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Combining Agro-Value Chain and Cluster Development:

a case study from Ethiopia

MDG ACHIEVEMENT FUND

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Comments and suggestions on issues raised in this project report are welcome and may be addressed to Adnan Seric at a.seric@unido.org.

Abstract

Enhancing productivity and growth in the agro-value chains in developing countries is a fundamental goal of national governments and international development agencies. A large part of the population in developing countries relies on agricultural production, and low productivity and food scarcity due to increasing demographic pressures represent a big challenge to actions aimed at poverty alleviation. In this report we first present a case-study based on a pilot project conducted jointly by UNIDO, FAO and ILO in Ethiopia sponsored by the MDG-Fund. This pilot project, focusing on value chain enhancement of the Ethiopian edible oil sector, highlights the importance and the critical aspects of an integrated approach where a value chain methodology is combined and integrated with a cluster development component and, hence, allows to simultaneously address several constraints which limit the development of the agro food sector in developing countries. In the second part of the report, we briefly discuss the case for a joint model for interventions aimed at promoting agro-value chain development.

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Acronyms

CDA	–	Cluster Development Agent
FAO	–	Food and Agriculture Organization
GoE	–	Government of Ethiopia
ILO	–	International Labour Organization
JP	–	Joint Programme
MDGs	–	Millennium Development Goals
MoFED	–	Ministry of Finance and Economic Development
MSME	–	Micro, Small and Medium Enterprises
NSC	–	National Steering Committee
PLC	–	Private Limited Company
PMC	–	Programme Management Committee
PPA	–	Processors/Producers Association
R&D	–	Research and Development
UNIDO	–	United Nation Industrial Development Organization

different levels in the value chain.[5] Finally, poor infrastructures, for example in terms of irrigated land or road intensity, have often strong negative effects on productivity and/or market access both in farming and agro-processing activities.

The existence of multiple barriers which simultaneously decrease profitable private sector development justifies undoubtedly the public intervention. Given the nature of the constraints faced by the agribusiness sector in the developing world, an approach which addresses at the same time different constraints is particularly suitable.

The 'Edible Oil Value Chain Enhancement' programme, realized jointly by three United Nations agencies (UNIDO, ILO and FAO) in Ethiopia, represents a step in this direction. Indeed, it is a pilot project in which features of agro-value chain development and cluster development approaches have been combined.

Both these methodologies have been widely adopted, though mostly independently, in developing countries by an increasing number of national and international organizations The interesting feature of the pilot programme analyzed in this study is the combined and organic implementation of these two distinct methodologies.

The agro-value chain development and cluster development approaches share similar premises: *(i)* individual firms often face sector-level constraints that they cannot address alone; *(ii)* in order to enhance the corporate/industry competitiveness both competition and cooperation mechanisms are relevant and, therefore, it is fundamental to build trust among different actors; *(iii) the governance, or presence of coordination mechanisms amongst different stakeholder, is particularly important for the generation, transfer and diffusion of knowledge leading to innovation which enables firms to improve their performances*. The differences between the approaches, instead, are subtle. The value chain approach considers a broad market system and the development of products/services from input suppliers to end-market buyers. Essentially, the value chain focuses on the flow of a developmental process putting emphasis on creating value in each segment of the chain. Vertical linkages are the main focus while less emphasis is given to horizontal linkages between agents operating in the same node of the value chain. The cluster approach also considers an industry value chain, but it focuses on geographic concentrations of interconnected companies and their interactions. In particular, it concentrates on the synergies between these enterprises (horizontal linkages), including those between firms in different segments of the value chain and between firms and other stakeholders, such as government, universities, business associations and other intermediate bodies. As a result of this geographic focus, the cluster approach does not always focus on the entire value chain.

The rationale to merge the two policy approaches is that it allows to better address the situation of backwardness of agribusiness sector in many developing countries which calls for actions inducing its structural transformation and, in particular, creating value along the entire supply chain.

The main aim of this report is that of describing,the 'Edible-Oil Value Chain Enhancement' programme in Ethiopia and in particular to emphasize the advantages of a combined approach in this pilot initiative. Although caution should be exercised in generalizing the results from a case study, several interesting lessons can be drawn from the Ethiopian experience. Based on these lessons, we briefly discuss the general case for combining agro-value chain development and cluster development approaches in developing countries.

1 VALUE CHAIN MEETS CLUSTER DEVELOPMENT: "EDIBLE OIL VALUE CHAIN ENHANCEMENT" PROGRAMME IN ETHIOPIA

In this first chapter of the Report, we present and analyse a pilot project, realized jointly by three United Nations agencies (UNIDO, ILO and FAO) in Ethiopia, in which features of agro-value chain development and cluster development approaches are combined: the 'Edible Oil Value Chain Enhancement' programme (see Box 1.1 for summary details of the Programme).[6]

This case study provides useful information for national and international development agencies on the virtues of adopting an approach which combines agro value-chain development and cluster development in crucial nodes of the value-chain – edible oil processing in the specific case under analysis - as well as on the potential challenges in the design and implementation of this novel strategy.[7]

This chapter is organized as follows. In the first section we describe the general context of the intervention, in particular the key constraints which characterize the edible oil sector in Ethiopia. Section 2 contains an overall description of the implemented actions; in particular, we discuss the main advantages derived by combining the value-chain development and cluster development approaches. In the last section we highlight some lessons learned from this case study.

1.1 The edible-oil value chain enhancement in Ethiopia: the general context of the intervention

As for most developing countries, agriculture is the backbone of the Ethiopian economy. The agricultural sector accounts for more than 40% of national GDP, represents the 90% of total exports and provides basic needs and income to more than 90% of the poor.[8]

In addition, most of the manufacturing activities are rooted in the agro-food sector: according to the World Bank the two primary agro-industrial subsectors - food and beverages, and tobacco – represent a large share of total manufacturing value added of the country, circa 47 percent. The agro-business sector is the largest contributor to the country's overall economic growth and poverty reduction. This is particularly true in rural areas which account for more than 80 percent of the Ethiopian population according to recent UN data.

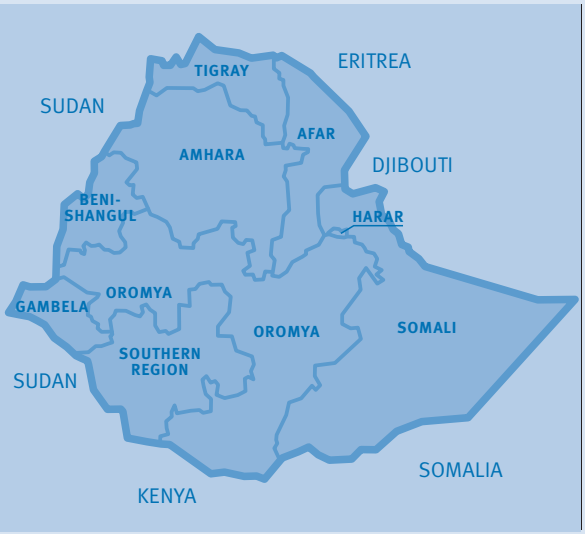
Although in the last decade Ethiopia has achieved strong economic growth, becoming one of the highest performing economies in Sub-Saharan Africa, the country remains one of the world's poorest. According to FAO, approximately 29 percent of the population lives below the national poverty line and average per capita incomes is less than half the current Sub-Saharan average.

Ethiopia has enormous potential for agricultural development. Currently, only about 25 percent of its arable land is cultivated, and agriculture is dominated by subsistence rain fed farming, using limited inputs and characterized by low productivity levels. The vast majority of farmers are smallholders and due to demographic pressure the average size of farms is declining. According to FAO, 12.7 million smallholders produce 95 percent of agricultural GDP.[9] The lack of capital, the small size of plots and the limited human and infrastructural resources make farmers highly vulnerable to external shocks such as price changes in international markets and climatic shocks.

BOX 1.1 - "EDIBLE OIL VALUE CHAIN ENHANCEMENT" PROGRAMME IN ETHIOPIA: A SHORT DESCRIPTION

Start date: January 2010
Expected end date: December 2012
Total budget: 3 million US$.

Regions and scope of intervention: the programme is geographically limited to several woredas (administrative districts) in two regions Oromya and Amhara and focused on two high-potential oil seeds (niger seed and linseed). Both seeds have a high oil content even if yields per hectare are relatively low and often considered as fallow crops by farmers. The two target areas, Oromya and Amhara, were selected on the basis of regional potentials and government priorities, in a consultative process which involved the Government of Ethiopia (GoE). In a subsequent phase, local governments were involved in the identification of the specific districts and direct beneficiaries of the interventions.



Participating international agencies: UNIDO (lead agency), ILO, FAO.

Government partners agencies: Ministry of Industry (lead counterpart), Ministry of Agriculture, Ministry of Labour and Social Affairs, Regional Bureaus of Agriculture, Labour and Social Affairs, Industry, selected municipalities (Adama and Bahir Dar).

Donor: MDG-Fund established in 2007 through a landmark agreement signed between the Government of Spain and the UN system with the aim of accelerating progress on the MDGs.

