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Regional Value Chain Initiatives: An Opportunity for the Application of the PACA-Approach

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Table of Contents

1 Introduction

This paper contributes to the current discussion in the development community on options for value chain promotion. It specifically looks at regional value chains at the sub-national level, since this will often be a promising level of intervention for business promotion activities. Value chains are defined here as the sequence of business activities that turn raw materials into products that are sold to final customers.

This paper is organised as follows. In the subsequent part of the first section I summarise the academic discussion on clusters, value chains and networks. In Section 2 I briefly present some experiences with value chain promotion in regional development in European countries. In Section 3 I summarise two experiences with regional value chain promotion in Brazil. In Section 4 I discuss the options of using PACA to organise a regional value chain initiative.

1.1 The academic discussion on clusters, value chains and networks

Exactly twenty years ago, a book was published that had a major impact on the discussion on economic development and business development. Michael Piore and Charles Sabel, two American sociologists / economists, had investigated the determinants of successful development in Northern Italy, and they were the first to describe, in English and comprehensively, a model of industrial organisation that seemed to defy conventional wisdom. High growth and internationalisation of business in Northern Italy was, to a large extent, not based on big industrial corporations but on micro, small and medium-sized businesses. In many instances, businesses in a narrowly defined subsector, together with related subsectors, were concentrated in one town, an "industrial district". Proximity facilitated close interaction between businesses – formal business interactions, informal communication, collective action in business associations. Industrial districts became a synonym for an alternative model of internationally competitive industrial organisation, as dense, locally concentrated networks of small businesses were able to match the advantages of huge corporations in terms of economies of scale and scope.

In the past twenty years, the focus of the academic discussion on industrial development has focussed at business networks for a variety of reasons. The observation of "collective efficiency" (Schmitz 1995) of clusters of small businesses that seemed to defy the established wisdom regarding the growth and competitiveness limitations of small businesses was one of them. An different line of research originated in the investigation of innovation processes, where it was detected that spatial proximity plays a very important role in stimulating learning-by-interacting and other forms of knowledge exchange and cumulative learning (OECD 1992, Cooke 1994).

At the same time, it is important to note that for a while researchers got somewhat carried away. They were intensely investigating the phenomenon of industrial districts, in particular as it became obvious that this kind of phenomenon existed not only in Italy but also in other industrialised countries, and moreover in many developing countries. But the observation that dense local networks of companies in clusters and industrial districts were only one of many types of business networks (Storper and Harrison 1991) slipped out of sight. The focus of research for a couple of years was on local production systems, often with a bias for SMEs, with only the occasional glance at the issue of their connection with the bigger economy.

This approach was challenged by researchers who came in from a very different angle, though with a similar objective, namely deconstructing the fiction that the ideal worlds of economists were an adequate description of a reality that is not marked by atomised competition by rather by close relations between companies, often on a long-term basis. In 1994, Gereffi and Korzeniewicz published the first volume with research on global value chains (which they called “global commodity chains”). Economics textbooks suggest that international trade involves transactions between anonymous sellers and buyers. In practice, however, quite the opposite is the case. Rauch (1999) finds that what he calls “differentiated products”, i.e. products which are not standard commodities and usually involve some degree of direct interaction between producer and buyer to determine product quality and specifications, accounted for 67.1 % of world trade in 1990, up from 56.5 % in 1970. Direct interaction may take different forms; typical examples are international business networks established by ethnic minorities (e.g overseas Chinese), international networks managed by trading companies (Rauch 2001), or intra-firm trade. Cluster researchers, however, have chosen to investigate yet another variation of direct interaction, namely the one which has been addressed under the heading of “global commodity chains” (GCC; Gereffi 1996a).

The work of Gereffi is mostly based on the investigation of production networks in the garment industry and trade, and even though he introduces a distinction between buyer-driven commodity chains (e.g. in garments) and supplier-driven commodity chains (e.g. in cars), his own work is mostly on the buyer-driven apparel chain. Other authors have investigated buyer-driven chains in other industries, such as footwear (Schmitz and Knorringa 1999), horticulture (Dolan, Humphrey and Harris-Pascal 1999), coffee (Fitter and Kaplinsky 2001), and furniture (Kaplinsky and Morris, undated).

The common feature of these industries is the dominating position of buyers vis-à-vis producers in developing countries, which is due to a high degree of concentration among buyers in industrialised countries and relatively low barriers to entry for producers in developing countries.

The literature on commodity chains has some shortcomings. Most notably, the term chosen by Gereffi and others is a contradiction in terms. As Humphrey and Schmitz (2000, 10) point out, he investigates commodity chains precisely because they do involve differentiated products, i.e. they are not about standardised commodities. This is one of the reasons why they and other authors prefer the term "value chain".[1]

Another deficiency of the GCC concept is that it lumps together entirely different arrangements. What Gereffi calls producer-driven commodity chains are arrangements which are co-ordinated by transnational industrial corporations. To some extent they organise their supplies on a market basis, to some extent as relational contracting. What Gereffi calls buyer-driven commodity chains is a different arrangement altogether, and in fact are two different arrangements. First, there are companies such as Nike, which have branding, product development and organising production networks as their main rationale. Second, there are companies such as Ikea, which have selling products to final individual customers as their main rationale.

This is not to say that value chain analysis is not useful. The problem with value chain analysis so far is its too narrow focus, its bias for buyer-driven chains and its shallow theoretical foundation. But what are adequate theoretical points of reference in analysing value chains, including their interaction with local clusters? The answer is relatively simple: Both value chains and clusters are about patterns of transaction which are neither markets nor hierarchies, but networks. Powell (1990) argues that it is useful to introduce networks as a third pattern of transaction, apart from markets and networks. He suggests that networks are not an intermediate pattern to be located on a continuum somewhere between the extreme points of market and hierarchy, but rather a distinctive pattern of organising economic transactions. Storper and Harrison (1991) address networks in terms of the link between the spatial organisation of production and governance. They provide a typology which straddles the gap between cluster- and value-chain-research, as clusters are usually integrated into value chains and value chains often connect

1 This, in turn, leads to a terminological inconsistency with the earlier work by Michael Porter, who refers to intra-firm interaction as "value chain", whereas he addresses inter-firm transactions as "value system".

different clusters. They also point at the fact that clusters are not necessarily agglomerations of SMEs, thus anticipating the findings of Markusen (1996).

