Global Value Chains: Some Examples and Resulting Issues

Meine Pieter van Dijk
Professor entrepreneurship at Maastricht School of Management for ICIM 2008 Conference in Maastricht, The Netherland
Email: m.vandijk@unesco-ihe.org

Abstract The Bottom of the Pyramid (BOP) approach can be combined with the Global Value Chain (GVC) approach. The challenge is to develop products or services for the Bottom of the Pyramid through unconventional partnering and empowering local producers and stimulating local value creation. This requires a focus on innovation, while keeping an eye open for sustainability. The big advantage of the GVC approach is that the development of economic activities is put in a context of resources and markets, of local, regional and international economies, of individual entrepreneurs and clusters, of competing in local, regional or international markets. The Global value chain concept is not new, but the global value concept came up when the discussion of the effects of globalization started and can be considered to be more encompassing than the other terms. Products which have been studied extensively under this angle are commodities, garments and textiles, leather products and electronics. In this paper four studies concerning the value chain will be pulled together to show how GVC and BOP approaches can be combined. It is concluded that upgrading of GVCs is possible and the GVC and the BOP approach can be combined. This requires the development of business models that link small producers to the GVC. In an increasing number of countries private firms play the role of extension service and marketing institution and farmers accept to pay for their services. It is important to stimulate innovation in these value chains and all kinds of projects may be necessary to promote value chain development.

Key words Bottom of the Pyramid (BOP), Global Value Chain (GVC), Africa, Asia

1 Introduction
The Bottom of the Pyramid (BOP; Prahalad, 2007) approach can be combined with the Global Value Chain (GVC; Gerefi and Kaplynski, 2001) approach. The BOP can be studied as an important group of consumers or as a series of low income producer who would earn more if the value chain would allow them to sell their products and earn a decent margin. The challenge is to develop products or services for the Bottom of the Pyramid through unconventional partnering and empowering local producers and stimulating local value creation as part of larger value chains. This requires a focus on innovation, while keeping an eye open for sustainability.

In this paper use will be made of previous studies concerning the value chain. We will first provide a theoretical perspective and summarize some of the issues. Then the evidence of three cases will be presented, before drawing some conclusions.

2 The Global Value Chain Perspective
The global value chain concept is not new if earlier terms to describe the same phenomenon are remembered: supply chains, international production networks, commodity chains and filieres. However, the global value chain concept came up when the discussion of the effects of globalization started and can be considered to be more encompassing than the other terms. The supply chain concept for example typically takes the perspective of a western company concerned about getting raw materials and spare parts. In the same way international production networks refer to efforts to outsource and place the production of certain parts in developing countries. The commodity chains, or what the French call filieres are much older and come closest to the GVC. Gerefi and Korzeniewicz (1994) started using the term in its present meaning and Gerefi with Bair analyzed for example a blue jeans chain starting in Mexico (Bair and Gerefi, 2001). Other products which have been studied extensively under this angle are commodities, garments and textiles, leather products and electronics (Altenburg, ed., 2006).

The big advantage of the GVC approach is that the development of economic activities are put in a context of resources and markets, of local, regional and international economies, of individual entrepreneurs and clusters, and of competing in local, regional or international markets.

The novel aspect of the GVC approach is that it anticipates competition and integration in the world economy. It takes into account the competition products are involved in at a world-wide scale. An
export-orientation is assumed, even for small and medium enterprises. Globalization is considered a win win situation and not a zero sum game. However, different countries, regions and cities benefit more than others from the new opportunities (Van Dijk, 2006a).

3 Issues in the Literature on GVC

Some of the major issues in the GVC literature are, the role of lead firms, the issues of power in the chain and the resulting distributional issues (Preville, 2002), the low road (just based on cheap labour) or the high road of GVC competition (Guilano et al., 2005). Finally theory formation in GVC analysis seems to be somewhat behind. We will show in the case of bananas that the real situation in the chain often does not correspond with what the theory expects.

Theory formation has concentrated on the value chain governance situation (Humphrey and Schmitz, 2000) and not so much on how to promote competition to assure a fairer distribution of the margins. The chain governance structure can be characterized as a network-styled way of governance, arm’s length market relations or as a situation of oligopoly. Sometimes one firm plays a very important role in the chain. Market power is sometimes analyzed, but it is rarely the subject of a competition regulator. They tend to focus on individual firms and not on value chains.

