high rates of growth and rapid poverty reduction. However, it is by no means unimportant in which way, with which products, and with the inclusion of which actors a greater integration in the world market occurs.

Traditionally, many developing countries were integrated into the world market through the export of unprocessed or slightly processed mineral raw materials and agricultural “colonial goods.” Continuation of this export pattern can never be the vehicle for a permanent, broad-based, and environmentally sustainable pattern of growth. The world market is capable of absorbing only a very limited amount of additional exports. World market prices are under constant pressure. Thus, real prices for agricultural raw materials have fallen by 1.7% a year since 1970; prices for food, beverages, and tobacco sank by an annual 3.4%; and those for oil seed, by 3.6%.[14] Income and employment gains in these groups of goods are only possible to a limited degree, at least as long as the protectionist agricultural policies of industrialized countries remain fundamentally unchanged.

The example of China showed that permanent export-driven growth is possible when internationally competitive industrial sectors are successfully built up. The demand in international markets for industrial goods is far more elastic than the demand for raw

13 UNDP (2003, p. 73; WTO (2002), p. 19.

14 Brandt (2003), p. 20 f.

materials; the wide variety of products makes integration into world markets possible on the basis of respective production advantages. The globalization of industrial production structures means that entry barriers for developing countries decrease, particularly in the area of labor-intensive and low-skill mass production. In this way, a great number of jobs were and are created in many developing countries, to which population groups affected by poverty also have access.

In particular, the development in the Southeast Asian countries, as well as more recently, in China, shows that it is possible to gradually work up, from an initially factor-cost-based integration into international industrial goods markets to knowledge- and technology-intensive market segments. This is also necessary in order to escape a gradual worsening of inter-industrial exchange relationships. Kaplinsky (2000b), looking at the long-term trend, has shown that the terms of trade for industrial goods have been moving against developing countries. He basically attributes this to the fact that knowledge-based production stages remain in the industrial countries, which then earn the return on innovation. In contrast, developing countries take on the knowledge-extensive stages where there are few barriers to entry and where competition and price pressure are correspondingly high.

The rapid advances in information and communication technologies give developing countries the possibility of integrating into the international services market. With an adequate connection to global telecommunications networks and the internet, many forms of service exports do not suffer from the traditional locational disadvantages arising from geographic distance and often inadequate infrastructure for the physical export of goods. The most well-known example of development based largely on the export of services is India. A number of other developing countries are now attempting to position themselves globally as providers of ICT services such as programming, call centers, etc. For example, the conglomerate Procter & Gamble is concentrating its entire ICT-based customer service for the American continent in Costa Rica.[15]

Up to now, the development-policy discussion has not sufficiently addressed the opportunities for developing countries to integrate into the world market with agriculture-based products beyond a limited number of commodities. For important product groups, such as meat products, fresh and preprocessed vegetables, processed fruit, etc., international trade has shown a yearly growth rate of 5% to 12% in the last two decades.[16] The export of value-added-intensive agriculture-based products opens possibilities for a geographically de-concentrated development that also directly includes population groups affected by poverty. There is potential for product differentiation and innovation.

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15 See Stamm (2003).

16 See Brandt (2003), p. 7.

The environmental impacts of export-oriented growth strategies are repeatedly the subject of intense controversy. It is generally held that an outward-looking development strategy leads to the accelerated degradation of resources and increasing environmental pressure. Such causal relationships can also be demonstrated by a number of examples (extraction of mineral raw materials, large-scale banana and soybean production, pesticide-intensive cut-flower production). On the other hand, there is no reason to assume a structural and inevitable causal relationship here. On the contrary, access to differentiated markets principally opens up the possibility to tailor income-creating activities more closely to the respective (agro-) environmental production conditions than is possible when serving less varied domestic markets. Furthermore, in recent years, consumer demands with respect to the (ecological) quality of imported goods and the corresponding regulatory requirements have increased markedly in the most important markets of industrialized countries. As shown in Section 3.3, these standards, often introduced in response to pressure from consumers in industrialized countries, are increasingly being enforced along the production and trade chains, up to and including the producers in developing countries - which can contribute to a reduction in environmental damage and production risks.

Contrary to simplifying, neo-classical models, in most developing countries, broad-based world-market integration is not purely the result of market forces. This is partly related to the fact that the international trade regime is far from the model described in Monterrey (free, open, non-discriminatory, see above). Also in many developing countries, inappropriate framework conditions continue to block market-driven development. A fundamental problem of most countries, to which government action and DC must find better solutions, is the lack of sufficiently qualified and motivated businessmen and women who can recognize, assess, and act on international market signals. Beyond that, where government interventions and DC should begin and how intensive the intervention into market-driven processes should be remain controversial and strongly dependent on the respective problem constellation. In addition to the deficits of the observed countries, this also includes the structuring of global markets and relevant tendencies in the international division of labor. From this perspective, the discussion of global value chains assumes a special role in developing an appropriate design of promotional policies and DC measures.

2 The value chain as an instrument for the analysis of economic relationships

In recent years, the number of development-research studies that are related to the value chain approach (VCA) or analyze value chains, *filières,* or global production networks has jumped. Most of the studies examine internationally organized production and trade chains, particularly those that link industrial and developing countries.

While the approaches of the 1970s and the 1980s were primarily heuristic-descriptive, most recent literature, especially in the Anglo-Saxon area, is oriented to political economy and views the VCA as an important contribution towards explaining unequal development and continuing underdevelopment under conditions of globalization. The aim is to distinguish between development-compatible and development-adverse forms of world-market integration and to draw up policy recommendations for the governments of developing countries. The results of current research do not provide conclusive answers in any of these focus areas.

Largely unaddressed are the concrete implications of the VCA for DC. How must the TC set of instruments in the WIRAM priority area (Economic Reform and Development of the Market System) be adapted in order to make a contribution to poverty reduction through the use of value chains? Can the establishment of new or the supplementing or deepening of existing value chains be an objective of DC interventions? What role does the reduction of information asymmetries play within existing chains and the related possible strengthening of the negotiating position of SMEs and their greater appropriation of profits? Under which conditions and to what extent can (potential) lead firms of global value chains be incorporated into VCA-based WIRAM programs in the framework of PPP measures? What does VCA mean for the mix of interventions at the various system levels; how might a VCA-based intervention approach look, particularly at the meso and macro levels? How do VCA-based interventions respond to other quasi-paradigmatic demands on DC (structure and system building, market creation paradigm in the area of BDS)?