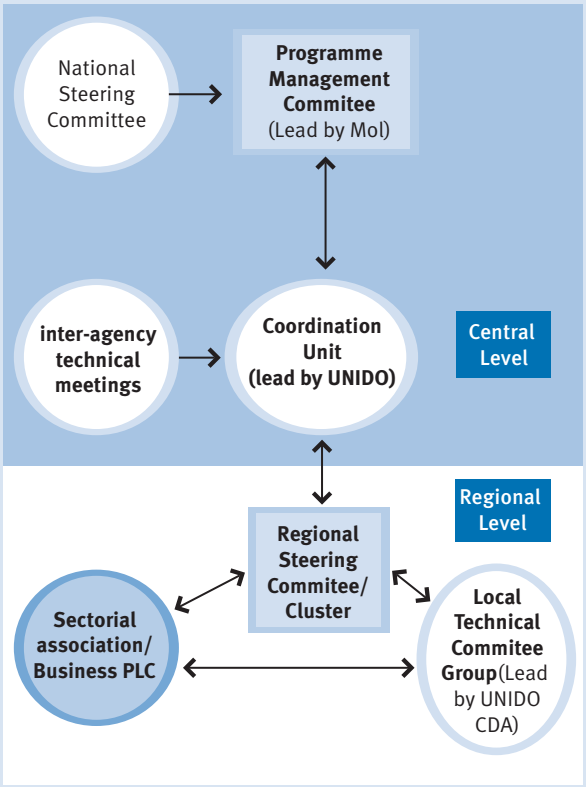
Relevant Millennium Development Goals: Goal 1 – poverty reduction, Goal 3 – gender equity improvement, Goal 7 sustainable development.

Summary of the project: "Ethiopia has huge potential for scaling up its production of edible oil: favourable agro-climatic conditions for increased oil seeds cultivation, the labour intensive nature of the sub-sector, conducive business environment, the willingness of the oil seed crushers to work at full capacity and the high local demand. Despite this potential however, the edible oil processing industry remains underdeveloped. Main constraints are: low production, poor quality of seeds, inadequate trading infrastructure and poor agro-processing facilities, weak business development services for upgrading the processors and limited access to local and international markets. Weak linkages among the chain's actors and lack of working capital also constitute major obstacles. The main aim of the Joint-Programme (hereafter JP) is to «enhance the sustainable supply of oil seed raw material at desired quantity and quality, promote efficient processing capacity and improve the access to markets by integrating the private sector in the entire value chain».

Expected outcomes:

a. Enhancement of productivity and competitiveness of private sector led agricultural production of oilseed;
b. Enhancement of capacity utilisation and quality of the end product in the targeted oil seed processing plants;
c. Improvement in access to local and international markets for edible oil producers.

Governance structure of the programme:
The involvement of several UN agencies and national institutions at central and local levels has the advantage of bringing together multiple expertises and enhance the coordination and coherence of the actions implemented but requires a well-designed governance structure in order to avoid possible deadlocks. The governance structure of the programme was organized in two levels, national and regional, as summarized by the scheme below.



As in all projects sponsored by the MDG-Fund, a **National Steering Committee** (NSC) and a Programme Management Committee (PMC) have been established. The NSC has the mandate to take strategic decision of a general nature and, during the life of the programme, has been called upon for solving general issues such as the facilitation of the dialogue between governmental institutions. The review of major issues or specific strategic decisions are the main tasks undertaken by the **Programme Management Committee** (PMC) which comprises representatives of the three UN agencies, the **Coordination Unit**, and the main Governmental ministries including representatives at regional level. The Coordination Unit, composed by a Coordinator and 3 staff members and supported by **inter-agency technical group**, is responsible for overseeing the Joint Programme implementation rate and feed relevant information to the PMC.

The actual implementation of the activities has been largely coordinated at the regional / cluster levels where two working groups were formed: the **Cluster Group**, composed by local stakeholders and beneficiaries, and the **Regional Technical Committee** (RTC), the local operational arm of the joint project lead by the UNIDO Cluster Development Agent (CDA)

Direct beneficiary targeted by the programme[1]:

- Oil Producers: approx. 100 located in two natural clusters (one around the urban area of Adama city and the other within the urban area of Bahir Dar);
- Farmers: 8800 men and 4600 women farmers in both regions;
- Farmers Unions: 4;
- Farmers Cooperative Unions: 2.

(1) Estimates based on direct and indirect data acquisition.

The export of Ethiopia is dominated by coffee and oil seeds. In particular, oilseeds are the country's second largest export earner, accounting for about 18 percent of the total foreign exchange earnings at a value of USD 382 million in 2010. In total, the oilseed producing sector supports the livelihoods of about three million Ethiopian farmers, as well as traders, transporters and oil processors. A wide range of oilseeds is produced with sesame seed being the most important for export (293,6 million of USD of export in 2010). Ethiopia is the second most important exporter, after China, of other oilseed crop although the unit values of these exports is amongst the lowest. Niger seed, a crop with a high content of oil of good quality, is the second most important oil seed crop and is currently exported mainly to the US and United Kingdom as bird feed. All other oilseed crops (soybeans, linseed, groundnuts, cottonseed etc.) grown in Ethiopia are almost entirely used domestically.

Notwithstanding the large, and potentially even larger, production of oilseeds, edible oil production is small and its exports negligible in value. Approximately 80 percent of the edible oil consumed in the country is imported, mostly palm and soybean oil from Indonesia and Malaysia, and represents a large drain of resources in a foreign currency constrained economy. In 2010, the value of imported palm oil

alone represented 57 percent of the export earnings from oilseeds. Domestic oilseed crushers produce the remaining 20 percent of the Ethiopian consumption of edible oil.

The edible oil value chain is currently highly fragmented. Bottlenecks in the market imply a reduced incentive for farmers to allocate land to oilseed production while at the same time poor linkages between farmers and processors hamper the reliable supply of raw materials that is necessary for the consolidation and modernization of the sector. The downstream oilseed processing domestic market is composed by few relatively large private producer, the largest being the Addis-Modjo Edible Oil Complex P. Co., and a large number of micro and small production units mostly informal artisanal and semi-artisanal with limited financial, technical and managerial capacities.[10]

The large and growing domestic demand, the labour-intensive nature of the sector and the favourable agronomic conditions make the edible oil a particularly interesting sector for the Ethiopian economy. Despite the high potential, the edible oil value chain remains, to a large extent, underdeveloped and cheap imported palm oil has put the local edible oil industry under additional pressure. The Ethiopian government has explicitly acknowledged as a priority goal the increase in the domestic edible oil production and the substitution of the large imports of mostly low-quality oil.

The enhancement of the edible oil value chain has the potential of boosting the development of the private sector (mostly composed by MSMEs), improve the livelihood of a large number of households and, at the same time, contribute to an improvement of the country trade balance.

It is in this general context that the programme analysed in this report was realized with the specific ex-ante goals of increasing the productivity and competitiveness of oilseed producers, boost the capacity for processing edible oil seeds and improve access to local and international markets.

1.2 Implementation and main results

One crucial and novel element of the programme is the joint involvement of three UN agencies as well as several national and local partners in a collective and coordinated effort. The 'collective effort' is a pillar of all MDG-Fund projects: the Fund has financed 130 joint programmes in 50 countries with an average involvement of six UN agencies. One expected result is the strengthening of the UN system's ability to 'deliver as one' avoiding inefficiencies, overlapping interventions and waste of resources.[11]

After a comprehensive analysis of the main constraints to the development of the edible oil value chain in Ethiopia (see *Figure 1.1* for a synthetic representation of a SWOT analysis), the action plan of the project has been organized around the following three main objectives (i.e. expected outcomes):

1. Boost the productivity and competitiveness of private sector led agricultural production of oilseed;
2. Enhance the capacity utilisation and quality of the end product in the targeted oil seed processing plants;
3. Improve the access to local and international markets for edible oil producers.

The general strategy of the programme has been that of addressing simultaneously and in a coordinated way bottlenecks affecting different levels of the value chain: raw materials production, processing capacity and quality of the final product, marketing channels. A sort of 'value chain big push approach' has been followed with the crucial novelty of integrating the typical measures adopted in value chain development methodology with cluster development components. In particular the 'cluster component' was focused at the agro-processing node of the value chain, i.e. at micro scale edible-oil processors. As mentioned above, two natural clusters of processors were targeted by the JP.

The lead agency, UNIDO, has assumed the overall coordination, while the responsibility of each specific sub-outcome has been assigned to each agency on the basis of its technical expertise, thus replicating also in the interventions the idea of a 'chain' in which each agency has a well defined role and intervenes at a specific stage of the value chain. Moreover, as mentioned above, continuous coordination and technical meetings have been useful in avoiding overlapping and in favouring a more efficient resource allocation.