What about the theoretical perspective at networks? From an economic perspective, the rationale of networks is based on the existence of transaction costs and principal-agent problems (Richter & Furubotn 1996). Market-based transactions can involve high transaction costs if products are not standardised, contract enforcement is unpredictable, costly and/or time intensive, or for other reasons. Hierarchies may involve high costs of supervision due to the agency problem. Companies prefer network-based relationships in those cases where they appear as more efficient than market-based transactions or hierarchies. Typical examples are long-term relationships with suppliers of differentiated products which are more efficient than market-based transactions (because the reliability and competence of the supplier is known) and hierarchy (because the supplier is specialised in what he does and thus more efficient). Stable value chains emerge in situations where buyers find it inefficient to draw on markets, in particular due to the necessity to have some control over the product characteristics (due to customer preferences, or the technical difficulties in customising a product, or legal requirements such as phyto-sanitary standards, or issues such as labour, environmental or other standards which are difficult to supervise and enforce), and where buyers also find it inefficient to organise the whole operation as a hierarchy, i.e. a vertically integrated firm. Chains do not necessarily straddle borders, but they are the more globalised the bigger the difference is between chain elements in terms of cost composition, economics of scale and technological sophistication.

From a governance perspective, networks are an alternative to hierarchy in those cases where resources are distributed among different actors so that decision-making is based on negotiation rather than command, even though there are usually power asymmetries. This has been thoroughly investigated with respect to governmental policies which rely on the know-how and other resources, as well as the voluntary co-operation, of non-governmental actors (Mayntz & Scharpf 1995, Messner 1997). The categories which have been formulated in the conceptual work on policy networks can as well be applied to business networks which are based on negotiation (Messner & Meyer-Stamer 2000).

Where does all this leave us? The main point is that academia has started to describe the micro-economy in a more realistic way. Most of it is not about anonymous market transactions but rather involves relatively stable arrangements between sellers and buyers. The value chain perspective also solves some of the problems of the sector perspective at industry and services, which tends to lump together companies that are completely unconnected in the real world. In a given region, you may have a chemical sector that consists of plastic product manufacturers, paint producers, pharmaceutical companies and fertiliser companies; lumping them together under one heading is pointless, especially from a development / promotion perspective. A value chain perspective, on the other hand, directs our perspective at groups of companies from very different sectors which interact closely. For instance, in the ceramic tile value chain product and process innovation is driven by companies from the ceramics sector (the tile sector), the chemical industry (the glaze manufacturers), and the machinery sector (capital goods) (Meyer-Stamer, Maggi & Seibel 2001). A value chain perspective captures real economic structures and is thus more useful in guiding development interventions than a sectoral perspective.[2]

1.2 Why regional value chain initiatives?

What about the territorial reach of clusters and value chains? In the academic discussion, clusters used to be addressed from a territorial angle, whereas the commodity chain/value chain discussion has emerged from the International Political Economy school of thought. Whereas the cluster discussion has in recent years moved away from a strict territorial focus (e.g. Raines 2000), the academic value chain discussion primarily looks at international networks of brand owners, designers, producers and distributors. Does this mean that value chains only exist at the level of the world economy? Of course not – they exist at various levels of aggregation, from the local level (where a cluster may involve most elements of a value chain, like in the ceramic tile industry), to the regional level, the national level and the supranational level. As we will see in the next sections, development organisations have realised this fact a while ago.

But why do we want to run regional value chain initiatives in the first place? What is the use of subnational regional value chain initiatives at a time when everybody talks about global value chains?

The fundamental justification for value chain initiatives is similar to the one for cluster, linkages and other network initiatives: For a promotion agency, it is more efficient to work with groups of companies rather than individual companies. Working with groups can lead to much more significant results. Based on this view, there are two different lines of reasoning.

2 The sectoral perspective must not be confused with the subsector perspective, which is not much different from the value chain perspective (e.g. Lusby and Panlibuton 2002).

The first one applies to local / regional subsectors that have a potential to be involved in global value chains, but which have not appeared on the radar screen of global buyers so far. In this situation, the purpose of a regional value chain initiative is to promote the upgrading of companies, moving towards internationally acceptable productivity and quality standards so that over time the regional value chain can be connected to a global value chain (regarding the trade-offs this involves see Meyer-Stamer 2003a).

The second line of reasoning applies to regional value chains that produce goods or services that are primarily sold on the local or regional market and that have little or no potential of being exported. Even in the case of the highly competitive and internationally integrated U.S. economy, this segment accounts for two thirds of national employment (Porter 2003, 560). The purpose of value chain initiatives in this segment is to improve productivity and quality. For instance, in its value chain work with the construction industry, the Competir-project (see below) addressed the issue of waste of materials, which is a massive problem on Brazilian construction sites. It causes an increase in housing prices, thus wasting a part of the income of house and apartment buyers who otherwise would have spent this money on other products.