The following figure shows the relations between the cluster, the GVC and the Supply Chain Management (SCM) approach. On the top of the pyramid the cluster view emerges. Through networking between the private and public sector the cluster tries to influence regional and local development to its advantage. It promotes the development of SCM and eventually becomes aware of the importance of the political and social issues at a global scale that influence the benefits in the chain and their distribution over different actors.

**Regional and Local Development Perspective**

![Diagram showing the relations between the cluster, the GVC and the SCM approach.](source)

**Figure 1 Cluster view: Private and Public Interaction**

4 Issues Concerning the Value Chains in Kenya and Uganda

The Round Table Africa (RTA) project (MSM, 2007) covers some 30 value chain studies concerning different activities and countries in the Southern African region. This helped us to identify a number of issues in different countries and value chains. It also allowed further study of some of the specificities of these value chains in the countries visited in the framework of this study: Kenya and Uganda. The following general factors influence the functioning of the value chains, but vary from country to country. They determine the environment of a value chain:

1) The macro economic and political circumstances in a country or region.
2) The attitude of the government with respect to the private sector is very important.
3) The potential of the country to produce certain products and to render specific services is important, for example each country would like to develop tourism or information technology (IT) services, but not every country has the potential.
4) The historical presence of certain chains like coffee or palm oil compared to the potential of new opportunities offered by valuable products such as flowers and IT.
5) The state of the infrastructure in a country and the distance to the coast, or the nearest port.
6) Competition from other countries or from similar products influences the development of a value chain.
7) Business confidence: according to a World Bank research Uganda is ahead of its competitors in terms of business confidence, meaning this information is available. Certainly Kenya will have to do something to re-establish confidence (World Bank, 2008).
8) The role of international actors, such as mining and other trans- or multi-national companies are important in the governance of the value chains.
9) Finally the conditions identified by Collier (2007) are important: the presence of conflict or war, being landlocked with unfriendly neighbours, having poor governance, or resources without governance structures to distribute their benefits.

5 Examples of Issues of Global Value Chains in Kenya and Uganda

Certain factors, however, are also specific for a value chain in a given country and will now be discussed, using examples from Kenya and Uganda. In box 1 the issues in the extractive industries in some other Southern African countries are presented. Given their importance agricultural value chains will be discussed first. Most research focuses on a certain product to understand the specificities of that agricultural value chain. For example maize, cashew nuts and fruit exports are studied. Currently there is a lot of attention for horticulture, bio fuels, but also cotton (in particular better quality and organic cotton), fishery, forestry and sugar. There are a number of factors in common for the agricultural value chains, besides soils and climate:

1) There is often a need for an external agency necessary to organize the farmers. Different solutions are possible. Not just government or cooperatives, but also private sector and associations. Foreign firms have mobilized the poorer farmers, for example in the case of jaitropha in Tanzania.
2) Infrastructure is important and transport opportunities for agricultural products need to be studied to find out whether poor people are also served by the current transport system.
3) Is FDI an effective way for developing these agricultural activities in a sustainable way?

Let us go deeper in the specific issues for eight agricultural value chains for which results were already available.

1) Biofuels: biofuels are a very recent chain and we have to be careful not to be overoptimistic. Many researchers are interested in a value chain study of biofuels; some take the fuels based on sugar or on natural oil products. Issues are:
   (1) What do the East African Community (EAC) and the Economic Partnership Agreements with the EU (EPA) imply for bio fuels in general and sugar in particular.
   (2) It is important to distinguish activities of the multinationals, local companies, governmental organizations and Non Governmental Organisations (NGOs) in this value chain. It seems to be a...
(3) Attention needs to be given to the distribution of the margin, the power relations and the process of vertical integration.

(4) Will it be possible to assess the effects of producing bio fuels on the poor?

(5) How to assess the factors influencing the sustainability of this value chain?

2) Cotton: Some research concerns the effects of the cotton value chain in Zimbabwe. In fact there are two types of cotton, which could be analysed as separate value chains (normal and organic cotton). He also interested in Corporate Social Responsibility (CSR) and will study the importance of introducing organic labels for cotton. Cotton suffers from important subsidies given by the US government to American cotton producers. The Chinese are undertaking efforts in Zambia to improve the quality of cotton. The Chinese and Bangladeshi are important textile producers and buy a lot of cotton in the world market, but want to control the value chain more.