FIGURE 1.1 S.W.O.T. ANALYSIS OF THE ETHIOPIAN EDIBLE OIL VALUE CHAIN

PRODUCTION ›	TRADERS ›	OIL PROCESSORS ›	RETAILERS ›	EXPORTERS
Strenghts				
Suitable climate and land; competitive sesame yields; low-cost labour;	World leader in sesame seed; Ethiopian commodity exchange.	Competitive wages; large internal market for oil and oil-cakes.	Existing structure.	Growing oilseed market; Increasing demand for organic and healthy products.
Weaknesses				
Fragmented small-holdings and supply base; Few commercial farms; Import of most inputs; High pre- and post-harvest losses; Poor technical knowledge; Poor access to finance.	Lack of organized market information; Prices of raw materials not based on quality; Too many middle-men adding low value added an increasing transaction costs.	Unreliable supply; Large fluctuations of raw material costs; Technology with low extraction efficiency; Unorganized small operators; Non-compliance with quality norms; Lack of skilled manpower; Infrastructure deficiency.	Non regulated imports of edible oil;	Lack of vision and policy; High transport costs.
Opportunities				
Farmers organization; Reduction of post-harvest losses.	Market organization; Quality standards.	Potential to increase oil production and improve quality.	Market organization.	Large market; organic certification.
Threats				
Climate change; continuing fragmentation of firms.	Increasing transaction costs.	Non-availability and high cost of funds; unreliable supply.	Inconsistent government policies.	Lack of competitiveness in international markets.

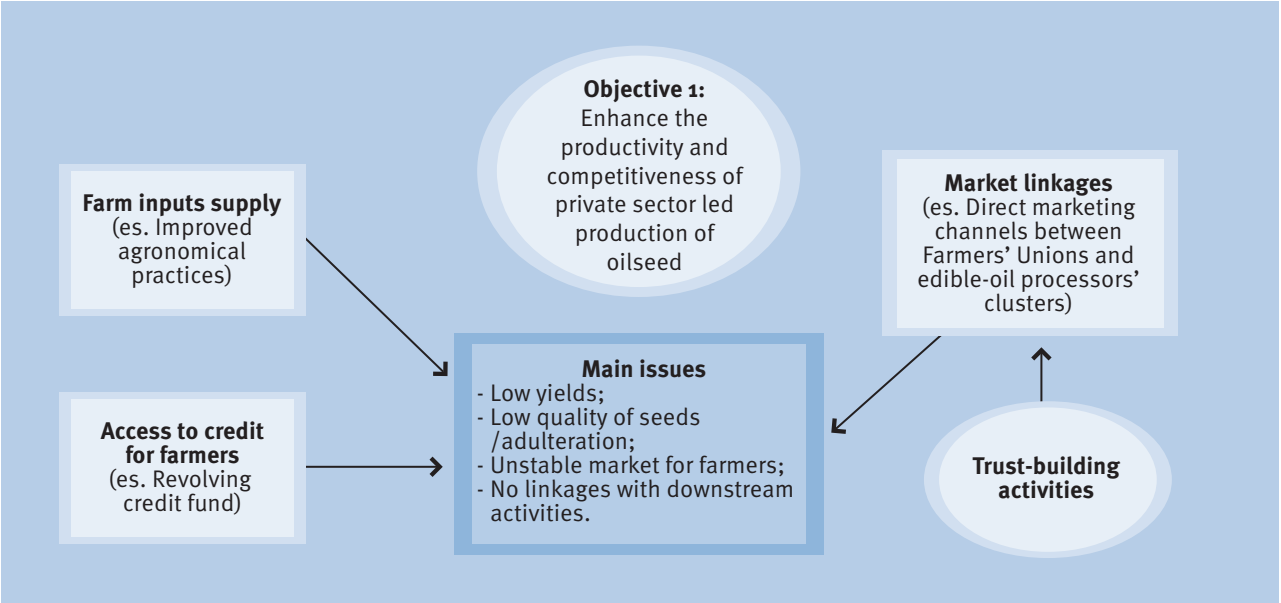
Source: UNIDO (2009)

Objective 1: Productivity and competitiveness of private sector led agricultural production of oilseed

This component has been structured around two main goals: (i) improve the productivity of oil seeds farming with the aim of ensuring a stable, growing and reliable supply of inputs to the benefit of the entire supply-chain; (ii) link farmers with downstream oil-seed processors.

Before the implementation of the project in the designated areas, an interrelated set of issues prevented the development of an edible-oil value chain based on the selected crop, niger and line seeds. The sector development was and still largely remains choked from its roots, i.e. a reliable and stable production of seeds for further processing.

FAO worked with the Ministry of Agriculture and its local counterparts with the aim of boosting the supply of raw materials. In a first step of the programme, some selected farmers have been contracted in order to produce improved seeds variety, in particular of niger seed, an almost neglected local oil crop with high potential. The improved seeds were later distributed to beneficiary farmers which also benefited from training on agronomical practices. According to FAO the intervention improved on average the yields of the seeds for beneficiary farmers from 7/8 to 17/18 quintals per hectare with some peaks of 20/25 quintals per hectare. The adoption of improved agronomical practices also contributed to a better quality of the



final products which resulted in a average increase of 15 percent over market prices.

With respect to the second goal, generating direct linkages between farmers and downstream processors, a marketing agreement was established between farmers unions and small processors, the latter group organized into a cluster formal entity.[12] FAO allocated credit funds to Farmers' Unions for the purchase of seeds from small-holders farmers via the primary cooperatives.[13] Primary cooperatives and the edible oil processors of the two clusters have signed supply contracts which provide: (i) a stable and direct supply of oil seeds; (ii) a reduction of the importance of traders in the market, with the consequent reduction of transaction costs along the value chain; (iii) an improvement in the quality of the seeds provided.[14]

Lesson 1. Clusters, transaction costs reduction and linkages along the value chain

We identified two main bottlenecks to the upstream market of oil seed production prior to the intervention. Firstly, farmers had low incentive to cultivate niger/line seeds for the reasons of relatively low productivity as well as financial capacity. A strong coordination failure was at work: low production by farmers implied that primary cooperatives had to wait long time before stocking enough seeds and selling them in the final market, with a consequent deterioration of seeds quality and volatile prices. Hence, the farmers preferred 'cash crops' with an immediate financial return and marginalized the production of these oil seeds. The second reason was the fragmentation along the value chain: no direct links were established between farmers and processors of oil seeds and the market was largely dominated by traders and middlemen with a considerable increase in costs and higher incentives of adulteration of the inputs.

The intervention has removed the main bottlenecks. FAO credit fund has eased the financial constraints by 'assimilating' these seeds to other cash crops. Besides, technical assistance has improved the productivity, and hence the returns from farming these crops. The creation of linkages with processors has eliminated the problem of time-to-market for the primary cooperatives: as soon as seeds are collected in relatively small quantities they are shipped directly to processors and hence the primary cooperative can re-employ the (revolving) funds for purchasing seeds from farmers. The cluster element has been fundamental to solve this bottleneck: the promotion of linkages of small and micro processors in the two selected clusters has significantly reduced the transaction costs for generating this stable linkage along the value chain. The collective action of the oil seed processors in establishing a mechanism for joint purchases of the raw material has been crucial. In this respect, the promotion of clustering

of economic agents in downstream phases of the value chain (edible oil processing) has contributed to strengthen and consolidate policy interventions in upstream phases (oil seeds production). This is particularly important in developing economies where the coordination failure due to the high fragmentation and micro scale of economic agents is very pronounced.

Objective 2: Capacity utilisation and quality of the end product in the targeted oil seed processing plants

The diagnostic study conducted before the implementation of the programme revealed the existence of a significant number of geographically clustered micro and small scale edible-oil producers characterized by the following features:

- primitive or outdated production technologies;
- unsuitable production premises (typically within the household);
- production of low quality products with low and deteriorating profit margins;
- under-utilised production capacity due to bottlenecks in raw material availability (oil seeds);
- high degree of adulteration;
- poor linkages with other processors;
- cut-throat competition among small-scale processors in a traders-dominated market.

Most of the processors were operating in the sector discontinuously and using the processing of oil seeds as a secondary or even tertiary source of household income.