There are currently no satisfactory answers to any of these questions. And we will not have the answers in the short term, as the results of development research in several key areas (e.g. governance structures in value chains) have still not been sufficiently verified to be directly relevant to implementation.

Thus, the current rapid and widespread acceptance of VCA by German TC is not without its problems. It is therefore advisable to carefully prepare program components in the WIRAM priority area that make use of the VCA, based on concrete problem analyses and partner dialogue, and to carry out close monitoring linked to the appropriate safeguarding of results. When this is ensured (and only then), can these program components take on an important experimental function for German and perhaps international DC. At the same time, there must be guarantees (e.g. in the framework of project progress monitoring and reviews) that the advances expected in the area of value-chain research in the coming years are systematically fed into the TC system and that the respective interventions are readjusted as necessary.

2.1 Necessary clarification and standardization of the terminology employed

As will be shown below, for at least twenty years now, there have been systematic attempts in English-, German-, and French-speaking areas, to describe and analyze the vertical integration and disintegration of production and distribution processes. A great many terms were used in this connection, in part with identical and in part with varying meanings.[17] Below we provide reasons for agreeing on the widely employed term *value chain* (*Wertschöpfungskette)* in future work in this area.

The term *global commodity chains (GCC),* used in Anglo-Saxon research of the last ten years, is problematic for a multi-sectoral approach that takes into account differing constellations of actors, for two reasons:

— In international economic- and development-policy terminology, a *commodity* is generally understood as a standardized good with clearly defined product characteristics that is traded on exchanges and other anonymous markets. Price competition predominates on commodity markets; insufficient access to land, capital, and technology characterizes the main barrier to entry. “Post-Fordian” forms of inter-organizational division of labor, but also international trade, for example, of special agriculture-based products, are not adequately covered by the term *commodity.*

— The term *chain*, like the terms *filière* or *Wertschöpfungskette* and production *chain,* implies the analysis of a linear process in which a product or service is produced. Already earlier versions of the c*ommodity-chain* approach and *filiére* studies have a more comprehensive understanding of *commodity chains* in the sense of networks, and they emphasize the role of functions and firms that are horizontally attached to the chains.[18]

Given the problematic content of this term, several newer studies propose substitutions for the term *global commodity chain*; for example*,* Henderson et al. (2001) suggest the term ***global production network.*** Both mentioned problems would thus be overcome. The present paper shares the reservations with respect to the term *commodity*; however, it is not easy to identify a new term, given that other delimitation problems continue to arise:

— The term ***production*** is conceptually related to only a part of the system that begins with raw materials and extends through consumption of the good in

17 See Kaplinsky / Morris (2001), p. 6-8, for the terms *value chain, filière,* and *global commodity chain*.

18 Hopkins / Wallerstein (1986, p. 159, emphasis not in original) use the following definition: “The concept *commodity chain* refers to a *network* of labor and production processes whose end result is a finished commodity. In building this chain we start with the final production operation and move sequentially backward…” An example of the *filiére* analysis (baked goods) from the 1980s is found in Schamp (2000), p. 31.

which we are interested. The results of the GCC research also confirm the increasing disintegration of production and distribution in important business sectors (e.g. the clothing industry). Use of the term *production network* thus requires the counter-intuitive subsumption of the distribution sphere under the term *production.*

— Although most work on value chains analyzes vertical *and* horizontal branching, thus, ultimately, *network-like structures,* many of the relationships (governance) and processes (technological learning, innovation, upgrading) at the center of interest are actually related to the vertical chain dimension.

For these reasons, it is recommended that the term ***value chain*** (German: *Wertschöpfungskette*) be used and that the term *chain* be understood in a broad sense and not in a purely linear fashion. In the German language, there is no danger of confusion with Michael Porter's term *chain* (German: *Wertkette*), which is basically concerned with firm-internal matters (see the following Section 2.2). In the English language, both areas of research are referred to using the term *value chain*.

2.2 Approaches for the analysis of vertical business integration: an overview

The analysis of vertical, division-of-labor production processes is in no way new. Already in the 1920s, the term ***Wirtschaftsformationen*** (economic formations) was coined in German and Dutch geography*. Wirtschaftsformationen* describe the cooperation between agricultural production and the services that support it. The term was revived in the 1970s when it was transferred to "formations" in the industrial sector; however, the concept was not taken up again outside of geography.[19]

A more important role was played by early works of **A.O. Hirschman**, particularly his *Strategy of Economic Development* (1958) and the "backward and forward linkages" described therein.[20] Linkage*s* are not understood here in the sense of tangible (substances, products) or intangible (knowledge, innovations, etc.) flows between established organizations. According to Hirschman, investment in an (industrial) firm produces demand effects that induce subsequent investments (backward linkages) by input suppliers (e.g. in agricultural raw materials, intermediate goods). Often, the output of an industrial firm can, in turn, be used as an input into another industrial activity. Thus, subsequent investments are also stimulated on the output side (forward linkages). This sequence of input-output effects leads to a process of industrialization that is characterized by continually arising imbalances (unbalanced growth). Hirsch-

19 See Schamp (2000), p. 27-29.

20 See Hirschman (1958), especially p. 100-119.

man understood his “strategy” as open criticism of the then reigning modernization theory of balanced growth in the framework of a big push.[21]

Hirschman largely denied that there were significant forward or backward linkages in agriculture. However, he qualified this already in 1958, noting that

> *“the production of modern methods does bring with it considerable outside purchases of seeds, fertilizers, insecticides, and other current inputs, not to speak of machines and vehicles.”*[22]

Value chains in the work of Michael Porter

The VCA of Porter consists of a purely linear description of various stages that are necessary for the production, marketing, and distribution of a good or service. It was developed in order to facilitate the identification, by company managers, of the value that arose at different stages of the value chain:

> *“The value chain disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential sources of differentiation. A firm gains competitive advantage by performing these strategically important activities more cheaply or better than its competitors.”*[23]

He limits himself to the level of firms and corporate networks and disregards aspects of corporate power, the reciprocal influence of firms, and the institutional context, as well as spatial aspects of the embedding of value chains.

