Regional Approach to Developing Industrial Clusters and Poverty Reduction: A Case Study of Vietnam

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Abstract: This paper aims to develop a framework for a regional approach identifying the connections from rural areas to urban areas and growth centres, and clusters' impact on poverty reduction. We identify cluster development opportunities in different regions of Vietnam to create a pro-poor impact, in rural areas that otherwise have been marginalised from economic growth; this could include key pro-poor commodities and job generating industries and services. By regional approach, the paper maps growth centres and connect poor rural areas that can benefit from cluster development. Using three case-studies of Vietnam, we recommend a number of regional policies that would promote pro-poor growth and achieve poverty reduction from spill-over effects from urban centres as well as identify investment types for linking rural development with urbanisation and towns, based on cluster initiatives.

Keywords: Cluster, regional development, poverty reduction.

1. Introduction

Vietnam's poverty reduction and economic growth achievements in the last ten years are one of the most spectacular success stories in economic development. The scale and capacity of the economy have increased continuously, with GDP growth of about seven per cent on average. The economic structure of Vietnam during last ten year was relatively stable, with adjustment in a reasonable tendency from agriculture to industry and service. Rapid

economic growth is arguably the main driver of rapid poverty reduction in Vietnam.

Vietnam is administratively divided into three regions (Northern, Central, and Southern) and six socio-economic sub-regions (according to the SEDS 2001-2010). These sub-regions consist of Red River Delta, Northern midlands and mountain areas (including North East and North West), North Central and Central coastal areas, Central Highlands, South East, and Mekong River Delta. In reality, economic development has been uneven geographically, hence there is great difference between regions in development standard, infrastructure and living standards; and rich-poor gap between

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regions tends to expand. There are some rural areas of Vietnam that have remained poor. The major constraints in these areas are difficult physical environment, which limits agricultural development and restricts access infrastructure and markets. However, there are also opportunities for development in these hinged on the development areas commodities within different regions Vietnam. Urban centres, especially peri-urban centres, can be seen as market for agricultural products from rural areas; or internal market or intermediate market to link with the national market and international market. Hence poverty reduction can best be achieved by supporting broad based economic growth in a region.

This paper aims to develop a framework for a regional approach identifying the connections from rural areas to urban areas and growth centres, and clusters' impact on poverty reduction. The next parts of paper will overview the economic development and poverty reduction of Vietnam over the past 20 years. The industrial cluster development and its impact on poverty reduction will be analyzed in the section 3. Section 4 will provide three case studies of Vietnam to illustrate the cluster and poverty reduction links. Last section is conclusion with some policy implication.

2. Overview of economic growth and poverty reduction

Vietnam's dramatic transition and growth in the 1990s have been attributed to a series of reforms, known as Doi moi, which began in the 1980s. In the early-to-mid 1990s, measures resulted in rapidly liberalization expanding exports and high economic growth, with real GDP growth averaging 9% per year. Over the past decade, GDP growth was about 7% on average, especially reaching 8.5% in 2007. Due to global economic crisis, the GDP growth rate of 2008 and 2009 slowed to 6.23% and

5.32% respectively, the lowest level in the past decade. In 2010, recession was stalled, the economy recovered and recorded growth rate of 6.78%.

The development gap between Vietnam and other regional economies has narrowed. For example, Thailand's GDP per capita in PPP terms in 1995 was 4.4 times higher than that of Vietnam, which has reduced to 2.7 times in 2009. Similarly, the gap with Singapore has reduced from 27 to 17 times, with Indonesia from 2.3 to 1.4 times, and with South Korea from 13 to 9 times⁽¹⁾.

Over past decade, rural economy and rural living standards have been also improved. Focused investment on rural infrastructure; investment for developing new varieties which have high productivity and quality; increased industrial parks, craft villages... have positively affected on the development of production, job generation, hunger elimination and poverty reduction.

Rapid economic growth is arguably the main driver of rapid poverty reduction in Vietnam. Vietnam's sustained and rapid growth has increased the size of the domestic market and the national economy and improved most of the indicators of social development. On average, each percentage point of GDP growth accounts for 0.37% reduction of poverty rate (see Figure 1). As the results of VHLSS 1993-2009 show, Vietnam continues to make progress in improving the living standards of the population. The poverty rate⁽²⁾ of Vietnam

⁽¹⁾ Cited in The Report of Vietnam Ministry of Planning and Investment to 2010 Consultative Group Meeting on 07-08 December 2010 in Hanoi.