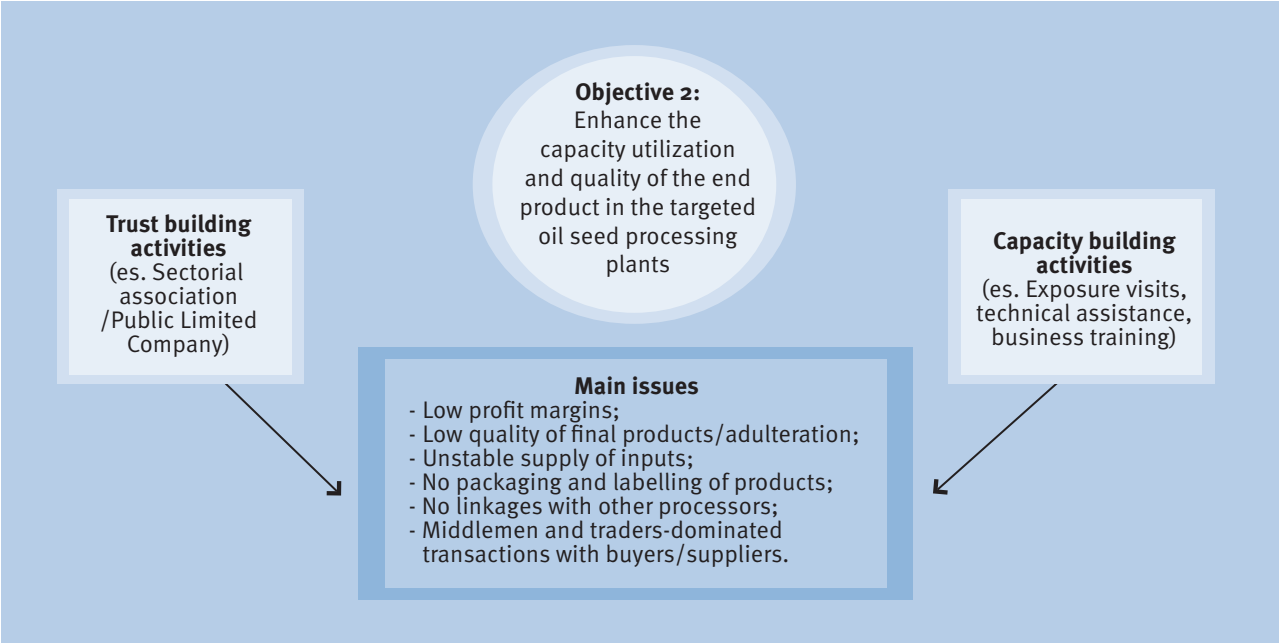
The first and probably most challenging step in the implementation of the project was the creation of a shared cluster vision and the promotion of 'trust' between processors. This crucial task was performed by well trained Cluster Development Agents or CDAs, a core element of the UNIDO cluster development methodology *(see Box 1.2)*.

The actions carried out can be classified in the following two broadly defined categories.

Trust building and cluster promotion. Several actions were undertaken in order to create awareness on the importance of collective efforts in boosting at the same time individual and collective benefits. Processors organised themselves initially, thanks to support from ILO and UNIDO, into local business associations and then a Public Limited Company (PLC) which provided a 'formal platform' within which cluster interactions were boosted and organized in order to reap the benefits of economies of scale and representation ('common voice'). These formal associations are the main vehicles for knowledge and information sharing as well as the focal points for linkages with other agents along the value chain (farmers, buyers and local and national government, international agencies and other donors). Tangible results were achieved thanks to the clustering promotion component such

BOX 1.2
CLUSTER DEVELOPMENT AGENTS: THE UNIDO EXPERIENCE

"UNIDO cluster development initiatives rely on the engagement of facilitating agents who operate as impartial brokers among cluster actors and help them share information and coordinate their endeavours. These brokers, known as cluster development agents (CDAs), are professionals working on a daily basis in the cluster, who support all stages of a technical assistance initiative, from the formulation of a diagnostic study to planning and implementing private sector development activities. A core task of the CDA is the promotion and coaching of business networks. Providing network members with training, operational support, incentives and motivation as well as encouraging knowledge diffusion and providing exposure to best practices are major determinants of the success of a cluster initiative. Given that the end-objective of UNIDO assistance is to generate endogenous and sustainable changes in the clusters, the CDAs are not meant to substitute for the role and performance of cluster actors. On the contrary, they provide assistance and support to cluster actors in the organization and coordination of collective activities. By adopting a participatory and empowering approach, they aim to mobilize existing resources and competences, strengthen them and enhance their impact on cluster performance by channelling efforts and resources to the attainment of collective goals" (for further information see UNIDO 2010).



as improved and more stable raw material supplies and establishment of stable linkages with large buyers, most notably Addis-Modjo Edible Oil Complex.

Technical and managerial capacity building. Also in this case, the first step of the intervention was that of making the processors aware of the best practices in technology and quality insurance and helping them to identify their own gaps. Exposure visits were organized both for processors and other stakeholders in large and medium scale companies operating in the edible oil sector in Ethiopia and in India.[15] Processors received specific training on processing technology, sanitation, product quality improvement, safety procedures, leadership and team management as well as business accounting. A fundamental role was played by local experts, in particular by local universities.

The results achieved in terms of boosting the capacity of the beneficiary oil-seed processors have been remarkable. Although a full evaluation of the impacts and their sustainability cannot be done at the moment, the following upgrading paths have been undertaken by a significant number of beneficiary processors:

d. Product upgrading. Several processors have moved from unsophisticated products (crude edible-oil unlabelled and unbranded) to more sophisticated ones *(see Box 1.3)* which, in some cases, have also obtained official quality certification.

e. Process upgrading. In both clusters a number of processors have substantially improved the transformation process thanks to new investments and a reorganization of the production process. Working standards and safety conditions were also improved. As a consequence technical efficiency was significantly increased.[16]

f. Functional upgrading. New functions – such as seeds cleaning, direct marketing, new managerial practices – were added with a positive effect on profitability.

g. Inter-value chain and other form of upgrading. Linkages with seeds-producers (farmers) and with crude-oil buyers (e.g. Addis-Modjo Edible Oil Complex) enabled the transfer of knowledge along the value chain. Besides, these new linkages have changed the behaviour of processors which are now following more strict practices in order to match logistics requirements, ensure reliable and larger supplies and meet quality standards.

As in virtually all value-chain development interventions, also in this project the effects of technical assistance have been highly heterogeneous across beneficiaries. In fact, not all the beneficiaries have the motivation or the 'absorptive capacity' for reaping

the benefits of skills and knowledge transfers. It is interesting to note that the cluster development component by generating stable and more intense linkages between processors has the potential for boosting the effectiveness of technical and managerial training programmes that are typically a core element of value-chain development methodology.

Lesson 2. Cluster development and the effectiveness of knowledge transfer activities

The enhancement of a value-chain implies a structural transformation of the production process away from subsistence-oriented, household-level production and household-based agro processing toward a finer division of labour, greater specialization and more intense linkages and exchanges among the actors operating in the sector. Two fundamental ingredients are required for facilitating this structural change: (i) efficiency improvements, a better use of the resources through technical and managerial upgrading; (ii) more horizontal and vertical coordination among actors. The promotion of clustering of economic agents addresses directly this second requirement by increasing trust, reducing transaction costs and promoting linkages between economic and institutional agents involved in a value chain. In addition, cluster's development has important effects also on efficiency improvements. In fact, the direct impact of technical and managerial assistance – tools that are typically used in value-chain enhancement – might be rather limited given that the beneficiaries have highly heterogeneous learning capacities and motivations. In this project the promotion of dense linkages and cooperative efforts between edible-oil processors has enhanced the effectiveness of technical and managerial training since actors have the opportunity to learn from each other in a systematic and continuous way. The exposure visits organized by UNIDO to large edible-oil processing companies in Ethiopia and India have stimulated innovations of some processors, probably those already endowed with better entrepreneurial and managerial capacities and with higher motivations. These 'frontrunners' entrepreneurs have substantially transformed their production units with visible effects on the profitability of their business (see for instance the story depicted in Box 1.3). Without parallel efforts aimed at boosting interactions within the cluster, these improvements would likely have been confined to processors with the highest capacity (see Figure 1.2). On the contrary, what is clear from the field inspection is that the strengthened linkages within the cluster have boosted the likelihood that also less skilled or more risk-averse entrepreneurs will attempt to 'simulate' the strategies of these front-runners and invest in production process upgrading in later stages. The promotion of trust and linkages within the cluster by reducing barriers between processors stimulates learning through imitation and it is therefore complementary to other training activities provided by cluster support actors such as the government, national and international NGOs.

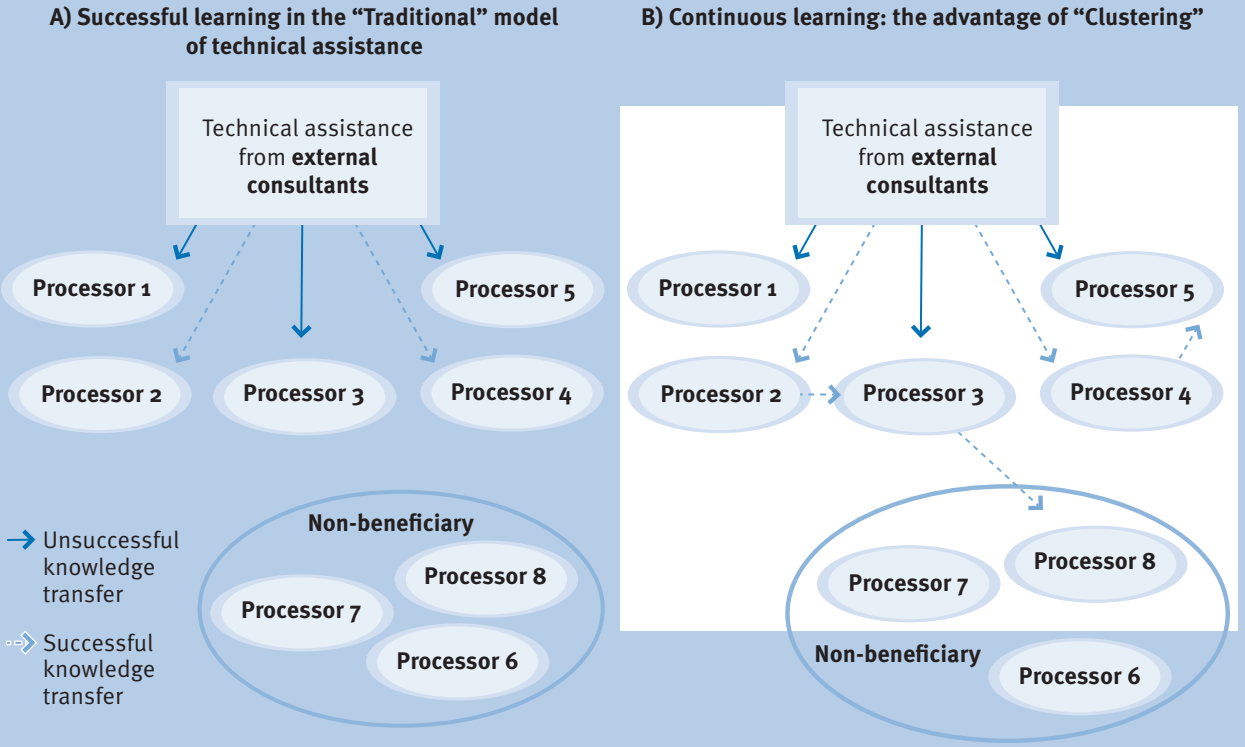
Objective 3: Improved access to local and international markets for edible oil producers