The *filière* concept and its significance for current development-policy issues

A direct conceptual predecessor of the value-chain approach currently being discussed is the *filière* concept.[24] This was developed in the 1970s by French economists is order to achieve a structured understanding of the economic processes within a production and distribution system. The main objective was to identify flows of goods and the actors involved with the flows and to make them amenable to economic analysis.

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21 See Nitsch / Lepenies (2000).

22 Hirschman (1958), p. 109.

23 Porter 1985, p. 33.

24 See Lenz (1997), Schamp (2000), p. 29-33; Raikes / Jensen / Ponte (2000).

In their simplest definition, *filière* largely corresponds to the production chain, technically understood as the totality of the production stages that extend from extraction of raw materials to satisfaction of the needs of the consumer. Thus, the entire cycle is disaggregated into segments; each segment includes the three steps "input, transformation, and output." The interfaces between the segments thus delineated represent potential markets. A product or service would be potentially marketable at these points.[25] Thus, *filière* is initially nothing more than an instrument with which to describe decentralized, organized production, the elements of which

> *"can be understood as a sequence of various meso-economic institutions such as markets and industrial sectors, the coordination and control of which cannot be guaranteed through hierarchy (as in firms)."*[26]

Already at the descriptive level, the *filière* approach can rapidly achieve high levels of complexity, if the observed segments of industrial production are assigned to various raw materials and final goods. This explains why the approach has aroused particular interest as a way to represent increasing differentiation and expansion of chains in the food industry. Here the *filières* are characterized by a rather straight-line process. This linearity is expressed, above all, by the fact that agricultural raw material is transformed in various segments of the *filière* and through different actors, i.e. it is processed or refined. This transformation process is clearly distinguished from industrial production processes, where, usually, an increasingly complex aggregate, based on individual parts of various origins, arises at the different stages of the chain.

In the framework of economic-history studies, the *filière* approach is able to help show, for example, to what degree transformation processes were shifted from agricultural firms or households to the secondary economic sector and how new sectors of industrial production arose in this way.[27]

Although the *filière* approach has completely different epistemological roots, its results are similar, in many aspects, to the new *commodity* or *value chain* approaches. The approach, which was initially largely static, empirical, and limited to national chain relationships, was further developed, at different times, through connections to various strands of theory. Thus, analytical approaches, some also important for current development-policy questions, were developed. At some points, a convergence with Anglo-Saxon approaches can be observed. Thus, already in work by Hugon (1988), an important task of the *filière* instrument was mentioned:

> *"to search out strategic junctures, from which the entire production and distribution chain can be dominated. The intention is to find those in the*

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25 See Lenz 1997, p. 22.

26 Schamp (2000), p. 30.

27 See Nuhn (1993).

group of actors who not only determine their own action in the filière, but also thus powerfully influence the ability or even the need of other actors in the filière to act."[28]

A particularly fruitful discussion for purposes of the present questions results from linking the *filière* idea with "convention theory." Due to their content, the resulting observations on the coordination of chains are presented in Section 3.2.2.

Global production networks at the company level (Global Production Networks I)

At the end of the 1990s, Dieter Ernst introduced the term g*lobal production networks* (GPN) into the discussion surrounding the internationalization of corporate activities.[29] The GPN concept attempted to capture the networks of transnational firms that operated in various, vertically disintegrated agglomerations of economic activities in different countries and did not organize their production in a series of individual investments. The most important motive for firms to establish such GPNs was access to flexible, specialized suppliers in countries with low costs. Empirically, the concept is relevant, above all, to the electronics and ICT industry.

Global Commodity Chains (GCC)

According to an earlier definition by Gereffi, GCCs consist of series of cross-organizational networks grouped around a good or a product. They link households, firms, and countries within the global economy. These networks are situation-specific, social constructs, anchored in each local context.[30]

Gereffi defines a total of four dimensions of GCCs:[31]

- an input-output structure, understood as the tangible (raw materials, intermediate goods) and intangible (knowledge) flows linked together in the process of value creation;
- territoriality, understood as the geographic concentration or dispersion of production and marketing networks, comprised of a majority of firms;

28 Lenz (1993), p. 26.

29 Quoted in Henderson et al. (2001), p. 6 f.

30 See Gereffi et al. (1994), p. 2.

31 Gereffi (1994), p. 96-97, 1995.

— a governance structure, understood as authority and power relationships that determine how financial, material, and human resources are distributed within a chain;

— an institutional framework that provides the national and international context for the interaction of chain segments.

Section 3 of the present paper will examine important conceptual elements of the GCC approach and its applications; Section 4 will detail the unresolved research questions.

Global production networks, the approach of Henderson et al.

Henderson et al. (2001) understand their concept of g*lobal production networks* as a direct refinement of the GCC, addressing several of its weaknesses that have been discussed in recent years. The authors see the following closely related essential aspects:

— Firms, governments, and other economic actors from various societies may have different priorities with respect to profitability, growth, economic development, etc. These differing priorities have distinct impacts on the behavior of actors in the chain (entry, exit, upgrading, etc.) Also non-governmental organizations and labor unions are systematically taken into account as actors in the development of an international value chain.

— The input-output structures within the chains are considered highly significant, because ultimately they decide on the locations where value and employment are created.

— Overall, the interrelations between the links of the chain and the place where they are embedded are the focus of interest:

"In order to understand the dynamics of development in a given place, then, we must comprehend how places are being transformed by flows of capital, labour, knowledge, power etc. and how, at the same time, places (or more specifically their institutional and social fabrics) are transforming those flows as they locate in place-specific domains."[32]

— The distinction between *producer-driven* and *buyer-driven value chains* (see below, Section 3.2.2 and Box 1) is not retained in this form. Although power is at the heart of the analysis (in addition to the value-creation process itself and the embeddedness of the actors in their geographic and institutional context), it

32 Hernderson et al. (2001), p.3.

is treated conceptually in a broader and more flexible manner. Three forms of power are distinguished in GPN:

  - Corporate power largely corresponds to the concept of governance in the GCC approach (see below, Section 3.2).
  - Institutional power is the ability of government, supra-national, and global institutions to influence network relationships.
  - Collective power is related to the possibilities for collective actors, above all, NGOs and labor unions, to influence the GPN.

- Henderson et al. also include technology alliances and licensing agreements between firms in the analysis, as an additional development-relevant element of the GPN of certain sectors (pharmaceuticals, electronics).