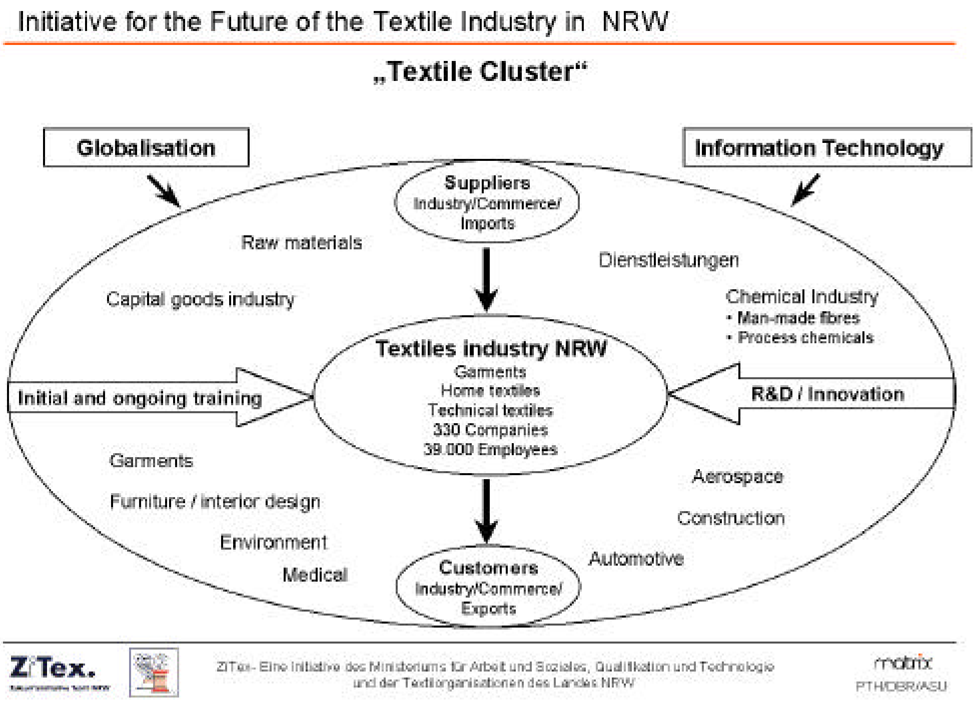
In other words, regional value chain initiatives make sense both in industries with an export potential and in industries that sell locally. Ironically, they are only difficult to realise in industries that are already integrated into global value chains and where a global lead firm discourages local upgrading initiatives as they might compromise their power position (Meyer-Stamer 2003a).

2 Value chains in economic development initiatives in Europe

In the European practice, value chain initiatives are characterised by two features. First, they tend to address regional value chains, not global value chains. Second, and closely linked to this, the border between cluster and value chain promotion becomes blurred. Let us look at two examples to illustrate this point.

1. In North Rhine-Westphalia, the state government's Initiative for the Future of the Textile Industry has evolved from a sectoral approach towards a cluster initiative. In fact, the consultancy firm which is organising the initiative is today explicitly presenting it as a cluster initiative (Figure 1).

Figure 1



Source: ZITEX.

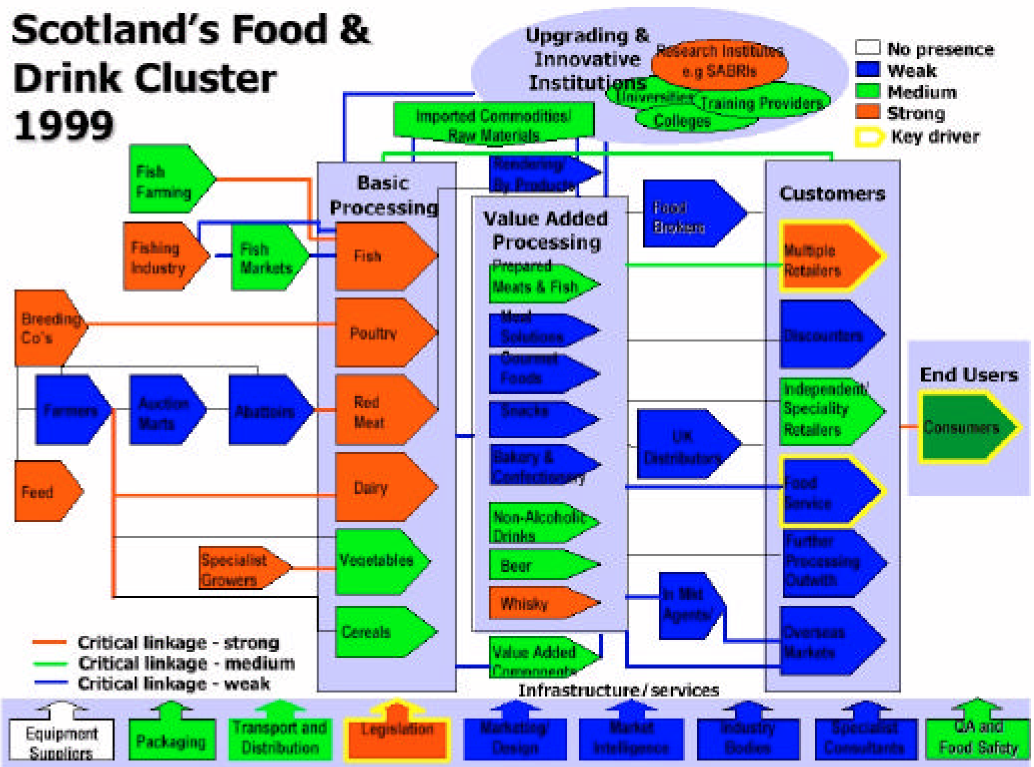
But this initiative does not have a specific territorial focus (apart from being a state-level initiative), which distinguishes it from the usual pattern of cluster initiatives. It is organised along the value chain, with suppliers (but not so much customers) being explicitly involved. In particular, the initiative has fostered a strong interaction between the specialised capital goods industry and local textile manufacturers. Moreover, it addresses technological issues. The initiative tries to boost innovation in the textiles industry by organising interaction with related industries which traditionally were excluded from sectoral initiatives. Examples would be technical fibres for the construction and automotive industry. In this way, the initiative goes far beyond conventional cluster approaches and takes the concept of value chain promotion to a new level, trying to facilitate the creation of a completely new value chain around the concept of technical textiles.