3) Fishery: has a good export potential, but the activity requires a good infrastructure, which is often missing. Also cooling and transport are important. Uganda uses lake Victoria and Kenya has an important seacoast. Usually fishermen have little access to credit or other Business Development Services (BDS).

4) Fruits and vegetables: research focuses on mangoes, avocados and passion fruits comparing Uganda with Kenya. Climatological factors play a role, but also the infrastructure, where Uganda is landlocked and depends more on air traffic. Some researchers want to concentrate on the potential of vegetables like red peppers and tomatoes. We suggested looking at important issues like the role of extension services, available technology and marketing channels beside the role of the emerging Business Development Services.

5) Forestry, timber and wood: The comparison between Uganda (which has a forestry policy, but is not able to implement it strictly) and Congo and Equatorial Guinea (who squander their resources) may be interesting. Also the role of Chinese traders in this sector is important. They get the hardwood out of countries like Equatorial Guinea and then export softwood furniture from China to countries like Uganda.

6) Horticulture: a very promising and proven export activity. Important factors are the distance to the market, the availability of air transport and the quality and quantity of water. Climatological circumstances tend to vary and Ethiopia seems to outcompete Kenya and Uganda at the moment. Instead of individual farmers, companies are currently investing in this sector and accept land lease contracts for a limited period. However, they are interested in a conducive business environment for their investments.

7) Sugar: this is an interesting product and one that could benefit from liberalization of agricultural imports in Europe. Secondly sugar is important for its use as a bio fuel. It tends to be given in plantations and requires a lot of water. Sometimes smallholders are organized by the sugar refineries.

8) Tea: in this case the value chain is old, but the quality is important and a lot of competition from Asia exists. Marketing, processing and quality (taste) are some of the key issues in further development of this chain.

6 Conclusion on the Agricultural Value Chains

Given the current prices of agricultural products better insights into the functioning of these chains would help to achieve their potential. Possible hypotheses concerning the current problems in the case of the agricultural value chains are:
- Inputs are too expensive, or not available, or of the wrong type
- Extension services are too far away from the farmers, or not adapted to their needs and possibilities
- Small agricultural producers have no access to finance
- There is a lack of intermediary organisations
- These organisations hinder the development of export
- There are no adequate marketing facilities
- Private operators can play a role in providing inputs and extension services and organize the marketing.

7 Low Tech Industries

Three industrial chains are studied in the framework of the project: the construction sector, the packaging industries and textiles.
1) Construction: a study is carried out on the construction industry in Kenya and Tanzania. Specific issues in this case are the missing middle (you have big and small ones in Kenya, but not many in between). Secondly, the role of the Chinese construction firms is quite important in Africa (Van Dijk, 2007). Finally, the construction sector is often qualified as one of the most corrupt sectors, which may make studying it even more complicated.

2) Packaging industries: one RTA study focuses on packaging industries in Kenya and Tanzania, in particular we want to study high performance organisations. However, it is not easy to agree on the criteria to define them. Alternatively a representative sample can be studied and asked questions about which factors influence the performance of the industries. It would be good to try to establish some benchmarking system to put the factories in a comparative perspective. Finally packaging industries depend a lot on the level of the development of the country and the technology chosen. Kenya seems to be ahead of Tanzania.

3) Textiles: the story of the textile industry in Africa is quite specific. After the end of the Multi Fibre Agreement (MFA) in 2005 countries like China increased their exports from China directly. They did not need African subsidiaries any more. We have to take the trade policies of the EU (EPAs) and US (AGOA) into account. From the African side the role of regional trade agreements such as SADEC and the EAC is important. Very few African countries seem to be able to compete with China and Bangladesh which managed to create 3 million jobs in this sector (Collier, 2007).

8 Service Chains

Five service activities are currently studied: banking and micro finance, the ICT sector, the rise of supermarkets, tourism and utilities.

1) Banking and micro finance: the financial sector is becoming more and more important for development. Local capital markets have emerged in many developing countries, helped by structural adjustment and the resulting privatisation. One also notes the often improved macro economic stability and lower inflation which means that interest rates have gone down. Also the micro finance sector has developed in many countries and now provides new possibilities to finance development activities.