3 Development-policy significance of the basic concepts of the value-chain approach

Section 1 showed that broadly effective and thus poverty-alleviating growth in developing countries that is also environmentally sustainable is not conceivable without access to the large and differentiated markets of industrialized countries. The value-chain approach presents possibilities to appropriately analyze the conditions for this and to assess the opportunities and perhaps also the risks. Especially important for development-policy practice is the question of under which conditions firms from developing countries can gain access to the global value chains, how they can appropriate a relevant share of the value added, and how they can draw non-tangible benefits (technological and organizational learning) from integration into value chains. Finally, important observations also arise with respect to the appropriation of value created by actors in the chain through the division of labor. In the following, several basic concepts of the value-chain approach will be examined with reference to these questions.

3.1 Opportunities for firms from developing countries to join internationally organized value chains

Traditional approaches to export promotion in developing countries are or were based, implicitly or explicitly, on the idea of equipping SMEs, as individual firms, groups, or clusters, with the competencies required to actively serve international markets. The current results of value-chain research demonstrate that this bottom-up approach is becoming increasingly unrealistic for business sectors that are of particular interest to developing countries. This is due, above all, to the restructuring of international value chains and the dominant role of individual lead firms.

Many of the studies that have appeared since the mid-1990s on internationally organized value chains are empirical studies of the clothing industry and, more recently, of the international trade of fresh fruit and vegetables.[33] The concentration of research on these sectors is justified by their particular importance for developing countries in the wake of globalization.

The two sectors have in common that they are increasingly being systematically organized by large firms from industrialized countries. The lead firms here are often companies that are themselves no longer or only to a very small degree engaged in manufacturing. Their core competencies are increasingly found in knowledge-intensive activities such as market forecasting, design, market development, and market support, and in the exploitation of global locational advantages for sourcing labor and specific resources. Gereffi (1994) calls value chains structured in this way "buyer-driven commodity chains." In other business sectors, the core competency of the firms integrated in the chain lie in production technology. In these "producer-driven value chains," the lead firms dominate both the upstream supplier relationships and the downstream linkages to the sale of goods.

This distinction between two different basic types of global value chains subsequently proved to be highly relevant for important business sectors (clothing industry, automobile industry). However, it does not adequately represent the many different chain relationships. In more recent studies, chains clearly dominated by lead firms are generally described as "captive value chains."[34]

33 E.g. Gereffi (1994), Bair / Gereffi (2001), McCormick (2001), Dolan / Humphrey (2000).

34 See Gereffi / Humphrey / Sturgeon (2003), p.5.

Table 1: The ten largest firms of the food industry worldwide, 2002				
Rank	**Firm**	**Country**	**Market value US $ in millions**	**Sales US $ in millions**
1	Nestle S.A.	Switzerland	88 112	50 615
2	Unilever	UK & Netherlands	56 394	48 505
3	Kraft Foods	USA	21 450	33 875
4	General Mills	USA	17 843	7 077
5	Danone	France	16 706	12 687
6	Sara Lee	USA	16 304	17 747
7	Heinz (HJ)	USA	14 539	9 430
8	Cadbury Schweppes	UK	14 202	7 898
9	Kellogg	USA	13 685	8 853
10	Conagra Foods	USA	13 026	27 194
Source: Financial Times FT500 (2002)				

In the area of agricultural goods, it is the global food corporations and retail chains that become the integrators of international value chains. While the food industry has already been characterized by a few large global players (Nestlé, Unilever etc.) for several decades (Table 1), since about the mid-1990s, retailers have been undergoing an unprecedented process of concentration that often includes cross-border takeovers.[35] Table 2 provides an overview of the 30 largest commercial food corporations in the world in 2002. It is to be expected that the concentration process will continue in both of these sectors in the coming years.

The most important result of value-chain research can basically be summarized as follows: in key business sectors, the access of firms from developing countries to large, differentiated markets can be much more readily achieved through integration into value chains organized to facilitate the division of labor than through independent export. The sourcing and outsourcing strategies of large industrial and commercial corporations are becoming key determinants for the integration of developing countries into the world economy.

35 See Wrigley (2003), p. 296.

Table 2: The most important international retail corporations 2002					
Rank	**Firm**	**Country**	**Sales US$ in millions**	**Number of countries**	**Sales abroad in %**
1	Wal-Mart	USA	180 787	10	17
2	Carrefour	France	59 690	26	48
3	Kroger	USA	49 000	1	0
4	Metro	Germany	42 733	22	42
5	Ahold	The Netherlands	41 251	23	83
6	Albertson's	USA	36 762	1	0
7	Rewe	Germany	34 685	10	19
8	Ito	Japan	32 713	19	33
9	Safeway Inc.	USA	31 977	3	11
10	Tesco	UK	31 812	9	13
11	Costco	USA	31 621	7	19
12	ITM (inkl. Spar)	France	30 685	9	36
13	Aldi	Germany	28 796	11	37
14	Edeka (inkl. AVA)	Germany	28 775	7	2
15	Sainsbury	UK	25 683	2	16
16	Tengelmann	Germany	25 148	12	49
17	Auchan	France	21 642	14	39
18	Leclerc	France	21 468	5	3
19	Daiei	Japan	18 373	1	0
20	Casino	France	17 238	11	24
21	Delhaize	Belgium	16 784	11	84
22	Lidl & Schwartz	Germany	16 092	13	25
23	AEON	Japan	15 060	8	11
24	Publix	USA	14 575	1	0
25	Coles Myer	Australia	14 061	2	1
26	WinnDixie	USA	13 698	1	0
27	Loblaws	Canada	13 548	1	0
28	Safeway plc	UK	12 357	2	3
29	Lawson	Japan	11 831	.2	1
30	Marks & Spencer	UK	11 692	22	18
Source: Financial Times FT500 (2002)					

Already at this point, it should be noted that a series of goods produced in developing countries and traded internationally are probably not adequately captured by the concept of *captive value chains.* This applies to certain (e.g. organic) non-traditional agricultural exports and processed agricultural goods, special segments of classic commodity markets (e.g. coffee from recognized quality locations, such Blue Moun-

tain Coffee from Jamaica) and Fair Trade products. These value chains are not driven by the producer side; however, permanent or seasonal scarcity forces the buyers to negotiate certain parameters instead of imposing them upon the other actors in the chain through a vertical "command and control" structure. The greater global competition between industrial and commercial firms and their interest in selling large quantities of high quality goods from developing countries can easily strengthen the negotiating position of special suppliers in this context.