2. At the same time, in the late 1990s, Scottish Enterprise launched the Food & Drink Cluster Initiative (http://www.scottishfoodanddrink.com). The Scottish Enterprise Network originally defined clusters as a noun – ‘*a group of industries and organisations linked by a common goal or practice*’. Worthy of note here is the lack of a geographic element. By default, Scottish Enterprise assumes its clusters are national models. Regional concentrations are usually referred to as ‘growth nodes’ within the overall cluster. It is left

to the cluster participants to define their own geographic boundaries (if any). More recently, Scottish Enterprise has changed to using the term 'cluster' has as a *verb* – an economic development process – to describe their approach to a particular range of interventions.

Food & Drink was an existing, mature cluster. The cluster team began by mapping the cluster; the core and related industries (Figure 2), and the linkages between actors. What is notable about this mapping is the analytic perspective addressing a value chain. The cluster map is not only very different from conventional, territory-based network visualisation exercises common in other cluster studies. It actually takes the mapping of a value chain a step further since, rather than describing the technical flow of activities, it outlines the different stages of "basic processing" and "value-added processing", as well as the different types of customers, and depicts the relative competitiveness and relevance of the elements of the value chain.

Figure 2



Source: McKenzie, Meyer-Stamer & Noll (2002)

In the case of the Food & Drink cluster, the interventions lay, in the main, around value-chain integration (including skills development and logistics). Various Local Enterprise Companies were then actively encouraged by the core (national) team to lead on these interventions, building on existing local relationships and skills and leveraging these at national level. The core (national) team provided a single framework and took a co-ordinating role.

What is the essence of these two examples? They show us how economic development agencies, looking for innovative approaches, use concepts such as clusters and value chains in a creative way which is quite the opposite of academic efforts to come up with clear definitions and distinctions. For economic development practitioners, there is strong evidence that too limited territorial initiatives, such as conventional cluster development concepts, involve many risks and may have an unfavourable cost/benefit-ratio. Addressing a value chain as the objective of an intervention introduces a perspective which is immediately plausible to industry players, as it reflects their everyday pattern of transactions. A value chain initiative may thus be a more plausible promotion approach from a business perspective. Conducting this at a regional level not only coincides with the mandate of development organisations but also has practical implications, since a value chain development initiative is simply impractical if the players that are to be addressed are distributed across too large a space.

3 Regional value chain promotion: Examples from Brazil

Not only development agencies like Scottish Enterprise are addressing regional value chains. International technical assistance agencies like GTZ have recently been launching projects that aimed at promoting value chains. Moreover, local actors themselves have understood the potential of running a value chain initiative.

3.1 Competir's regional value chain initiative

In the Northeast of Brazil, the Competir project, a joint initiative of the SME promotion organisation SEBRAE, the vocational training provider SENAI and the German technical assistance organisation GTZ, has launched a regional value chain promotion project in late 2000.[3] The first step consisted in the selection of value chains, based on consultation between the involved organisations and the application of six criteria: involvement of SMEs in the chain, the chain's relevance for employment, the involvement of women in

3 This section is based on information obtained during the interaction between the author and Competir project staff during advisory activities in 2001/2002.

the chain, the existence of comparative advantages and natural resources, the availability of technical know-how, and the existence of a minimum competitive advantage with a potential for expansion (Feldmann 2003). They decided to work with four value chains: construction, milk and cheese, textiles and garments, leather and leather products. The idea was to start working with each of these value chains in each of the nine states included in the project, which altogether would have amounted to 36 value chain initiatives. The plan was to address the integration of value chains across state boundaries at a later stage. This means looking at 36 specific value chains – and hoping that a “pull” effect due to upgraded value chains leads to a significant intervention in terms of outreach.

The second step was to commission analytical studies on each of the 36 value chains, the majority of which had been completed by late 2001. As the terms of reference for the studies were somewhat vague, since Competir did not yet have a thorough understanding of the value chain issue and could not provide an elaborate value chain diagnosis methodology, the studies where very diverse in terms of depth and quality of results.

The third step was the design of a workshop format to engage representatives from the selected value chains, and the training of local moderators to conduct these workshops. The first launch workshops were conducted in early 2002, and the workshop format was adjusted based on the experiences gained there and then.

The fourth step was an analytical effort by project staff, combining the chain mapping studies and the results of the workshops and creating a deepened understanding of the chains. For this purpose, the following matrix was used (Feldmann 2003):

Elements of the value chain	Central elements	Geographical location	Problems, bottlenecks	Strong points	Actors and opportunities for action
Producers					
Suppliers					
Logistics					
Consumers					
Support institutions					
Know-how					
Basic legal framework					

The fifth step involved the organisation of a new series of workshops for the value chains in the various states. For these workshops, a format was developed that involved four steps:

1. verifying the perception of the value chains developed so far,

2. identify critical elements and important bottlenecks in each chain,

3. identification of practical activities to deal with bottlenecks, giving priority to actions to be implemented immediately and showing the potential to create results within four to six months,[4]

4. creation of a steering group, consisting of key participants from the workshop, preferably business-people, to monitor the progress of practical activities.

This only works if the participants in the steering group are motivated – which to a large extent depends on actions that can create quick results. A further critical point is how to convince business people to cooperate who are involved in day to day struggles with each other. How to distribute benefits resulting from actions? It requires good moderation and mediation skills as powerful and competent actors might also misuse such a committee.

The workshop format was designed in a way that permitted going through the four steps within four to six hours, thus taking into account the time constraints of many relevant actors, in particular business people. An optimum number of participants, it turned out, was around 25 to 30 (Feldmann 2003).