⁽²⁾ Poverty rate is calculated by monthly average income per capital of household.

⁻ In 2004, 2006, 2008, it is measured by the Government's poverty line for 2006-2010 period, considering inflation adjustment as follows:

^{2004: 170} thous. dongs for rural area, 220 thous. dongs for urban area. 2006: 200 thous. dongs for rural area, 260 thous. dongs for urban area.

reduced rapidly from 58.15% in 1993 to 28.87% in 2002 and 10.7% (measured by old poverty line) or 14.2% (measured by new poverty line) in 2010. Poverty rate of Vietnam is now smaller than that of China, India, and the

Philippines. Vietnam has early fulfilled its Millennium Development Goals on poverty reduction; and Human Development Index has also improved together with improvements of growth and people's living standards.

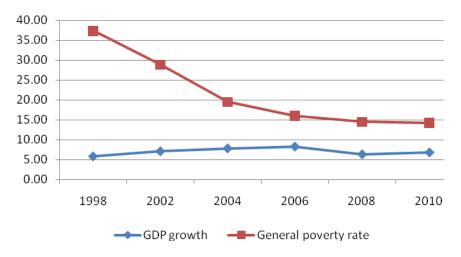


Figure 1: Economic growth and poverty reduction.

Source: GSO

Poverty reduction has been seen in all regions, but poverty incidences are different. The results of VHLSS 1993-2009 illustrate a consistently high poverty rate for Northern midlands and mountain areas and Central Highlands. The highest poverty rates in these two regions have been persistent since 1998. In contrast, the poverty rates for the Red River Delta and South East are now quite low. These facts are relevant to the above analysis of geographical distribution of enterprises. Specifically, the Central Highlands and the Northern Midlands and Mountain Areas with small proportion of the number of enterprises have the highest poverty rates; while the Red River Delta and South East with high concentration of enterprises have low poverty rate. Obviously, the persistence of poverty in the Northern midlands and mountain areas and the Central Highland regions reflects the constraints these regions face in participating in

the growth process. The major constraints are a difficult physical environment, which limits agricultural development and restricts access to infrastructure and markets.

Although economic growth has been the key determinant of poverty reduction in Vietnam, it has been associated with an increase in inequality, particularly a widening ruralurban income gap. The concentration of poverty in Vietnam is in rural areas (about 90% according to UN 2009, GSO 2010). Poverty rates have been reduced, but remain high, particularly among ethnic minorities, which comprise 14% of the population and live mainly in these remote upland areas. If growth only generates employment for the poor but not improve income, then poverty can be reduced but not sufficiently to reduce inequality. Employment generation in poor regions alone will not be adequate to reduce income gap if not associated with improved labour productivity.

3. Definition of "Industrial clusters" and benefits from developing industrial clusters

In literature, industrial cluster is defined as an agglomeration of firms, including small firms, medium firms and large firms, which produce a range of related or complementary products in a particular region. Regional boundaries are not necessarily administrative boundaries. In reality, individual firms in an industrial cluster are often faced with similar challenges and risks, and at the same time they also have similar opportunities. In a industrial cluster, firms that produce products through which the industrial cluster is recognised are called core firms; other firms in the industrial cluster are called supporting firms. Overall, an industrial cluster mainly emphasizes concentration of production, cooperation and coordination among related firms in industrial cluster.

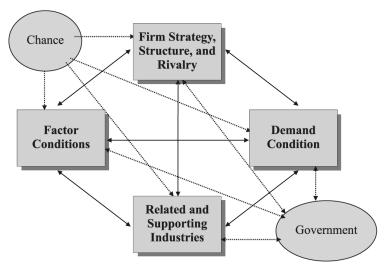


Figure 2: M. E. Porter's model of industrial cluster. Source: M. E. Porter, 1998

Clusters are discussed extensively by M. E. Porter. In his theory of clusters, stakeholders in clusters also include related services providers, schools, academic institutes, associations, distributors, retailers and buyers, etc. M. E. Porter's model of industrial cluster can be shown under value-chain as Figure 2.

Core firms receive inputs from a range of supporting firms through forward linkages and backward linkages. They are material suppliers and firms producing accessories and machinery, intermediate traders (such as traders, exporting firms or importing agents), organizations of providing technical and financial services (such as consultancy of quality, environment, design, power, investment, etc). There are many different interest groups such as specialist business associations and other associations and forums that have contributed to the dynamic development of industrial clusters. All actors, consisting of core firms, supporting firms, services providers, technical and financial organizations, associations and other entities, are stakeholders of industrial cluster.