3.2 Governance and coordination of value chains

Of the four dimensions of international value chains developed by Gereffi (see Section 2), the governance structure has attracted the most attention in the literature since the mid-1990s. The concept is briefly presented below, whereby it is assumed that it is useful to conceptually distinguish between the governance of a value chain and its coordination. While governance, at least in the context of the VCA, points to the power relationships between actors within the system of relationships and the possibility of appropriating profits, coordination is more closely related to management of the delivery of tangible goods and products to the interfaces between the segments of a value chain. If governance is basically understood as setting rules, then coordination can be viewed separately as implementing the rules and monitoring their adherence. In Section 3.2.2, we will examine various coordination regimes, as they were developed in the *filière* literature.

3.2.1 Governance of value chains – results of research on global commodity chains

The governance of value chains has been at the center of Anglo-Saxon commodity-chain research since Gereffi (1994). An important reason for the emphasis on this dimension of value chains lies in the history-of-economic-thought tradition of the GCC approach, in other words, the connection to dependency and world-system theories. Power within value chains is seen as an important factor with which to explain perpetual underdevelopment and, in part, increasing geographic disparities – measured according to various criteria - in the wake of globalization.

The governance concept is, at heart, identical with the aim of Hugon (see above) in the *filière* approach, to identify "*those who not only determine their own action in the filière, but also thus powerfully influence the ability or even the need of other actors in the filière to act.*"[36]

36 Lenz (1993), p. 26.

It is assumed that individual firms in modern value chains set the parameters to which other firms of the chain conform. Value chains are controlled by specifying the parameters for products, processes, and logistics.[37]

- Product parameters determine the design of the products to be produced.
- Process parameters determine how the product is to be produced.
- Logistics parameters determine how much of a good is to be produced when and how the physical flow of goods is to be executed.

The importance of **product parameters** grows with the rising diversification of markets and increasingly complex, internationally distributed production processes, which mean, for example, that production components from different production countries are assembled in a third country. Also in less complex value chains, rapidly changing product characteristics often determine the marketability of a good (e.g. clothing industry).

Process parameters are intended to reduce risks, but they also increasingly satisfy specific customer preferences not only related to physical product characteristics, but also to the external effects of the production processes.[38] Important risk-reducing process standards include ISO 9000 for general quality assurance or HACCP (*Hazard Analysis and Critical Control Point*) for the food industry.

Logistics parameters are ultimately gaining importance because the competitiveness of value chains is increasingly being expressed by the organization of complex production processes without unnecessary loss of time and with low costs (e.g. through inventory maintenance). In this context, the ability of the actors in the value chain to electronically manage inter-organization communication and the flow of data also plays a growing role.[39]

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37 Humphrey / Schmitz (2002), see also Messner (2002), p. 21 f.

38 An example of this is “bird-friendly coffee” or “shadow coffee,” sold in the USA, which comes from traditional mixed cropping. By purchasing this specific type of coffee, consumers wish to make a contribution to the preservation of winter habitats for migratory birds. Other well-know examples are the Rugmark initiative against illegal child labor and the entire area of Fair Trade.

39 See Altenburg et al. (2001).

Box 1: The two basic forms of commodity chains, according to Gereffi:
Producer-driven commodity chains: Control of value chains through large, mostly transnational manufacturing firms, above all, in capital- and technology-intensive industry branches, such as automobiles, aviation, computers, semiconductors, and machine building. In producer-driven value chains, the lead firms influence both their suppliers and their buyers. The specific barriers to entry in producer-driven commodity chains lie in the required comprehensive and technology-intensive investments in the production sphere. Industrial firms are therefore the key actors here.
Buyer-driven commodity chains: Purchasing firms such as wholesalers and brand-name producers play a decisive role in the establishment of decentralized production networks in export countries. Such value chains are typical, above all, in labor-intensive, consumption-goods industries, such as clothing, shoes, toys, and entertainment electronics. Most foreign purchasing firms have their products produced by suppliers in developing countries according to specifications and standards that they provide, they thus have a great deal of influence on the upstream links in the value chains. Barriers to entry are usually low for production.

In the GCC approach, governance of a value chain encompasses four stages:[40]

- setting rules;
- supporting other actors in the chain in order to be able to adhere to the rules;
- monitoring adherence to the rules;
- imposing sanctions where rules are violated.

3.2.2 Coordination of value chains: results of the French filière research

It is useful to present in more detail the connection of the *filière* concept to French **convention theory**.[41] Its roots lie in neo-institutional economics; much work is also influenced by regulatory theory approaches. A basic underlying assumption of convention theory is that, under conditions of information asymmetries, it is essential for the functioning of the markets that there is a common “language” among participants. This yields various criteria, according to which the salability of goods is determined and on the basic of which trade is ultimately executed. While quantitative criteria were decisive for trade under Fordian production conditions, under current condi-

40 Kaplinsky / Morris (2001), p. 67-73.

41 The following explanations are based primarily on Raikes / Jensen / Ponte (2000), p. 18-20.

tions, *quality* criteria increasingly play the crucial role. The convention theory distinguishes four mechanisms by which quality demands on products are coordinated among market participants:

- Under conditions of **domestic coordination**, the reduction of uncertainty about product quality occurs on the basis of trust, either on the basis of long-term relationships between actors or through the use of brand names and informative designations of origin (sparkling wine from Champagne, watches from Switzerland).
- Under conditions of **industrial coordination**, uncertainty about quality is reduced through the actions of third parties who set common norms and standards and monitor their adherence.
- Under conditions of **market coordination**, price differences are equated with quality differences. This presupposes simple and transparent quality characteristics.
- Under conditions of **civic coordination**, the various actors are committed to common values, which results in an intrinsic motivation to avoid conflict (e.g. Fair Trade coffee).

Filières of varying coherence, stability, and complexity arise depending on how forcefully a certain coordination mechanism has been imposed with respect to the product or product group in question.

The lowest degree of integration is to be expected in chains where market coordination prevails. If prices are adequate indicators of product quality, more frequent changes in partner relationships along the *filière* are to be expected, triggered, for example, by movements in relative prices due to internal (increases in productivity) or external (exchange rate fluctuations) factors.