One study concerns a Micro Finance Institution (MFI) in Zambia. The research question is what would make these MFI’s sustainable in the rural areas? Her MFI is 70 percent agricultural lending and 30 percent goes to peri-urban customers. There is the classical dilemma: being financial sustainable and reaching the very poor? If donors would pull out her organization would collapse within two years. A hypothesis could concern access by women and the comparison between the traditional (the loan sharks) and the emerging micro financial sector. It would be interesting to take a successful micro finance organisation for comparison, for example K-rap in Kenya. Finally it is important to come up with a good definition of financial sustainability.

In the framework of micro finance several issues can be raised and confronted with economic theory: why micro finance and how does micro finance differ from traditional finance? How do micro finance institutions (MFIs) function and what is the impact of micro finance on the users? Why are they successful, when sustainable and what is the role of donor support?

2) The ICT sector: One study concerns the role of ICT in poverty alleviation. There are high expectations of what role ICT could achieve. Can it break the poverty gap? We have to be realistic that it often creates jobs for middle and upper class people. Secondly there is a lot of competition in the region and not every country is going to make it in this sector. Finally, the nature of IT demand may change (from design work to customer services).

3) The rise of supermarkets: The rise of the supermarkets sector in developing countries is an important phenomenon with huge implications for example for farmers, which are not very often analysed. It is necessary to look at the marketing channels of different products. Once a product has been chosen we can do the usual value chain analysis: identify the actors, study the margin, determine the power relations and keep track of the process of vertical integration.

The development of this sector in Tanzania has a lot to do with the more active role of South Africa in the region. South African investors are behind it and they use their own value chains. It is important to find out how local farmers can benefit more from these value chains.

For this study some products will be selected and the research will look at the options from the point of view of the supermarkets and the farmers. What are the arguments used by the supermarkets to go for one or another option. The hypotheses are that the development of the supermarket sector is linked to the level of development of the country and the role of foreign capital in the economy.
4) Tourism: Tourism in Uganda and Tanzania is up, while in Kenya it is down. Uganda is ahead of its competitors in terms of business confidence and also in terms of increasing numbers of tourists. However, so many issues are related to tourism that usually more focus is necessary in the research. There are too many statements made about this sector while only few topics have been researched properly. Several hypotheses have been suggested: for example concerning the dominant role of foreign operators, or the hypothesis that a well functioning national carrier is crucial for tourism development. There may be conflicting agendas between different operators in the value chain (foreign or local, transport or facility oriented, sport or nature oriented, etc.).

The question can be asked: should tourism contribute directly to poverty alleviation? There are direct and indirect effects and the government is in between with its policies. Interesting aspects are Company Social Responsibility (CSR) and community based tourism, which is an interesting niche market. The project allows a comparison of community based and other types of tourism. The Netherlands Development Organization (SNV Arusha) is involved in community tourism development programs in Tanzania and we should learn from their experience. The role of the available infrastructure is also important.

5) Utilities like water and electricity

The comparison between the functioning of electricity utilities in Uganda and Zambia is interesting because both countries took a slightly different way to deal with the issues as reflected in the hypotheses of the participant working on this sector. Uganda has unbundled and privatised part of the chain, while in Zambia the government has kept a better control over the sector. It is useful to look at this sector in terms of a value chain, because it forces us to look at alternative ways of generating electricity or supplying drinking water as well. Then we also need to do benchmarking, because otherwise the comparison bay not be very useful.

There is also a study on the health sector, which could also be considered to function as a value chain with medicines and doctors as inputs and patients as the final consumers. Issues are cost recovery and the role of NGOs. Another issue is the emphasis on preventive versus curative health care and on the role of the private and the public sector. Finally sometimes expenditure shifting has taken place were the expenditures changed from an urban hospital emphasis to a rural health centre with blood screening equipment (to prevent the spreading of AIDs) emphasis.

The study of rural-urban linkages in Kenya and Uganda is interesting and will focus on an agricultural value chain (food production) to illustrate some of the mechanisms transferring development from the urban to the rural areas. Issues are to what extent countries are aware of the potential of the flow of capital (remittances), ideas and people to and from the rural areas.