What has been the practical outcome of these activities? Feldmann (2003) presents examples from the construction industry. One of the most frequently mentioned problems involved the interaction between architects and construction companies. The construction companies complained that the blueprints provided by the architects are often hard to understand and impractical or entirely unrealistic. The architects accused the construction companies of ignoring their blueprints, not paying adequately and not clearly articulating their requests. The result of the value chain initiative was the creation of a working group consisting of architects and construction companies that tries to sort out this problem.

Whereas in the construction sector the concept of regional value chains fit nicely, since quite a number of relevant elements of the chain are located in the same state, things turned out different in the textiles and garments value chain. This value chain connects often clearly defined clusters which are located in different parts of the country, so that the idea of having a series of meetings to get actors from various stages of the value chain to interact is

4 In other words: prioritising activities in the same way we would do it in a PACA Exercise.

defeated by the cost and time involved in travelling over long distances. For this reason, the Competir project decided, pragmatically, to switch to a cluster approach in this sector, initially addressing two local garment clusters in the interior of the states of Ceará and Sergipe, respectively. The basic format of the approach, however, was based on the lessons learnt in the value chain initiatives: organising rapid diagnostic workshops with local players which quickly led into practical activities.

What have been the main lessons learnt?

- In certain subsectors a regional value chain approach makes sense, in others it doesn't. However, deciding whether or not a value chain initiative makes sense is frequently less obvious than one might expect. The example of the textiles and garments value chain seems to be straightforward enough. However, in other cases the value chain initiatives did not take off despite optimistic expectations. For instance, in the case of the milk and cheese value chain a value chain initiative seemed to make perfect sense, since there were clearly discernable regional chains with at least one "typical regional" product. Several factors conspired to block this initiative nevertheless, the huge competency differentials in the chain (between many very incompetent producers and a few very competent producers) being one, the existence of a few powerful actors (big dairy companies) being another one.

- This leads to the formulation of criteria that possibly can be applied in the early selection phase of a value chain initiative:

  – Look for resource-based sectors where processing is based on mature, not too complex off-the-shelf technology and where the minimum efficient size of processing companies is not too large. It is important to note that the minimum efficient size must not only be addressed from a production technology angle, but also in terms of distribution, access to shelf-space, and the ability to build a brand.

  – Try to understand the power structure in the regional value chain. If there are one or few very powerful actors, either team up with them or seriously consider not to address this chain. There is no point in trying to run a value chain initiative against the passive or active resistance of a powerful player in that chain. At the same time, if you can get the buy-in of a strategically positioned powerful player you can expect quick wins.

  – Look at the level of formality along the chain. Value chain initiatives are unlikely to succeed if many or most of the companies along the chain are semi-formal or informal (in the case of Brazil this mostly means: evade taxes and social security contributions). They are also unlikely to succeed if only few but critical chain elements are operating informally. This seemed to be a big problem in the leather value chain, where local tanneries apparently provide their output to informal final processors elsewhere in the country, whereas local leather and shoe manufacturers are often formal operations and get their leather from formally operating tanneries elsewhere in the country.

– Look for subregional value chains in order to cope with logistics issues regarding the organisation of workshops.

– Focus at those value chains where you identify motivated stakeholders.

- Regarding practical activities to improve the competitiveness of regional value chains, four types of options tend to come up:

  – activities within elements of the chain: The diagnosis of the chain will often identify individual weak links.

  – activities at the interface between two elements, like the architects / builders example mentioned above. In this case, each element is doing more or less fine but the lack of alignment and exchange between them is creating serious problems. In systems theory jargon, is the typical system/environment problem, where optimisation efforts focus at the system itself and neglect the functioning conditions of the environment.

  – activities spanning a number of elements of the chain, such as an effort to upgrade the value chain based on goat leather, which is addressing goat producers, abattoirs, tanneries and final product manufacturers.

  – activities addressing framework conditions, such as in the case of milk where clumsy implementation of health standards creates barriers to entry.

- From a practical-methodological perspective, it is crucial to use skilled moderators and well-defined workshop formats to engage businesspeople, who suffer from serious time constraints and easily drop out of joint activities if they perceive a workshop they attend to be a useless talk-shop. This lesson not only points at the importance of intense moderation training, including performance assessment and follow-up training, and the detailed design of workshop formats. It also involves the necessity to create standardised presentations to present the purpose of workshops, and it goes down to the creation of a standardised, consistent wording. This not only increases the probability of success by an order of magnitude. It also contributes to a consistent knowledge management, which in turn makes it possible to replicate this approach with other value chains and in other regions.

3.2 Management of a regional agricultural value chain in Santa Catarina

Mafra is a Brazilian city of about 50,000 inhabitants which is located at the border between Santa Catarina (SC) and Paraná, where it has a twin city, Rio Negro with about 35,000 inhabitants. Even though only a third of Mafra's population is living outside the boundaries of the urban perimeter, it is basically a rural place. Mafra's industry is resource-based – sawmills, furniture and other wood products, brick manufacturing; the only apparently "modern" company is a ceramic tile manufacturer. Mafra has got a somewhat stronger profile in services (especially wholesale and retail trade, medical services, and education) as it is the center of a micro-region encompassing a number of smaller towns. Per-capita-GDP was about R$ 4,800 in 1995 (at that time, the Real had about at 1:1 parity with the Dollar), i.e. 20 % below the average of SC, which ranks seventh among Brazilian states.

Local economic promotion activities started in the mid-1990s. In 1996 local government succeeded in attracting a factory of an U.S.-company which will employ 85 employees at its final stage. There were no subsequent investments, but this experience created a consciousness regarding the possibilities of local activities. In 1997, a new mayor entered office who picked the former president of the local chamber (ACIM) as secretary for economic development. Both participated in 1997 in a seminar on concepts and instruments of local economic promotion organized by Fundação Empreender (FE). In 1998, ACI and city government invited FE to support the elaboration of an economic development strategy, called "Projeto Marketing Municipal". The proposal of the FE consultants was to conduct a quick appraisal of competitive advantages and disadvantages. This exercise launched a process which led to the creation of the Participatory Appraisal of Competitive Advantage (PACA) methodology (for an overview of PACA see Meyer-Stamer 2003c).