Also in chains with industrial coordination, the transaction costs of changing partners are limited, if there are a sufficient number of correspondingly certified firms. This is also increasingly the case in international *filières,* as long as generic quality standards such as ISO 9000 or HACCP are involved. However, the result is different if complex norm systems must be first drawn up and negotiated between market partners with the involvement of third parties.

Up to now, civic coordination has been a niche phenomenon *(ethical trading)* in international trade. Because the number of market partners is thus limited, the developing value chains are generally constant over time. For example, it is the stated policy of the Fair Trade organizations to open up long-term trade perspectives for suppliers from developing countries in order to permit the organic development of existing capacities.

The need for internal coordination increases greatly under conditions of post-Fordian consumption and production patterns. However, the coordination mechanisms mentioned by Raikes / Jensen / Ponte (2000) suggest a further breakdown:

— *Trust-based coordination* is central for goods and services, whose characteristics change frequently, making a standardized quality determination for the purposes of industrial coordination difficult. This applies to many industrial supply relationships, as well as to non-traditional fresh and processed agricultural products for which it is still unclear in the early phase of the product cycle which customer preferences will prevail in the medium term.[42]

— Brand names and guaranteed designations of origin are aimed directly at the consumer. Thus, this coordination mechanism is ultimately only effective at the upper end of the value chain. The question remains how coordination is organized in the area of backward linkages from holders of trademark rights to suppliers, or how high quality standards are enforced in the regions with guaranteed designation of origin. In many cases, this will involve trust-based coordination; in others, however, also direct supervision and control, e.g. in “outgrower schemes” in the area of agriculture and forestry[43]

In important market segments, the breakdown into the four mentioned coordination mechanisms cannot be strictly maintained, and a shift of the coordination regimes takes place over time. This can be seen in the examples of ethical trading and the organic production of food, beverages, and tobacco. In an early phase of developing these market segments, the interaction along the value chains was clearly based on civic coordination: social or ecological product quality was assumed, because the participating actors felt that they were part of a community that shared the same values. With time, the coordination regime in both market segments changed significantly, due to socio-cultural, economic, and regulatory changes. On the consumer side, the once clearly delineated communities of values (ecological groups, alternative third world trade) increasingly unraveled over time; new groups of customers were added. The distribution channels for ecological and Fair Trade goods fundamentally changed, in that these groups of goods penetrated conventional supermarkets. At the same time, at the national and transnational (European Union) levels, rules were established that exactly defined the product quality “organic.” In both market segments, there are today complex evaluation and monitoring procedures to verify adherence to the agreed standards. Corresponding quality seals signal to the consumer that the verification was carried out. Thus, reduction of uncertainty corresponds much more closely to industrial coordination.

42 See Stamm, 1997, p. 147.

43 See e.g. Anonymous (undated).

3.2.3 Recent approaches to developing a general theory of governance in value chains

The distinction, introduced by Gereffi, between two different kinds of value chains, which were, however, always dominated by lead firms in the industrialized countries, has been repeatedly criticized as inadequate. Nevertheless, it was maintained in the literature until only a few years ago, with the exception of an article by Gereffi in 2001 (i.e. before the end of the "New Economy"). In that article, he analyses the effects of the internet on value chains and outlines the possibility that "infomediary-driven commodity-chains" with their own governance structures might emerge. Above all the large firms of the internet industry (e.g. AOL Time Warner) would assume a central role in bringing together the partners.[44]

In more recent work, a fundamental reconceptualization of the approach has been attempted in order to develop approaches to a "theory of the governance of value chains."[45] More work is being undertaken with the term *coordination,* without systematically employing the results of *filière* research described in Section 3.2.2. Humphrey and Schmitz (2002) emphasize that governance, in the sense of a clear dominance structure, is not necessarily a constitutive element of global value chains. In other work, it is pointed out that the power within chains must not necessarily be found in *one* firm; rather certain chains are decisively marked by *different* actors.[46]

In a 2003 study, Gereffi / Humphrey / Sturgeon extensively develop the governance approach. Governance is there seen as *a* form of value-chain coordination within a continuum between pure market relationships and hierarchy (vertical integration). Between **market** and **hierarchy,** three different forms of value chains are highlighted as relevant types:

- **Modular value chains**: These develop for products that demonstrate a modular architecture, i.e. the elements of these products are produced largely independently of each other and are assembled on the basis of standardized interfaces. The suppliers manufacture products according to the detailed instructions of the purchaser, but maintain full responsibility, e.g. for the process technologies employed.
- In **relational value chains**, there is a predominance of complex interactions between buyers and sellers that often lead to a high degree of mutual dependence. The function of such chains is often promoted through reciprocal trust or also through family and ethnic ties. These relationships can be supported through geographic proximity; however, this connection is in no way mandatory.

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44 Gereffi (2001), p. 163.

45 Gereffi / Humphrey / Sturgeon (2003).

46 Raikes, Jensen, Ponte (2000), p. 22.

— In **captive value chains**, the smaller suppliers are largely dependent on the big customers. Switching to other buyers would incur prohibitive costs. These chains are often characterized by a high degree of monitoring and control by lead firms. The term subsumes the buyer-driven and producer-driven value chains originally distinguished by Gereffi.

Three aspects essentially determine which of the mentioned coordination forms prevails in a specific value chain:

— the complexity of the transaction. Transaction costs are especially high when complex and customer-specific products are produced in different firms that must coordinate their activities;

— the possibility of coding information and knowledge and thus transferring it efficiently and without high transaction outlays;

— the existing competence level of the suppliers. The higher this is, the more likely it is that the lead firm will attempt to cut own learning costs and will delegate decisions to the upstream actors in the chain.

Depending on the particular forms of the three listed variables, different types of coordination will prevail. An overview of these correlations is presented in Table 3.

Table 3: Forms of coordination in value chains and their determinants

Form of coordination	Complexity of transactions	Possibility of codification	Competence level of suppliers
Market	Low	High	High
Modular	High	High	High
Relational	High	Low	High
Captive	High	High	Low
Hierarchy	High	Low	Low

Source: Gereffi, Humphrey, Sturgeon (2003), p. 14f.