In a highly fragmented and poorly connected value chain, such as the Ethiopia edible oil's one, market access is probably among the most severe constraints faced by small-scale producers. In fact, the creation of new and more sophisticated marketing channels is characterized by large economies of scale and often requires some form of cooperative effort.

In this respect, the programme was centred around the promotion of backward linkages between oil seed producers, traders and processors (as discussed above) and forward linkages between the processors and marketing agents, distribution chains, retailers.

Technical assistance was provided to the beneficiary processors in order to improve the quality, labelling and packaging of the final products. Through the participation in specialized trade fairs and the establishment of formal linkages with marketing traders and retailers, several beneficiaries have considerably expanded the geographical scale of their markets and, as a consequence, improved profit margins. The measures aimed at boosting the development of the cluster have also facilitated the creation of a new forward linkage with the biggest refinery in Ethiopia, Addis-Modjo

FIGURE 1.2 - TECHNICAL ASSISTANCE AND LEARNING IN CLUSTERS



BOX 1.3
EDIBLE-OIL PROCESSORS UPGRADING: A SUCCESS STORY

40 years old Endalkachew Nigatu was born in Arsi Zone, Asela town 75KM away from Adama city (Oromia region). After graduating from secondary school in Asela, he was engaged in grain trading business and, in 2003 started to process edible oil pressing.

For the first three years, due to financial constraints Endalkachew started a joint-venture with the owner of a pressing machine. At a later stage, he was able to undertake the necessary investment to buy a seed-crushing press and established its own productive unit.

The output of its premises has been for 8 years a low-standard crude oil and, as a by-product, oil cakes used as animal feeds. The product was unlabelled and unbranded and sold to traders in big barrels. As Endalkachew, given the relatively low entry costs in this informal and sub-standard segment of the market, several micro-scale processors started a similar business in Adama town. With a limited and volatile supply of oilseeds, this increased competition translated almost immediately into low and falling profits margins. As a consequence, also the incentive to adulterate the products increased. Several processors, including Endalkachew, went out of business.

The project 'Edible oil Value Chain Enhancement', launched in Adama in October 2010, represented a source of new hope. Endalkachew was one of the processors who was convinced to restart his machines and assumed a pivotal role in convincing

other micro scale producers to be engaged in the project.

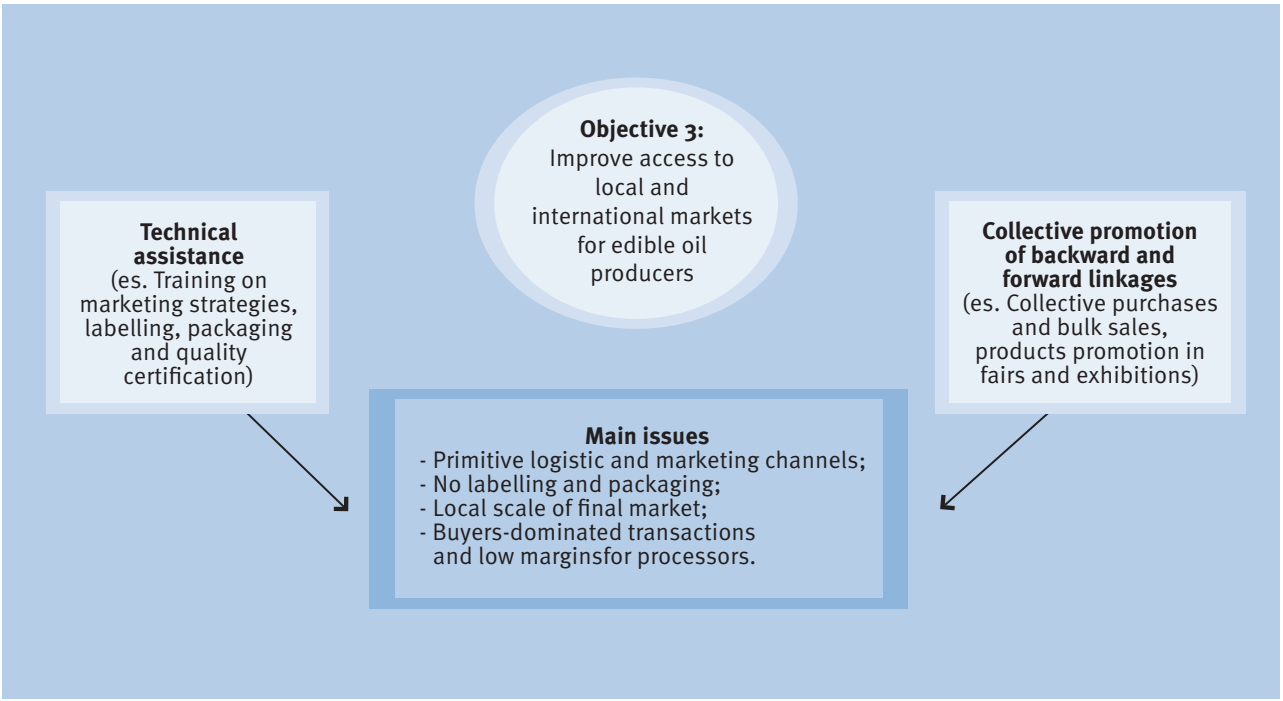
Thanks to the training and technical support received during the project, Endalkachew decided to upgrade his processing systems, technology, and packaging techniques. All the necessary investments were self-financed.

With the support from development partners his products are now labelled, bottled and fully certified by the Ethiopian quality standard authority. Adama University was involved in the quality upgrade process and provided test services and support in the certification application. The refined, certified and packed edible oil has been exhibited in different trade fairs both in Adama and Addis Ababa. He has participated in the 5th Specialized International Exhibition in Agriculture and Food held in Addis Ababa Exhibition center in June 2012.

These exhibitions were crucial for learning that the demand for higher quality, certified edible oil is very high and allow to escape from the price competition with low-quality imported palm oil. New market opportunities materialized: Endalkachew is now linked with wholesalers and consumers cooperatives in Adama, Addis Ababa, and Awasa

The reorganization of his business, promoted by the participation in the programme, has substantially improved the quality of life for Endalkachew and his family. Before only his family was involved in production activities, now his business gives full time employment to 15 people and a new productive unit is expected to be established within this year.

Endalkachew success story has important implications for the sustainability of the programme: he is considered as a 'model' and other processors are changing their ways of conducing business inspired by his visible and tangible experience.



Edible Oil Complex, which is now collecting large quantities of crude oil from the processors of the Adama Edible-Oil cluster. This linkage was previously inhibited by the high transaction costs faced by the large firm in dealing with a large number of unorganized and poorly linked micro-processors.

Distribution channel before: crude oil sold to wholesale markets or intermediate traders unlabelled and unbottled

After: semi-refined extra virgin crude oil labelled and bottled (with quality certification in some cases) and available in several locations.

Lesson 3. Cluster development and market access

The self-reinforcing effects of agro-value chain and cluster promotion methodologies were evident also with respect to the goal of improving market access of micro and small entrepreneurs. In fact, substantial fixed costs are typically incurred for the activation of reliable and effective logistics and marketing channels and, hence, economies of scale characterize these business functional areas. While technical assistance to beneficiaries, such as the promotion of labelling or new marketing strategies, reduces some of the costs faced by individual processors, the joint-effort induced by the cluster component of the programme enabled small individual firms to reap the benefit of economies of scale in these activities which are typically confined to larger firms. The joint application of both policy methodologies opens another channel for knowledge transfer through collective learning and best-practices simulation (see Figure 1.2). The few successful entrepreneurs who were more 'sensible' to the knowledge transferred through the programme and were able to upgrade their marketing strategies are now the main source of knowledge transfer for other processors in the clusters. Besides, the enhanced 'trust' between processors has translated into the adoption of joint marketing strategies.

1.3 Lessons learned: a summary

The experience of the 'Edible Oil Value Chain Enhancement' programme highlights the potential advantages of a combined use of tools that have generally been applied separately: clusters promotion and agro-value chain development. Based on the results achieved so far a few useful lessons may be highlighted at this stage.