The appraisal exercise was conducted in September 1998 by two FE consultants, one of them being the author or this paper, accompanied by the executive secretary of ACIM. The main findings were

- relatively weak structure of industry, overall mediocre competitiveness of industrial companies, but some potential in trade and agriculture;

- an adequate structure of support institutions, especially regarding education and vocational training, a highly competent agricultural extension NGO (BNAF), two credit cooperatives for agricultural development with some potential, and a very high credibility of ACIM;

- a critical financial condition of the city government;

- a strong commitment of local leaders and organizations to get involved in economic promotion as a result of a sense of a looming crisis, plus a strong commitment to collaboration between organizations and associations.

Our proposals included conceptual issues and concrete suggestions. Regarding conceptual proposals, we tried to convince local actors that the main approach to local economic development should be to mobilise endogenous potentials. We also emphasised the message that economic promotion should be about creating a difference, a specific local profile which cannot easily be replicated elsewhere, a profile which creates a localised competitive advantage. Concrete suggestions included connecting local agriculture with local trade.

Activities in this respect built on the existing initiatives of BNAF, a local organisation which had operated for two years and so far had gone more or less unnoticed by other local actors. The work format of BNAF was based on a new concept of associativism. BNAF encouraged smallholders to form associations with about ten members, each initially focusing on just one product. Each association is coached by BNAF's consultants. Each smallholder who wants to enter an association is obliged to pass through a week of training at EPAGRI, a state government agricultural research and advisory agency. At the beginning, the main product was tomatoes which were grown in simple, cheap tunnels (greenhouses consisting of a wooden frame covered with robust transparent plastic). Subsequently, new products were introduced, including some cultures for greenhouse cultivation (zucchini, cucumbers, melons, and strawberries) as well as other processed products (milk, honey, beans, chicken and rabbits). BNAF received a small amount of government subsidies and was otherwise reliant on financial support from its target group, i.e. families owning small properties. It was scanning world-wide experiences in agricultural innovation; BNAF consultants had paid visits to Israel, France, China, and Mexico to get first-hand information on new production techniques. In September 1999, BNAF gave assistance to some 300 smallholders, with more families waiting to be integrated.

The effect of the PACA Exercise was, most of all, to connect BNAF to the local Business Chamber, ACIM. The cooperation between BNAF and ACIM involved two aspects: linking BNAF and its clientele with local trade, and conflict resolution. Linking local small producers with local trade was no easy task. Local supermarkets had tried to purchase vegetables from local producers before, but this had failed due to unreliable and unethical behaviour of the producers. Ever since local producers had sold their products to wholesale traders in Curitiba (two hours away from Mafra), and supermarkets had purchased fruit and vegetable there. Convincing the supermarket owners to give it another try with local producers, this time with the mediation of ACIM and BNAF, involved intense persuasion by the executive secretary of ACIM. Initially, it involved only tomatoes (with everybody being better off – producer prices were 31 % higher, purchasing prices for supermarkets 22 % lower, and the consumer price dropped by 15 %), subsequently being expanded to other products. Local marketing of milk involved one association investing in equipment to sterilise and package the milk. Producer prices rose from R$ 0,16 to R$ 0,41, with the producers still selling it at a much lower price than large companies. It happened thus that the association won a bid to supply local schools against large competitors like Parmalat.

Where is the value chain aspect in this story? Basically, BNAF managed the entire value chain:

- It conducted systematic market research, identifying promising products which fit with local soil and climate conditions and provided robust profit margins.
- It established contacts with potential buyers and organised transport and distribution.
- It organised training for local producers.
- It negotiated input prices with suppliers, and it organised the distribution of inputs.
- Over time, BNAF got involved in processing of products (packaging honey, preparing and packing mixed pickles, etc.).
- BNAF also cooperated with two local credit cooperatives which provided credit to BNAF-affiliated producers, where a recommendation by BNAF implied rapid credit disbursal.

An unexpected effect of the link between producers and trade, and of the trust which quickly built between BNAF and ACIM, was that local trade companies started to deposit money at one of the local credit cooperatives. Initially, this involved an amount of about R$ 600,000, which by September 1999 had grown to more than R$ 4 million and then also involved the other credit cooperative. While in September 1998 BNAF had various projects in the drawer and was desperately, and with little success, looking for funds, today the situation has reversed – BNAF has to work hard to put all the money at productive use.

Conflict resolution by ACIM at that stage involved two cases which might have blown the whole experience. First, BNAF had come up with the idea to organise joint purchases of all the affiliated smallholders. It turned out that the best way of organising this was to organise an open auction, with the suppliers bidding against each other until the lowest acceptable price for various inputs was reached. The suppliers reacted by asking ACIM for support in forming a cartel to deal with BNAF. It took the executive secretary of ACIM several meetings to dissuade the suppliers from proceeding with this scheme, mainly by pointing out the fact that local agriculture is going through a period of crisis (since traditional cultures are becoming less productive and earning lower prices, while interest rates have been raised to extremely high levels during the last three years), and that it was in the long-term interest of suppliers to strengthen local producers.

Second, apparently one of the representatives of a large milk producer bribed a health inspector of the city government to classify the milk produced by the association as hazardous. The inspector examined the association's installations at ten o'clock in the morning, and by 3 p.m. came up with the incriminating exam. The manipulation was immediately obvious since the next laboratory is located in Curitiba; it was technically impossible to have an exam in hands within such short time. The association alerted ACIM, which immediately called for a meeting. It was decided to send a sample to Curitiba for an examination, and ACIM was to call the local newspapers immediately to alert them of the inspector's fraud. This worked just fine – the real exam arrived the next day, showing that the milk was just fine; the newspapers published this result, thus reinforcing the standing of the local producer; and ACIM successfully lobbied with the mayor to have the corrupt inspector fired.