The further development of the governance approach outlined here has two unmistakable strengths. On the one hand, the larger range of possible coordination forms permits a more appropriate *description* of the complex reality than was previously possible. On the other hand, it presents theory-led hypotheses as an *explanation* of variously structured value chains. However, equating the terms and concepts of *governance* and *coordination* (governance as a particular form of coordination) is not without its problems, given that in earlier approaches, *different* dimensions of the internal logic of value chains were captured with the terms *governance* (dominance) and *coordination* (agreement on quality parameters).

3.3 Learning and upgrading in internationally organized value chains

The interactions between the actors within the value chain, as currently defined, are not purely market based and also not unidirectional. While theoretically, the end product of firm A flows into the production of firm B as an intermediate product, not only money, but also information and knowledge, in the form of personal contacts, flow from B to A. International value chains are thus "transmission belts" that can considerably accelerate the learning processes of firms in developing countries.

One can distinguish various kinds of learning processes in international value chains:

- **Targeted partner promotion:** The lead firms of a value chain actively transfer specific knowledge and promote the competencies of suppliers as part of their value chain governance. This is done with the goal of linking the flexibility advantages of outsourcing non-core competencies with a guaranteed supply of high quality intermediate products. Also the necessary enforcement of increasingly important standards leads to learning processes along the chain.[47] For developing countries, above all learning processes in the area of backward linkages are important in this connection. But also distribution firms often receive comprehensive training from owners of brand names, which increases their competency and competitiveness (e.g. franchising).
- **Unplanned spillovers in formal partnerships:** In special cases, lead firms enter development partnerships with suppliers in developing countries and, at times, with local R & D institutions, in order, for example, to adapt international technologies to local conditions. In these cases, unplanned technological spillover effects, but also spin-off effects may result, in addition to the direct learning and upgrading processes intended.[48]
- **Demonstration effects:** Not in every case must learning effects along the value chain be intended by the lead firms. By way of demonstration effects and learning by observing, the firms at the lower end of the chain can acquire skills and knowledge that are still considered part of the core competencies of the lead firms.

In the now extensive value-chain literature, studies of technological and organizational learning along the chain are still rare. Most findings are from studies of learning processes that result from the linkages between transnational companies and SMEs in developing countries.[49] There is still very little research on the way in which learn-

47 See Kaplinsky / Readman (2001), p. 28-33, Messner (2002).

48 *Spill-overs* are understood in this context as unplanned learning effects for third parties; *spin-offs* are understood as unplanned, commercially useful results of research and development work.

49 See Altenburg (2000).

ing processes in multi-tiered value chains take place, in other words, not between the lead firm and the first-tier supplier, but between x-tier and x+1-tier suppliers. In connection with agriculture-based value chains, the transfer of knowledge to agricultural producers is also of particular importance in this context. Previous studies, especially in the context of the rapid growth of national and international retail corporations and the resulting changes in sourcing behavior, are able to point to the problem, but still say very little about the way in which the necessary increase in competency at the level of, for example, small farmers can be achieved.[50] A revival of the discussion about contract agriculture may be useful in this connection.[51]

As a result of learning processes, firms are able to improve their position in the value chain. In the value-chain literature, "upgrading" is understood as the process that enables a firm to take on more value-intensive functions in the chain, make itself harder to replace, and thus appropriate a larger share of the generated profits.

Four forms of upgrading are discussed in the value-chain literature:[52]

- process upgrading through increased efficiency and shortened lead time;
- product upgrading through the production of higher-value goods;
- functional upgrading by taking on more complex steps;
- value chain upgrading through a "lateral move" of the entire value chain into more future-oriented segments.

The possibilities for upgrading depend on various factors, primarily, the basic character of the market (buyers or producers market), the substitutability of the partners, the level of competency of corporate management, the integration of the firm in clusters that promote collective learning processes, and the efficiency of the institutional corporate environment, which enables the firm to tap assets (technological know-how, advisory services) that it cannot itself produce.

3.4 Distribution of financial returns within value chains

The concept of global value chains was developed, *inter alia,* to explain, at least in part, the unequal distribution of welfare gained through international trade (see Chapter 2). At least for important captive value chains in light industry, it can be shown that the lead firms in industrialized countries concentrate on those activities that promise the highest profit margins. These are knowledge-intensive activities with

50 See: e.g. Dolan / Humphrey (2000), Reardon / Berdegué (2002) and the country studies in the same issue of the journal, Page / Slater (2003), Lang (2003).

51 Grosh (1994), Warning / Key / Soo Hoo (2002).

52 See additional details in Hatakoy (2003), Kaplinsky / Morris (2001), p. 38.

high barriers to entry, for example, in the area of design and marketing. On the other hand, increasing competition due to low barriers to entry leads to continual pressure on income (wages, profits) at the lower end of the value chain.

The distribution of income along value chains depends on many variables. **Scarcity** and **barriers to entry** have been identified as important determining factors. Scarcity leads to rents - here defined as profit margins - that are greater than an average rate (which, ultimately, can only be determined theoretically). Kaplinsky und Morris define three different kinds of rents:[53]

- rents that are the result of targeted activity at the firm level, for example, the ability to employ specialized technologies, better qualified personnel, or specific marketing competencies;
- rents that are the result of changed interaction among the actors in the value chain and the ensuing improved synergies;
- rents that are the result of external factors, for example, asymmetrical access to scarce resources or high quality raw materials or the actions of third parties (protectionist trade policies, privileged infrastructure provision, etc.).[54]

The way in which the appropriation of rents along value chains changes over time depends, to a considerable degree, on the existence of barriers to entry at the individual stages. Actors in segments with low barriers to entry are subject to intense competition and often can only survive in the market through a low-price policy. In contrast, actors in segments with high barriers to entry can limit the competitive pressure and thus safeguard their margins. Basically, it is true that the higher the barriers to entry, the higher are also the profit margins.

The terms *scarcity* and *barriers to entry* can also conceptually capture and open up to empirical research aspects of income distribution in chains other than those of light industry and fruit trade, the main sectors studied up to now (captive value chains). For numerous value chains, it is plausible that also producers in developing countries can earn scarcity rents, at least at times. This applies, for example, to a number of agricultural products that are only produced in developing countries for reasons of climate and agricultural conditions, but are increasingly consumed in industrialized countries. Here, the number of firms that can produce high quality goods on a global scale is limited. At the same time, the marketers are dependent on high quality goods, precisely in the phase of penetrating the market with “exotic” products, when the profit margin is especially high. If the market launch succeeds, there is interest in being able to offer the products over the entire yearly cycle, so that quality producers

53 Kaplinski / Morris (2001), p. 79.

54 Access to information is also often asymmetric in the developing country context. Then, the greater negotiating power of the information rich compared to that of the information poor can also lead to the appropriation of rents by the former.

in various climatic zones must be incorporated.[55]

In both constellations, the negotiating positions of producers in the value chain are relatively good, and they can appropriate scarcity rents or a relevant share of the innovation rents, at least in the medium term. If legally a guaranteed designation of origin or appropriate marketing permanently excludes other competitors from the market, then producer groups can earn scarcity rents over the long term (e.g. coffee from Antigua / Guatemala, Darjeeling tea, Tequila, Pisco).