Coordination and simultaneous approach to market constraints. The general philosophy of the intervention conducted in Ethiopia edible-oil sector follows a sort of small-scale big-push, i.e. addressing simultaneously and in a coordinated way the bottlenecks affecting the different levels of the value chain: raw materials production, processing capacity and quality of the final product, marketing channels. This approach has the advantage of avoiding the unsolved bottlenecks that frustrate the entire intervention, thus boosting the likelihood of an effective use of the invested resources. In this respect the involvement of three UN agencies with distinct responsibilities on the basis of their technical expertise and with one lead agency (UNIDO) assuming the overall coordination of the project, has replicated also in the interventions the idea of a "chain" in which each agency has a well defined role and intervenes at a specific stage of the value chain.

Clusters as facilitator of value-chain enhancement. The development of a modern value chain in developing countries requires a 'structural change' which, in turn, relies on two main ingredients: (i) creation of new knowledge and skills; (ii) strengthening of linkages between the relevant stakeholders. This present pilot project highlights how the development of a cluster might fertilize this structural change. In fact, more coordination at a particular point in the value chain might generate the necessary linkages for supporting a structural change along the entire value chain. Trust building, the crucial element of cluster development efforts, is particularly important in developing economies where the coordination failure due to the high fragmentation and micro scale of economic agents is very pronounced.

Besides, the effectiveness of technical and managerial training – a cornerstone in agro-value chain development methodologies – is boosted by the policy measures aimed at promoting cluster's interactions since actors have the opportunity to learn from each other in a systematic and continuous way. In this particular case, the support of the clustering process by reducing barriers between edible-oil processors has stimulated learning through imitation, as such to be regarded as a positive aspect of the intervention that has been complementary to training activities provided by development partners.

Local human resources: a crucial element. Often, the success of a project is strongly related to the quality of the local staff involved (in this project we refer mainly to the ground staff operating in project offices and cluster locations). This was one of the key strength of the programme under analysis. Experienced and, even more important, highly committed local resources are crucial for assuring not only an effective implementation but also the sustainability of the programme. Given the usual short duration of these programmes some mechanism for a slow phasing-out of the support by local staff like CDAs might be a relatively low cost additional intervention which might tremendously increase the probability of success after the end of the project.

Although the project has been successful so far, some critical elements are worth to be highlighted. In these multi-actor programmes the governance structure might be a fragile element that deserves particular attention by development partners. The involvement of several international and national agencies was challenging at times in terms of a smooth and timely implementation of the activities. Some difficulties were evident in the interaction process: delays experienced in one part of the 'implementation pipeline' might affect the effectiveness of the entire process given that activities carried out by one organization were instrumental to activities carried out by another. A good initial design of the governance structure, including rules for revising the allocation of responsibilities and funds, is fundamental for the success of similar initiatives.

Another weak element, common to similar intervention but even more relevant in the case of a combined approach, is the typically short duration of the project. The absorption of new knowledge requires time, in particular in traditional agriculture were agronomical practices are often the results of ancient knowledge transferred from one generation to another. Also the formation of trust among previously uncoordinated and often unknown entrepreneurs requires time. A short project lifetime implies that, at best, the final outcome is that of an embryonic and still fragile cluster. The lifetime of an intervention should be a flexible element defined on the basis of a sustainability assessment. Interventions should be 'unplugged' when the project is likely to take-off with its own legs.

2 THE CASE FOR A COMBINED APPROACH TO AGRO-VALUE CHAIN ENHANCEMENT IN DEVELOPING COUNTRIES

Agribusiness and agro-industrial development might significantly contribute to growth and poverty alleviation in developing countries. There is a strong case for a policy focus on these sectors which have a current and untapped potential of substantial growth. The case study on the 'Edible-Oil Value Chain Enhancement' programme in Ethiopia described in the previous chapter, although not meant to represent an evaluation of the programme, is a clear example of how well-designed and carefully implemented actions might contribute to the goal of a pro-poor of the agri-business value chains.

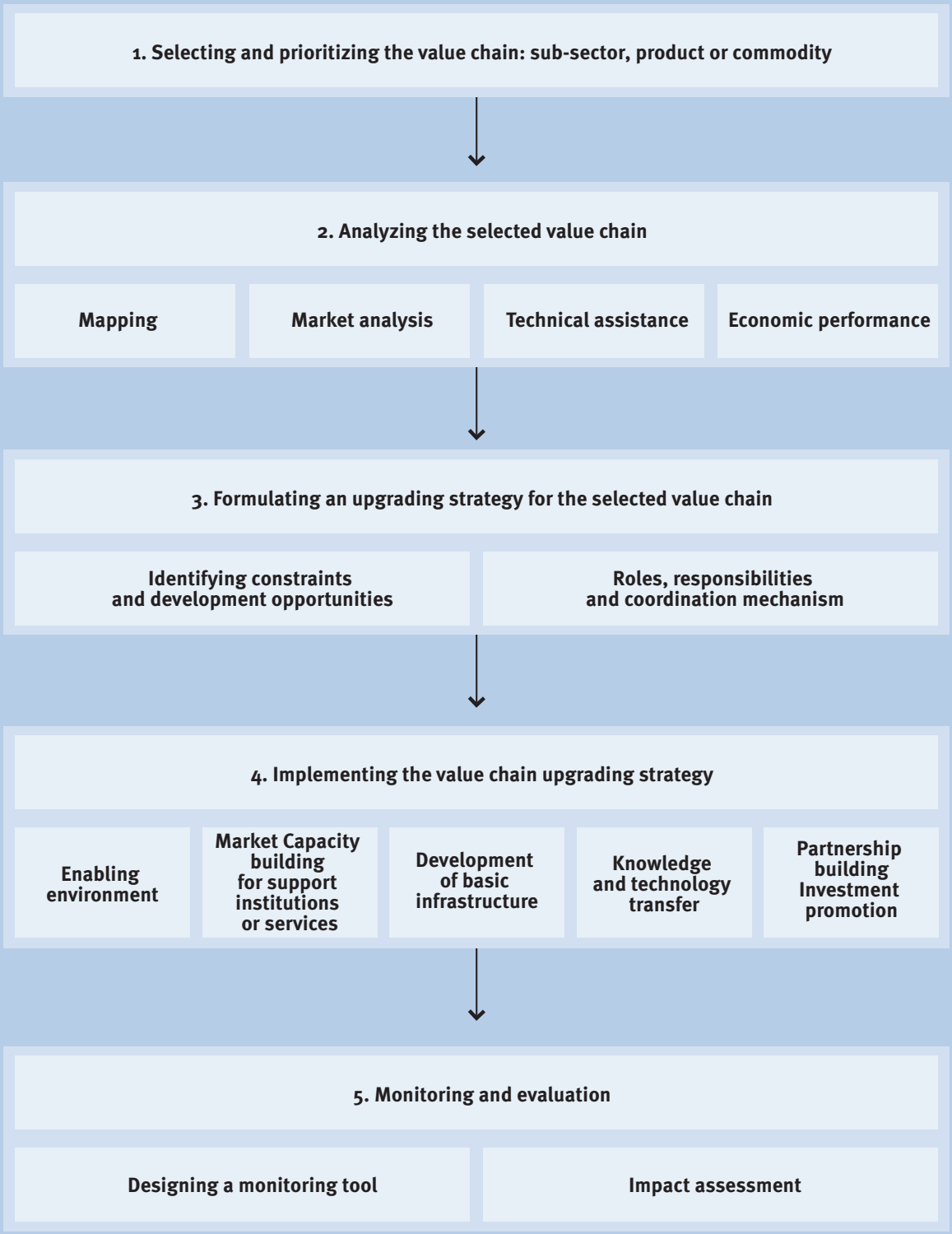
Although many developing countries have a clear potential in this particular sector success will be determined by the ability to assemble different pieces of a complex puzzle: private enterprise development, enhancement of product quality and safety, promotion of coordinated linkages among producers, processors and retailers, and improvement of the competitive position of individual enterprises in the marketplace.

Policy interventions need to enhance and facilitate a structural transformation of the sector; that is a re-orientation away from subsistence-oriented, household-level production and household-based agro-industry towards an integrated agribusiness sector based on greater specialization, exchange and capturing of economies of scale and a greater productivity growth throughout the entire agri-business value chain, covering farms, firms and distributors.[17]

Recently, the focus on value chain development has become part of the approaches that governments and international development agencies, such as UNIDO,FAO, ILO, the World Bank and others, use to support the development of individual producers and processors, including farmers, and small to medium-sized enterprises in less developed countries.[18] At the heart of value chain concept lays the idea of actors connected along a chain producing and supplying goods and services to end consumers through a complex and sequenced set of activities.[19] Development of value chains is expected is to reduce poverty and foster generation of additional income and employment for different groups who engage along the value chain.[20]

The interventions usually carried out under the agro-value chain development approach go in the direction to support the required structural transformation and productivity growth by (i) creating an enabling environment for private sector development; (ii) developing business services including the collection and dissemination of market information and the promotion of knowledge flow, and assistance in such areas as technology upgrading, quality management, and training; and (iii) establishing the necessary infrastructure for compliance with accreditation systems – food quality, hygiene and safety standards as well as social and environmental standards that may be demanded by specific markets or buyers.[21]

FIGURE 2.1 - BASIC STEPS OF UNIDO APPROACH TO AGRO-VALUE CHAIN ANALYSIS AND DEVELOPMENT



Source: Figure 3 in UNIDO (2009)

2.1 Cluster development meets agro value chain development: the advantages of a combined approach

The development of a value chain has a clear 'geographical' component. In fact, similar economic activities are often geographically concentrated in specific areas, or 'clustered' in some localities. Agri-business operations make no exception to this pattern of concentration.