9 Conclusions: Crosscutting Issues in Value Chain Research

1) Many researchers do not use a theoretical framework in their value chain studies.
2) The role of the Business Development Support system (BDS) is important in a number of chains; in particular access to finance is often mentioned as a bottleneck.
3) Some staff working in the agricultural sector expect a lot of certification, but there are already so many bureaucratic constraints for small and medium enterprises.
4) My adagio remains: look at it as a value chain with different actors with some or a lot of power, a certain degree of integration, and look at the distribution of the margins!
5) It is important to find out how to organize the producers. Instead of cooperatives, associations or private firms can do a good job.
6) It may sometimes be useful to develop a business model, in the sense of an example how the sector could be developed.
7) The comparison between two cases or countries is important. Currently much research takes the point of view of one, usually the researchers take their own country point of view, while the learning experience may be to imagine another situation and check how that worked out.
8) Research always concerns what exists and not what could eventually come into existence!
9) Some value chains have a clear actor, some are consumer driven and some are producer driven.
10) The value chain governance structure is extremely important for achieving change.
11) Some students are really inclined to protectionism. However, the solution for most countries is not subsidies on inputs, forcing shops to buy local products or imposing higher import tariffs. Usually this is not even possible in the framework of the WTO!
12) The students tend to present their value chain in general terms instead of going into their specific research results.

10 A Global Value Chain for Software in Nanjing (China)

Previous research (Van Dijk, 2005) suggests that China can also advance in non-traditional industries, such as IT and software production, although it goes at a high price in terms of investments dedicated to this and largely financed by the government. The first effort made to develop the IT sector in Nanjing was a cluster of hardware and software selling shops and workshops developed in the inner city (Van Dijk, 2002). These shops were not very innovative and mainly catering for the local market.

We will summarize why the IT cluster on Zhujiang Road in Nanjing is currently not an innovative cluster. In a second wave of IT industries a number of software producing companies in Nanjing opted to locate in different centrally located and suburban clusters developed rapidly under favourable local, national and international conditions. An international value chain seems to be developing in the case of the software sector of Nanjing. In general China is trying to play a more important role in the IT chain as illustrated by the buying of IBM PCs by Lenovo. This investment gives the Chinese investor complete control over a whole chain in one single blow.

Hard and software producers of Nanjing are not only integrating in local value chains, they are also becoming more and more part of global value chains. This relationship goes in two directions. One through the supply chain and secondly because the world starts buying these IT products. Software producers in Nanjing buy in the global market the more sophisticated equipment they need and advanced software that is not produced in China. They offer their software, either as part of joint projects, or tailor-made for a customer. Contrary to India a number of own products with trademarks have developed in Nanjing. These may eventually also be able to conquer a place in the world market under their own trademarks. We refer in particular to the security, power and telecommunication related software. It is, however, much more difficult for the smaller software enterprises to develop and market their own trademarks.

An emerging citywide cluster in an innovate milieu?

Is Nanjing an innovative IT cluster developing as part of a global value chain? The conclusion in Van Dijk (2006b) is that this is a citywide IT cluster in the make, in particular if more coordination would be achieved between the different levels of government and when the complementarities between the different software producers are fully developed. Nanjing seems to be far enough from Shanghai and to be big enough to develop its own dynamic IT sector, using the concentration of universities and R&D institutions and its important regional market. The export of software is happening at a much slower pace than we expected. However, the software sector seemed to serve the local market in the first place. There are now indications that this is changing.

Software enterprises in Nanjing did receive real support from local government and this support was often more appropriate than what we found in the sample of small IT enterprises on Zhujiang Road. It should be noted that the local value added generated in this emerging software sector in Nanjing is probably much higher than what the shops and workshops on Zhujiang Road generate.

Four different types of relations between IT companies in the five relevant districts were found. In the first place a number of companies have units at different locations. Panda is the clearest case of an industry located in the center of the city and at one of the economic development zones. The same applies for Ericsson, Siemens and Philips. Secondly, many of the products of these firms are sold in the center, reinforcing the impression that the central location is particularly important as a kind of electronic supermarket. More interestingly a number of companies are working with the universities and R&D institutions in the center of the city. This may range from sending employees to these institutions to embarking upon joint R&D projects. Finally, some of the companies located in the economic development zones in the north or the south have chosen to participate in the two major IT projects in Nanjing city, the Gulou Science Park with the Nanjing Software Park in Pukou District and the Jiangsu Province Software Park in the Xuanwu District.