How did this experience evolve in subsequent years? By late 2003, there were more than 1,000 families involved in activities with ARCO, the organisation that succeeded BNAF. National government's financial support for BNAF had been discontinued in June 2001. BNAF was effectively disbanded, and the whole scheme was in limbo for a couple of months. The solution was facilitated by the former executive secretary of the local BNAF office, Wilson Kuiava, and the former executive secretary of the local Business Chamber, Ilgo Welp. Wilson accepted the post of a municipal secretary of agriculture. Ilgo, who had left the chamber after a new, very narrow-minded president had been elected, joined Wilson in the quest to mobilise resources for a new agency, which was conceived in January 2002, founded in May 2002 and became operational in September 2002. ARCO stands for Regional Commercialisation Agency, i.e. it is meant to serve the region, not just Mafra. Apart from that, ARCO applies the same model as BNAF. ARCO has a staff of five people – a director (Ilgo), a financial manager, a commercial manager and two extension officers. Apart from that, it draws on the resources of the agricultural extension service and research stations of the state of Santa Catarina. Initially, it was funded by the National Agency for Land Reform. This has been supplemented with funds from the National Programme to Promote Family Agriculture. Currently, there is a strong trend of ARCO being funded by management fees of major projects, like the construction of a abattoir for small animals.

What are the main success factors of the work of BNAF / ARCO?

1. It follows a clear business logic. Even though it is a non-profit organisation, it is driven by market opportunities. ARCO has a long-term vision (upgrading of family agriculture, creating a rural middle-class), but it does not have a strategic plan. It is, however, acting strategically in the sense that it analyses arising opportunities and threats, and prepares plans to deal with them as they materialise. For instance, in late 2003 it was drafting stratagems for the foreseeable collapse of the largest local input supplier.

2. It goes after opportunities. For instance, in late 2003, ARCO was busy trying to find out how to respond to a demand for honey which came, surprisingly, from Denmark.

3. Before any new product is introduced, systematic market research – both at the supply- and demand-side – is conducted. Only those products are introduced where demand exceeds supply, and where margins are so high that even in the event of a downturn in the market production stays viable. Right now, ARCO is waiting for the results of research on the regional cheese market, which will define the cheese products to be developed in 2004.

4. It has a clear understanding of the necessity to manage the entire value chain – from purchasing inputs to distribution to customers. It negotiates collective purchasing of inputs, and it negotiates with customers and organises distribution.

5. ARCO, like BNAF before, is involved in intense networking, i.e. a systematic effort to mobilise whatever resources may be available to further its goals, and to build alliances with likeminded organisations to increase visibility and bargaining power. This includes intense interaction with health and sanitation inspection bodies, who otherwise might turn into a threat.

3.3 Issues in regional value chain initiatives

On top of the lessons learnt and the critical success factors mentioned before, it is useful to consider some more issues in the execution of regional value chain initiatives.

- The organisers of a value chain initiative had better assume that the relationship between companies in the chain is difficult. We often observe that, along the value chain, everybody is busy blaming everybody else for the lack of competitiveness; the "stupid cow syndrome" presented by Fairbanks and Lindsay (1997) is a typical example in this respect. So we will often find that the relationships among companies along a given value chain are characterised by aversion, distrust and perhaps even open hostility. Against this background, it is even more important that an initiative leads to quick wins, since this is the only possibility of breaking with destructive, distrustful behaviour.

- One of the crucial features of the value chain approach is to look at things from the perspective of the final consumer. This involves a change in mindset not only for businesses inside the value chain but also for business support and promotion organisations. For groups of businesses, the value chain approach is the equivalent to the business process reengineering approach within a company, which also aimed at overcoming fragmentation and mutual blaming and substituting this with a shared orientation at the customer. For business support and promotion organisations, the value chain approach involves a change in practice, moving from support measures that are based on an analysis of internal deficiencies of companies towards support measures that take markets and customers as a point of departure.

- A value chain initiative is not necessarily about win-win-options for everybody in the chain. In the case of Mafra, the inputs suppliers were clearly on the losing end, and it took a lot of effort to persuade them to live with this, basically by pointing out the long-term benefits of the value chain initiative, which is leading to strong growth that also benefits the suppliers as increased scale of supplies compensates for lower unit prices.

4 PACA and regional value chain initiatives

Using PACA in value chain initiatives is not just an idea. The two examples from Brazil indicate that PACA has already played a role in value chain work. Some PACA tools were successfully used by Competir, and a PACA Exercise played a crucial role in amplifying and leveraging BNAF's work in Mafra. Yet the usual focus of PACA is a local economy, not a value chain, and the methodology is primarily geared in this direction. Accordingly, using PACA systematically in regional value chain initiatives will involve a certain amount of adaptation and development of additional tools.

4.1 Why use PACA in regional value chain initiatives?

The reasons to use PACA in regional value chain initiatives have already appeared implicitly in the section on the Competir project:

- It is not necessarily useful to contract costly external consultants or researcher to conduct mappings and analyses of regional value chains. A PACA Exercise can render the necessary results much quicker and at a lower cost. Moreover, it would already involve, mobilise and motivate those players who subsequently would champion practical activities in a given value chain initiative.

- Regional value chain initiatives are up against a variety of obstacles, such as lack of trust between companies and time constraints of business people. For that reason, PACA principles like swift action for quick wins are crucial to convince the players in a value chain that the initiative makes sense.

- PACA is a proven method when it comes to connecting companies, supporting institutions and government. It overcomes communication barriers between these different sectors. Especially for government it is often difficult to project commitment and competence to the private sector. PACA can be very useful in overcoming this perception.

- PACA is a methodology that is not only useful to launch a development initiative but also to assess and refocus ongoing initiatives. It can be used both to drive and to monitor and evaluate territorial development initiatives. It thus solves the difficult challenge of introducing monitoring and evaluation into a value chain initiative.