The advantage of clusters have been portrayed by a rich literature including scholars such as Michael Porter[22] and can be summarized as follows:

- **Learning and technological externalities.** The geographical proximity of firms allows a rapid diffusion of information on market opportunities and on process and product innovations. Innovation policies targeted toward the cluster are likely to boost the collective learning capacity and in turn the overall competitiveness of the cluster and the local economy. Competition and imitation play an important role: as emphasized in the case study above, the cost of learning is lower in clusters.

- **Labour market efficiency and finer division of labour within the local economy.** Skilled labour, specialized and customized products and services, lower costs and a greater variety of inputs are all the result of a finer division of labour in a "dense" cluster.

- **Access to capital and credit market efficiency.** Clustering of economic activities within one or few related sectors might significantly improve the efficiency of the credit market by reducing the information asymmetries between borrower and lender. An effective allocation of capital is a fundamental ingredient for the development of clusters. Given the better quality and quantity of soft and hard information within a cluster, the financial intermediaries are able to reduce screening costs and to allocate capital to the best entrepreneurial talents. This advantage might not be particularly strong in developing countries with an ill-functioning credit market.

- **Development of a "cluster brand".** This is particularly important for agro-products, in fact the concentration of producers allows to more easily generate a 'local brand' and all firms which operate in a successful and competitive cluster are able to benefit from this cluster brand. For instance, in many Italian agro-food clusters currently in their maturity stage, the "brand" has a significant value and allows firms to position themselves more easily in high value added niches.

Given the above advantages, the aim of cluster development policy is to reinforce and promote cooperative efforts and networking of firms in order to mobilize and spread knowledge and ideas, information and technology within the cluster and/or to create soft infrastructures which enable clusters' actors to import knowledge and best practices from other locations.[23]

Cluster development can be a valuable mechanism to address value chain constraints, especially those requiring the transformation of stakeholder relationships.

In fact, one of the main limitation of the value chain methodology is that often value chains are depicted as simple linear flows where the focus is given almost exclusively to vertical linkages between actors operating in different nodes of the value chain (e.g. farmers, agro-processors, traders) and disregarding possible weaknesses in the horizontal linkages between firms that operate in the same node of the value chain.

Another limitation is the stylized dichotomous concept of either buyer-driven or producer-driven value chains which tends to ascribe all power to one 'governor' of the chain, whereas in reality different degrees of power or powerlessness are usually found along any given chain, and power constellations continuously change over time.

Moreover, some decisive determinants of a sector's competitiveness and development, e.g. government regulation or the availability of specific infrastructure and skills, tend to be neglected if value chains are conceptualized as rather autonomous units. A more systemic view of value chain development needs to take into account not only the firms that are part of the actual core production chain, but also other actors that are impacting on the chain: public and private service providers whose services are requested by the firms that are part of the value chain and

actors that undertake value chain development interventions. Apart from interactions between actors, the national and global context (e.g. investment climate, trade agreements) determines the context in which value chain actors evolve.

To summarize, the embeddedness of value chains in the overall policy framework, in a territorial context and specific socio-cultural patterns is of great relevance for the design of policies.[24] In this respect the cluster concept highlights the embeddedness of firms in complex inter-firm relations. It emphasizes geographic proximity, and it draws the attention to additional elements which are usually not addressed in value chain analysis, e.g. the role of local socio-cultural milieus with shared values, the relevance of local labour pools, formal and informal mechanisms of knowledge transfer as well as the dynamics of joint action of firms at the same node of the value chain. In particular, a cluster is often distinguished from a typical value chain in that it includes stakeholders who typically are not considered in value chain analysis but who nonetheless provide key inputs into value chain operations.[25]

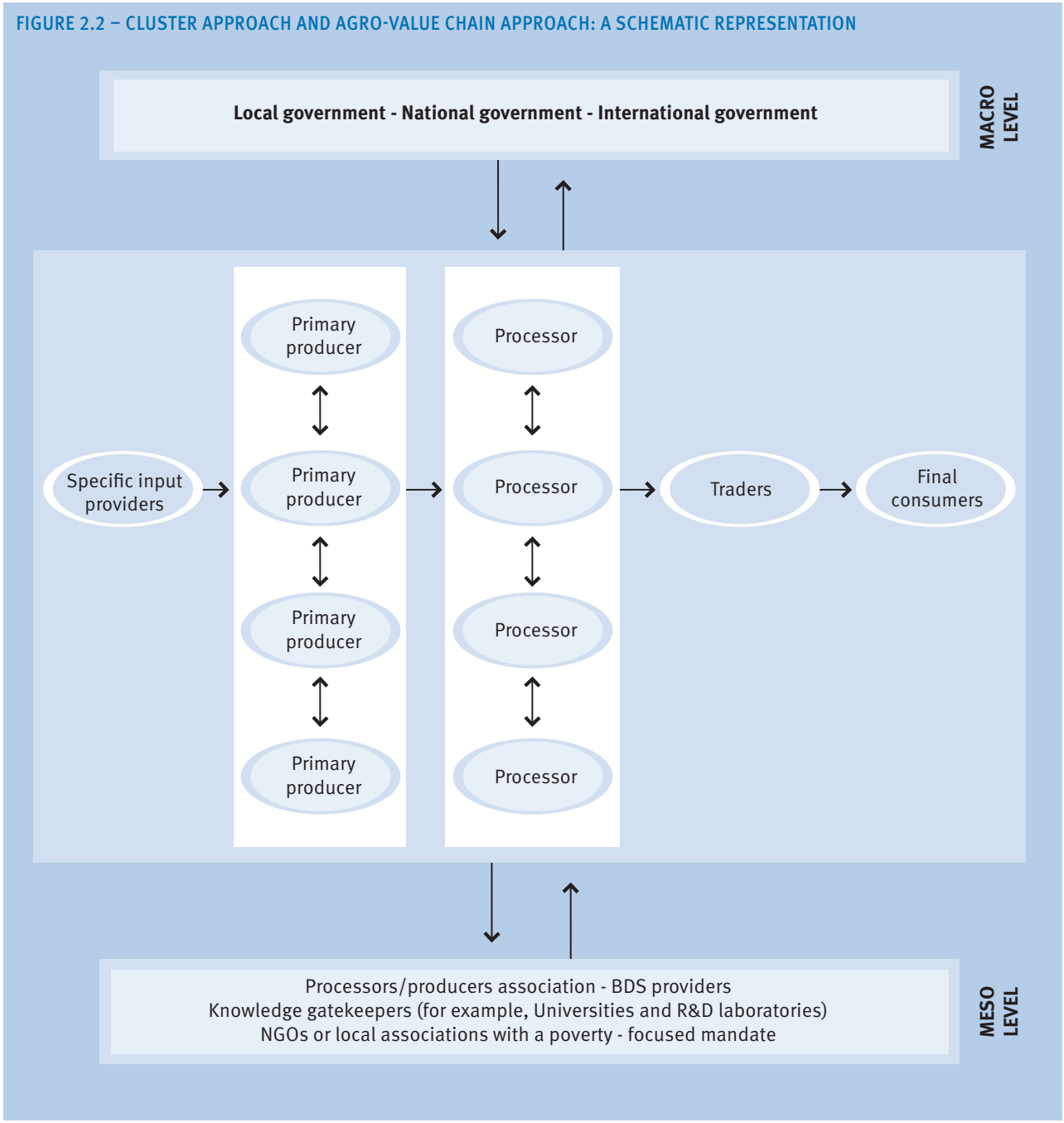
The rationale to merge the two policy approaches is that it allows to better address the situation of backwardness of agribusiness sector in many developing countries which calls for actions inducing its structural transformation and, in particular, creating value along the entire supply chain. This requires, above all, trust among stakeholders along each segment of the value chain. Creating this culture of trust entails a shift in paradigms that allows formerly antagonistic stakeholders to come together to address key obstacles and meet common objectives. Collective actions are the cornerstone of cluster competitiveness. It is important to consider that the costs related to collaboration increase in contexts, such as developing countries, where institutions are weak and often unable to exercise control and enforce sanctions that reduce the risk of default and opportunistic behaviours. In addition, low levels of trust hamper interaction among firms as well as firms and support institutions, reduce their propensity to information exchange and hinder the development of business partnerships.

At the same time, given the presence of heterogeneous actors and the complex nature of their interactions, the design of the system of governance is a crucial element for the success of any cluster and value chain development policy. In developing countries there is the tendency to have an informal organizational structure. This points out to the potential role of the public-private partnership in favouring the development of 'intermediate representative bodies' and building the capacity of such associations to promote and undertake collective actions.