Also at the upper end of the value chain, where distribution of the final products in the large markets of industrialized countries occurs, specific constellations can still decisively influence the allocation of rents to various actors. Thus, although there are high barriers to entry in branding and distribution logistics, which make the entry of new actors increasingly unlikely, oligopolistic competition can also lead to a drastic reduction in the margins prevailing in a market.[56] Then the rents shift, finally, from the lead firms of the value chains to consumers.

4 Need for conceptual research and preliminary observations on the implementation of the approach in development cooperation

Looking back on the various attempts to describe and analyze vertical integration and disintegration of production and distribution chains, Anglo-Saxon research on global commodity chains or value chains is highly interesting. It has history-of-thought roots in the approaches of world-system theory[57] and, in a similar theory-led way, seeks to conceptually capture international processes of unequal development in the wake of globalization.[58] At the same time, it makes connections to concrete policy and recommendations for action for private and public actors in developing countries. However, implementing the GCC approach to further develop the set of instruments available to development cooperation has yet to be done. Some points of criticism and open questions with respect to the concept have been discussed in recent years.[59]

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55 See Stamm (1997), p. 14 f., Grote (1995).

56 According to statements by a questioned representative of one of the large German retail firms, the profit margin in this business sector presently lies around 0.5 %; other sources place it around 1 %.

57 See Hopkins / Wallerstein (1986), p. 157-170.

58 See, above all, Kaplinsky (2000a, 2000b).

59 See e.g. Henderson et al. (2001), Raikes / Jensen / Ponte (2000).

4.1 The concept of governance

For a long time, governance aspects stood at the center of the global value-chain discussion. The clear dominance of lead firms in industrialized countries with regard to important value chains has been documented. However, the long-standing dichotomy between buyer-driven and producer-driven value chains was criticized, time and again, as inadequate. The more recent approach of Gereffi / Humphrey / Sturgeon (2003) moves away from this dichotomy in favor of a broad spectrum of value chains with various forms of coordination. Supplementing captive value chains with relational and modular value chains offers a news and initially plausible way to analyze chain relationships in various sectors important to developing countries. Nevertheless, the deductive potential of the concept for empirical research has yet to be established.

If no clear governance structures can be detected in certain value chains, one must examine how the parameters required for the functioning of the chain are negotiated and coordinated. Also questions of income distribution along the chain and the feasibility of upgrading strategies are posed again under these framework conditions.

4.2 The relationship between governance, coordination, and public regulation

Another important starting point for more in-depth research is the relationships between the establishment and the governance structure or coordination form of value chains, on the one hand, and international regulative frameworks, on the other. Here several main hypotheses can be formulated:

— To the degree that the decisive product characteristics are internationally regulated and adherence to quality standards (in the wider sense of the word) is verified by third parties, the lead firms can reduce at least part of their governance or coordination efforts. This is fundamentally in their interest, for the establishment of network relationships necessary for efficient governance (or coordination) requires investments of time and money.[60] The goal of the lead firm would then be to maintain *governance* in the form of power and barriers to entry vis-à-vis third parties, but to reduce transaction costs through a shift to industrial forms of coordination.

— Changes in the form of international regulations can have decisive impacts on the composition of value chains. In this connection, Raikes / Jensen / Ponte (2000) point to the controversy between Italy and France (guaranteed designation of origin), on the one hand, and the Anglo-Saxon countries (brand-name

60 Messner (2002), p. 23.

and consumer information), on the other hand, concerning regulation of the international wine market.

4.3 The historical and institutional dimension – path dependence and the embeddedness of value chains

Henderson et al. (2001, p.11) point out that most of the literature on global commodity chains is concerned with describing and analyzing the current state of value chains with respect to governance and the input-output structure. More historically oriented research could open up enquiry into the path dependence that may arise through repeated interaction between people and social units when the chain is being established.

At the same time, the authors recommend paying more attention to the fact that internationally organized value chains not only link firms at different locations, but also the respective social and institutional contexts in which the firms are embedded. This contextualization is, however, particularly important for understanding concrete corporate strategies and the development impacts of specific chain formations. Also the question of whether the different national origins of the lead firms lead to differing governance behaviors has still not been sufficiently addressed.

4.4 Preliminary observations on the implementation of the value-chain approach in development cooperation

Up to now, no DC instruments have been systematically derived from the value chain approach, either in German-language areas or internationally. Neither is the present paper intended or able to do this. Nevertheless, some general remarks ought to be offered along with some concrete suggestions that result from those remarks:

- First of all, the value chain approach, as a heuristic device, can make clear that measures to promote economic development and employment have chances of success only if they systematically take into account the structural embeddedness of each economic activity, in other words, the question of forward and backward linkages, including the competition and dominance structures.
- As a rule, is it not promising to undertake SME promotion that bypasses the respective relevant lead firms. There is less and less room to expand markets for SMEs by forming these firms to be active “solitary actors” in international markets. Rather, a relationship to the integrating firm of the value chain must be established. In the ideal case, these can be integrated into economic development and employment promotion measures as PPP partners.
- The “value chain readiness” of firms in developing countries is strengthened and their upgrading possibilities increased, if they can access specific, knowl-

edge-based inputs where they are. Thus, corresponding institutions for training, applied research, standardization, measurement, quality control, etc. must be strengthened.

— In the framework of policy advice, DC can support the governments of developing countries in drawing up locational policies that work toward the targeted acquisition of linkage-relevant direct investments and a systematic improvement in the competitiveness of local SMEs.

— Development impacts of value chains are *also* dependent on the income distribution within the chains. Building up information systems that are also accessible to weaker links of the chain can help reduce information asymmetries and thus contribute to greater retention of income in developing countries.

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