We conclude that the emerging software sector makes a dynamic contribution to the economy of Nanjing. Their local value added is high and the companies have started to export. They have developed and are developing interrelations with universities and researches centers and cooperate more often with each other. Government policies seem to be more successful in this case and the high potential of the IT sector is linked to their increasing export achievements. Even if Zhujiang Road does not have the same growth potential, it is now part of a complex citywide IT cluster and contributes to the overall
performance of this IT cluster. Clearly a community of software producers has developed and is negotiating with the local government to create the right environment for the further development of their company.

**Integrating in global value chains**

Due to changes in production systems, distribution channels and financial market and due to the spread of information technologies, local clusters in China are increasingly integrated in global value chains (GVCs).iii A distinction has been made between government governance structures and private sector cluster or sector governance structures.

Firms are under pressure to improve their performance and to increase their competitiveness. New and ever cheaper products are penetrating global markets and intensify the competition in markets where labor-intensive manufacturers were dominant. Firms in developing countries can only react by upgrading. This means making their products more efficiently and increasing the value adding activities by making more sophisticated products and using more advanced production processes.

The cluster literature suggests upgrading strategies are facilitated by local level governance and that currently global chain governance issues are particularly important. Through its participation in the World Trade Organization (WTO), Chinese firms have better opportunities to market their products globally and to source in the world market. At the same time their share of the local market may shrink due to the entrance of competitors. The real competition is not one firm against another, but rather one supply chain against another. In this competitive world differences in the political and social culture become important factors that need to be taken into account. The following figure shows the relation between the cluster, the GVC and the SCM view. On the top of the pyramid the cluster view emerges. Through networking between the private and public sector the cluster tries to influence regional and local development to its advantage.

Supply Chain Management (SCM) is also important to remain competitive. It means using techniques to improve competitiveness by improving efficiency at the level of the channel, rather than at the firm level. The real competition is not one firm against another, but rather one supply chain against another. In this competitive world differences in the political and social culture become important factors that need to be taken into account.

Further integration in international value chains is the future in this sector, but may not necessarily lead be increased exports of final products given the importance of the local market in China. Also the process of increasing exports of Chinese language software is slow and tying global value chains for IT and software is not easy. The sector may find important and enough applications in China. Local language software will be an important future market, where the local IT sector has a certain competitive advantage, just like in countries where Chinese characters are also used.

**Preville on the banana value chain**

The theoretical framework used by Preville (2002) concerns the welfare effects of trade. However, he also looks at the distribution of revenues in the banana value chain and in particular the division and distribution of the margins between the different parties in the EU banana commodity chain. Trade theory assumes that liberalization will leads, through a combination of specialization, unbundling (or vertical disintegration), technological development and competition to lower prices and better quality (for example telecommunication value chain). However, for certain products (bananas) there seems to be no competitive and contestable market!

What went wrong in the case of bananas? Why did the competitive market not develop? In the first place there is no real specialization, all bananas are considered similar. Secondly, there is limited technological progress and investments are very high. Also there is no vertical disintegration. Highly integrated companies like Fyfes and Chiquita still call the slots. To summarize, no real competition developed in this chain.

The result is that the consumers still pay too much, while the producers receive too little. Preville (2002) calculates that only 20 percent of the value added goes to the producer. The market is not really contestable! Hence he chose as the title of his book: Trade liberalization under imperfect competition, An analysis of the European Union's market for banana imports. A small number of Transnational companies (oligopoly: 60 to 70%) dominate the trade, but no anti monopoly policies have been successful so far. There are no possibilities for new entrants (for example the idea to export eco-bananas is not very successful, nor did Surinam manage to build up its own export channel. The result is that the prices of Euro bananas are artificially high and ironically bananas have become a service, rather than a commodity, given only one fifth is paid to the producers and the rest goes to all kind of service delivery companies: transport, cooling, distribution etc.
Andadari’s Study of a Wood Furniture Chain in Central Java

Andadari (2008) studies a buyer driven value chain: wood furniture clusters in Central Java. This PhD provides an excellent summary of the literature concerning clusters and value chains. The analysis is carried out at at three levels: internal factors (the enterprise level), cluster level factors and factors at the level of the value chains (externalities). Each time the relevant variables have been selected and the relation with firm performance was estimated through a production function or through direct regressions. Besides using production functions and direct regressions, a structural equations model was also estimated. The results were that at the cluster level most variables are significant, except the positive effects of clustering for small enterprises (no horizontal cooperation). For the value chain level variables: export and foreign buyers were statistically significant and hence important factors determining the development of the cluster.