Another element which is central for an integrated approach is the institutional capacity-building, in particular for local governments and municipalities given the crucial role that these institutions might play in sustaining the momentum of collective activities. The pilot initiative described in the first part highlights the importance of designing an adequate multi-level governance involving national governments as well as third-party stakeholders, such as financial institutions, universities,and educational institutions, industry associations etc. Thus, for any good result to be achieved policy making bodies and support institutions must also cooperate with each other. As the present pilot initiative has shown such a cooperation may be further enhanced through creation of sector specific advisory and monitoring bodies (e.g. project-specific steering committees) that offer a space for discussion among all relevant stakeholders.

As we have learnt from the analysis of the 'Edible-Oil Value Chain Enhancement' programme, the complexity of interventions requires expertise in various areas. A well-designed division of labour among UN agencies is therefore likely to further increase efficiency of interventions. Agencies have specific strengths, and combining and coordinating these strengths will prove helpful in dealing with the diverse actors and the specific challenges they are facing. In a sense such a division of labour among agencies is similar to the division of labour in a value chain: agencies are to a certain extent specialized and they have specific strengths, thus they can offer specific support services in specific contexts to different actors in the value chain. Yet, as in a value chain, this will also require efficient and well-governed coordination of agencies.

FIGURE 2.2 – CLUSTER APPROACH AND AGRO-VALUE CHAIN APPROACH: A SCHEMATIC REPRESENTATION



Additional suggested readings

Ceglie G., Stancher A. (2010) Cluster development for pro-poor growth: the UNIDO approach, Business, Investment and Technology Services Branch Technical Paper Series n° 18.

Coniglio N. D., Prota F. (2012) Natural and Agro-Resources Based Clusters (NARAC) in Developing Countries: a methodological framework, Report prepared for the UNIDO.

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Oyelaran-Oyeyinka, B., Mc Cormick, D. (eds.) (2007) Industrial Clusters and Innovation Systems in Africa. Institutions, Markets and Policy, United Nations University Press.

Porter M. (1998) On Competition, Boston: Harvard Business School Press.

UNIDO (2010) Cluster development for pro-poor growth: the UNIDO approach, Technical paper series, Vienna: UNIDO.

1 Roepstorff T. M., Wiggins S. (2011) New global realities governing agribusiness, in K. K. Yumkella, P. M. Kormawa, T. M. Roepstorff, A. M. Hawkins (eds.) *Agribusiness for Africa's Prosperity*, Vienna: UNIDO.

2 In this Introduction we refer to the African context as a paradigmatic example; indeed, our considerations may also apply to less-developed countries in other continents. For a detail ed analysis of the profile, challenges and potentials of agribusiness in Africa, see K. K. Yumkella, P. M. Kormawa, T. M. Roepstorff, A. M. Hawkins (eds.) *Agribusiness for Africa's Prosperity*, Vienna: UNIDO.

3 Agribusiness is a broad concept used to mean farming plus all the other industries and services that constitute the supply chain from farm through processing, wholesaling and retailing to the consumer. Agro-processing is the subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector.

4 Jayne T.S., Mather D., Mghenyi E. (2006) *Smallholder farming under increasingly difficult circumstances: Policy and public investment priorities for Africa*, International Development Policy Syntheses. Jayne T.S., Yamano T., Weber M., Tschirley D., Benfica R., Neven D., Chapoto A., Zulu B. (2003) Smallholder income and land distribution in Africa: implications for poverty reduction strategies, *Food Policy* 28(3), pp. 253-275. Zezza A., Carletto G., Davis B., Karfakis P., Stamoulis K., Tasciotti L., Winters P. (2006) *Heterogeneous Access to Assets, Markets and Agrarian Institutions: Evidence from Household Survey Data*, Background Paper for the World Development Report 2008, Rome: FAO.

5 The main constraints of the small agro-industrial enterprises in the Sub-Saharan Africa context are: limited market access; reliance on agricultural raw materials that are of highly variable availability and quality; poor access to inputs and to appropriate information on technologies and market demand; weak managerial capacity.

6 The analysis presented is based on information gathered by the authors during a field trip in Ethiopia in February 2013 and on background material. Given that at the time of the drafting of the Report the project is still ongoing (although close to its conclusion), our aim is not to provide an evaluation of the results obtained but rather to analyse the approach adopted and, in particular, the potential benefits and challenges that similar joint projects might face.

7 Projects financed by the MDG-Fund present the novel feature of a joint implementation of the programme by a group of UN agencies. Although inter-agencies cooperation is not novel in itself, the MDG-Fund requires a 'deep integration' in the sense that the joint-programme is jointly planned, designed managed and implemented.

8 World Bank (2009) World Development Indicators 2009, Washington D.C.: The World Bank.

9 IFAD (2013) Rural Poverty Portal: Ethiopia, http://www.ruralpovertyportal.org/country/home/tags/ethiopia.

10 Addis-Modjo Edible Oil Complex P. Co is a former State-Owned-Enterprise that was privatized in 2008.

11 The "Delivering as One" initiative takes its initial steps from a report issued by a UN panel established by UN Secretary General Kofi Annan in 2005 with the aim to work more coherently and effectively across the word in the areas of development, humanitarian assistance and environment protection.

12 In both selected clusters, the processors formed a legal entity, Private Limited Company (PLC).

13 In Ethiopia farmers are organized into primary cooperatives and, in turn, primary cooperatives are members of a Farmer Union.

14 The formal linkages that have been created have substantially reduced the incentives for adulteration of the oil seeds. The processors have agreed to pay a premium over market price in return for higher seeds quality that is achieved thanks to seed-cleaning procedures. Often adulteration of seeds is done by traders and middlemen and hence the reduction of the nodes of the value chain has positive indirect effects on raw material's quality.

15 The exposure visit to India was received particularly well both from local Ethiopian policymakers and edible oil processors. Technical assistance was also delivered by Indian experts in edible oil processing. This component highlights the importance of South-South cooperation due to the relatively shorter distances in terms of technology and institutional settings.

16 For instance some processors have introduced seeds heating systems which enable to obtain a higher rate of extraction of edible oil and more efficient semi-refining systems.

17 We refer the reader to the interesting contribution of Staatz J. (2011) Enhancing agricultural productivity, in K. K. Yumkella, P. M. Kormawa, T. M. Roepstorff, A. M. Hawkins (eds.) Agribusiness for Africa's Prosperity, Vienna: UNIDO.

18 The more prominent agencies carrying out value chain interventions have even developed their own value chain approaches with more or less full-fledged methodologies and tools that they follow.

19 In Africa there are interesting case studies of value chain development: citrus (from South Africa), clothing (from Mauritius and South Africa), cocoa (from Ghana), coffee (from Kenya, Ethiopia, Tanzania, and Uganda), cotton (from Tanzania and Zimbabwe) and fresh vegetables (from Kenya and Tanzania) (see for more details Gibbon P. and Ponte S. (2005) Trading Down, Africa, Value chains, and the Global Economy, Philadelphia: Temple University Press).

20 Food agro-industrial development is closely linked to the performance of the agricultural sector, since it is its main source of basic raw materials. Close vertical links between agriculture and agro-industry are essential to ensure that raw material supplies are available at the time and in the quantity and qualities required for the production line. At the same time, agro-industrial development is critically important for the expansion and diversification of the agriculture sector. Development of the agro-industrial sector creates opportunities for making a significant contribution to the transformation of agriculture and, by extension, to the development of the economy as a whole.

21 For instance, the UNIDO approach to agro-value chain analysis and development focuses on the relevance of agro-value chains for pro-poor growth and to ensure sustainable development. We refer the reader interested in more methodological details to the following publication: UNIDO (2009) Agro-Value Chain Analysis and Development. The UNIDO Approach, Vienna: UNIDO.

22 See among others Porter M. (1998) On Competition, Harvard Business School Press, Boston.

23 While the general aim of a cluster initiative is common, the methodologies of implementation might differ according to the agency that implements the actions in the field. For instance, UNIDO has a long tradition in cluster development policy, we refer the interested reader to the web sites of the agency for further information www.unido.org.

24 Almost any type of national policy or donor programme in the field of private sector development somehow directly or indirectly influences value chains. This is the case, for example, of policies aimed at improving overall investment conditions, attracting foreign investment, providing better business services, or increasing the competitiveness of national SMEs (and hence their 'value chain readiness'). This makes it impossible to establish a clearly delimited set of 'value chain policies'. Conversely, adopting a value chain perspective is often useful to understand the impact of generic private sector policies.

25 At the same time there are several elements of the value chain approach which can enrich the cluster development approach. The focus of the value chain approach on the importance of market potential is the first element of cross-fertilization for a joint approach. In fact this element is often underrated in cluster development initiatives which, on the contrary, tend to focus on 'bottlenecks' affecting technical and productive upgrading. Moreover, the emphasis on building synergistic relationships among actors located at different points of the value chain opens the door to an approach that is designed to address constraints at various stages of the production cycle, including those among farmers/primary resource producers and enterprises which process primary inputs and products.

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