4.2 How use PACA in regional value chain initiatives?

A PACA in a regional value chain initiative has to apply general PACA principles:

- limited diagnostic effort: Don't have consultants or researcher compile huge reports. Limit research to the minimum necessary, in particular by assessing reports which already exist because some donor or development organisation had money to burn. Also assess the research on value chains in the same industry in other regions and countries; the Internet offers a huge number of them. Conduct your own field research in the sense of action-research.

- participatory, action-oriented diagnostic: Use Mini-workshops and interviews with players from your value chain to understand its structure and the opportunities and challenges it is facing. Document any proposals that come out of the Mini-workshops, including noting the people who made them and who may be willing to champion their implementation.

- quick wins: When it comes to defining proposals for practical activities, don't address the biggest challenge – you won't be able to address it with players who don't trust each other and who are sceptical about the whole process. Rather go for proposals which promise quick wins, i.e. solve problems that are really bothering businesses in their day-to-day operations and that yet are not too difficult to sort out. Quick here means: it should be possible to have a visible result within no more than a few months.

The main justification for a value chain initiative is the fact that one element of the chain (or several of them) compromises the competitiveness of the entire chain. Adapting PACA for value chain work probably will mean to move from an emphasis on opportunities to a recognition of the existence of bottlenecks – many of which, however, can probably give rise to business opportunities.

The practical organisation of a the first phase of a value chain initiative might look as follows:

1. identify relevant players and possible champions inside the value chain;

2. invite a small number of them (no more than ten) to conduct an exploratory workshop to get a better understanding of the players and issues involved in the value chain;

3. launch the diagnostic effort with a kick-off workshop that would mostly address supporting institutions, associations and government institutions, not individual businesses;

4. have two to three weeks of fieldwork, doing Mini-workshops (mostly using standard PACA formats) and interviews;

5. organise the Presentation Event and the Way-forward Workshop shoulder to shoulder to minimise travel effort of participants and to move to practical action swiftly.

To what extent is it necessary to develop additional Mini-workshop formats? Some of the standard PACA Mini-workshop formats, such as the Five Forces format and the Interaction Matrix Mini-workshop, obviously are useful for a value chain PACA Exercise. On top of that, there is the opportunity to introduce additional Mini-workshop formats the specifically look into value chain issues. For instance, the framework used by the Scottish Enterprise Food & Drink initiative can easily be translated into a workshop for-

Figure 3: An example of a workshop-based value chain mapping

mat, the outcome of which would probably look similar to Figure 3 (which was the outcome of a tourism value chain mapping workshop in a region in South Africa).

To what extent do you need a clear, coherent and consistent definition of value chains to conduct a value chain PACA? Whereas the definition is important for academic work, especially if it involves statistical analysis, it is only of limited relevance for action-oriented value chain initiatives. Players from within a value chain tend to have an implicit understanding of the structure of the value chain they are operating in. The mapping of the value chain they will provide is the one which is relevant for your initiative.

What would be the main challenges involved in a value chain PACA?

First, in a value chain PACA, it is advisable to assume the validity of the six obstacles to cluster initiatives I have outlined elsewhere (Meyer-Stamer 2003b, see Table 1). This implies not to have a too optimistic expectation regarding the viability of a value chain initiative. Even if the possible benefits appear very convincing to an outsider, industry insiders may perceive things in a very different way.

Table 1: Obstacles to co-operation in clusters

Obstacles to co-operation between firms	*Obstacles to co-operation between firms and supporting institutions*	*Obstacles to co-operation between private and public sector*
Prisoner's dilemma in an uncooperative environment	Difficult relationship between SMEs and associations, in particular chambers	Local governance issues (political rivalry, collective conservatism, role of chambers)
Costs and risks of co-operation	Common problems of co-operation between firms and supporting institutions	Global governance issues (externally owned firms, foreign buyers)

Second, there are practical issues. Players from a regional value chain will have to travel larger distances than actors involved in a conventional local PACA Exercise. This creates an obstacle which can only be overcome if you do a really good job in the build-up phase, i.e. identify proper champions and use them to mobilise other players from the chain. Public business promotion agencies sometimes believe that it is sufficient to send a letter or a fax to mobilise business-people for workshop. This is usually not the case. It is crucial to mount a systematic mobilisation effort, putting a lot of time and effort into convincing actors that there is a strong reason, preferably a good business case, for allocating time for Mini-workshops or interviews.

The purpose of a value chain PACA, just like a local PACA, is not to create huge landmark projects. The purpose is rather to unleash a radical change in the type of relationship between players in the chain – to move from distrust and confrontation to co-opetition, i.e. a pattern where tension and conflict still exists, but where it is nevertheless possible that players along the chain address common problems and improve their overall competitiveness. The outcome of the first rounds of activities will be anything but spectacular, but businesses will still appreciate them. Over time, small successes induce a change in mindset and behaviour. Players in the regional value chain will start to understand that their main rivals are not their respective suppliers and customers, but value chains elsewhere in their country and in the world.

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mesopartner is a consultancy partnership which specialises in local and regional economic development. It was founded in December 2002 and registered in April 2003 by Dr Ulrich Harmes-Liedtke, Dr Jörg Meyer-Stamer and Christian Schoen.

Currently, the main product of mesopartner is PACA. This is a methodology to kick-start or refocus local economic development initiatives which has been developed by Jörg Meyer-Stamer. It has been successfully applied in a number of developing and transformation countries. The main objectives of mesopartner are

- to train PACA practitioners in various countries,
- to develop more specific PACA instruments, for instance for cluster analysis, value chain analysis and analysis of government-created obstacles to business,
- to develop and disseminate further methodologies and tools for local and regional economic development initiatives,
- to develop innovative concepts and tools to train practitioners in local and regional economic development.

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