What were the new insights arising from Andadari (2008)? I like to mention five:

1. Small firms don’t benefit from cluster, unless combined with foreign buyer, helping to gain access to a new market! She determined the importance of internal factors, of clustering and value chains and gave weight to the factors related to these phenomena
2. She showed that there are important differences small, medium and large firms in the cluster
3. She pointed to the role of China and Vietnam as important competitors for Indonesia
4. It became clear that there can be a rise and decline of clusters, despite being linked to the world market through GVCs

Andadari (2008) finds stagnation in the cluster and proposes a number of factors why development has not continued after 2000 and 2005, after a boom before 2000 and one between 2003 and 2005. Andadari (2008: 102) provides different reasons:

The cluster in its maturity stage, showed declining exports, which is blamed to a declining demand for Jepara furniture exports & changing consumer preferences (102), international competition and developments in the domestic wood market. Indonesian producers are facing competition from Chinese and Vietnamese producers

The question is however, is the decline really unavoidable? If an upgrading effort would have been undertaken the cluster may have become more competitive. Such a strategy would try to:

1) Use export market information & foreign partners
2) Improve existing technology
3) Introduce innovation
4) Improve the quality and design of the products
5) Use foreign capital and skills to the maximum

In the framework of the Round Tables, the challenge is to combine the Global Value Chains approach and the development of the BOP. It is important to pay attention to:

1) The selection of chains with a development potential
2) An analysis of the role of the major actors in the chain and the issue of chain governance (see Humphrey and Schmitz, 2000)
3) An analysis of the power structure in the chain (including monopolies) and the resulting distribution of the margins
4) The possibilities for upgrading the chain

12 Conclusions

The conclusion can be drawn that upgrading of GVCs is possible. The Common Fund for Commodities (CFC) in Amsterdam is one of the organizations that can play an important role in this process. In particular the Fund can help to improve chain governance and monitor important developments in the chain. Secondly the challenge is to link the GVC approach and the BOP approach. In this case we try to integrate the producers at the BOP. Not all value chains contribute directly to poverty eradication, but the revenues from chains like mining allow governments to carry out pro-poor policies. These companies are also often involved in CSR activities to assure support from the local level.

In the third place is important to develop business models to link small producers to the GVC. Different formulas are possible and some out-growing models have become quite successful.

In the fourth place, in some countries (Tanzania and Vietnam for example) private firms increasingly play the role of extension service and marketing institution and farmers accept to pay for
their services. These private firms would then take care of exporting the agricultural harvest. Also, it is also important to stimulate innovation in the value chain. Finally all kinds of projects may be necessary to achieve value chain development. They should be based on the identification of promising gaps in the value chains, on deeper knowledge of the functioning of these chains and on clear ideas about the potential for upgrading them. This discussion leads to the general issue of upgrading clusters and value chains.

Guiliano, Petrobeli and Rabellotti (2007) give an overview of possibilities for upgrading of clusters and value chains. They distinguish product, process, intra-chain and inter-chain upgrading.

Value chain analysis is clearly a very powerful instrument to analyse the potential of certain products and the distribution of the benefits in the chain. It is clear that the existing research does not answer all the issues brought up in our research. Many questions remain unanswered and require further research. For example there are few convincing studies about the issue of the sustainability of the value chain, nor empirical studies on the role of the government and other actors in the chain and the difference in this respect between for example China and a number of western countries.

Usually there is a lot of competition in the value chains and the banana chain was the only one where not enough competition existed to bring the consumer prices down. Assistance for chain development can be provide by bi- or multi-lateral organizations, or by different levels of government. Even NGOs have a role to play, in particular if one wants to promote the BOP idea through the development of value chains. Most agricultural chains have more potential in this respect than mining or certain service industry value chains. However, employment can be generated directly, like in the agricultural chains, or through increased government finance, as in the case of a capital-intensive mining chain, where the government has negotiated a fair share of the revenues. Sometimes even through CSR the employment or social welfare objectives may be achieved.

References