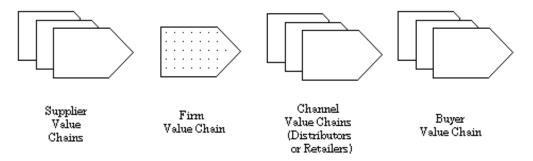


Figure 3: Major components of industrial cluster under value chain system. Source: M. E. Porter, 1980

Geographical areas of various industrial clusters are also very different. As an industrial cluster occurs naturally, it often spreads on an area that at least is large enough so that firms can connect each other. However, because industrial clusters are not legal entities, thus their geographic boundaries are often defined dogmatically. Ideally, the area of an industrial cluster should be large enough to capture a sufficient number of firms and so that firms can exchange and link each other; and should not so large that it constrains linkages and feeling of development spirit of industrial cluster.

Obviously, the market is always a decisive factor of existence and development of an industrial cluster. Without market, a cluster will certainly fall in collapse and failure. For such reasons, when discussing industrial clusters, the value chain cannot be disregarded. Value chain links steps in whole development process; produce and deliver products from producers to buyers. It consists of activities from research and development, material supply, preparation of financial resource, production to distribution of products to buyers and provision of post-sale services as well. Value chain is a system of linkages among entities of industrial clusters that relate producing a commodity; links households, firms and the state with each other and with external markets. including international market. Therefore, it is very important that products or services produced at industrial cluster must be conformable to requirements of market; and must always keep abreast with changes of market demand.

Market access is now the most critical for poverty reduction. One of the important lessons withdrawn from reality is that in order to maintain sustainable growth, private sector has to play important role in business start-up and development. This requires division of labour among three parties, specifically the agency of project implementation must create social capital through meetings, discussions among stakeholders, groups, training for capacity building, etc; private sector strongly contributes to strengthening of social capital through working together and cooperation to gain profits, through enhancing awareness necessity of production improvement, and finally though supplement institutions providing resources for production upgrading.

For "mature" industrial clusters, the maintenance of distribution channels is critical; and determination of market targeted products will be a factor making the differences between success and failure. Therefore, changes in the market must be regularly monitored and evaluated; and contract enforcement is also important for actors in industrial cluster. On this aspect, social capital is very important.

Another benefit from cluster is to help related firms increase their productivity and competitiveness through concentration of production and a division of labor. Economies of scale and scope can allow individual firms to survive and grow by specializing in specific tasks or functions within the production process and by accessing to specialist skills and services and inputs from within the cluster. Similarly, external economies that arise from the agglomeration can result in a significant lowering of costs in accessing inputs, information and labours. Again, this can helps small firms survive and grow in ways that would be infeasible if they operate in isolation. The knowledge spillover in cluster make feasible to small firms to acquire new knowhow, new products and new production techniques that could not obtained through markets. Clustering can thus enhance the individual capacities of small firms to access markets, and acquire skills, knowledge, information and credit. With all above mentioned benefits, the clustered firms can higher value-added products improving productivity, product quality and services.

Clustering can also promote collective capacity. In addition to the direct economic benefits that passively accrue to the small and medium firms by virtue of their location within the cluster, there are significant gains from active local collaboration that clustering can set into motion. Local cooperation, both individual firms and cluster institution can strengthen the ability of cluster actors to compete in the markets by sharing costs, by engaging in join tasks or functions such shared marketing and distribution. Moreover, such form of joint action can help clustered firms confront external threats and challenges and face vulnerabilities. These external challenges are

pronounced as local clusters engage in global market. Globalization refers to the increasingly rapid flows of capital, goods, services, people and ideas across borders, can help bring local actors in to global markets and enhance their income earnings opportunities. However, globalization can also potentially increase vulnerability of local actors to sudden changes in global demand, in trading rules and in financial stability. Thus, with globalization is there also greater instability vulnerability. Clusters can help small and medium enterprises (SMEs) reduce their exposure to exogenous shocks and risks. Local institutions such as business associations and collective service centres can help clustered firms acquire the skills, the technical abilities to reduce their vulnerability to the exigencies of globalization, thereby enhancing the well-being of workers and producers.

Local initiatives and local collaboration are themselves often strengthened by local social capital. Clusters tend to have a strong presence of social capital, which can take the form of shared norms and/or common identities. This can, potentially, help reduce vulnerability, help flows of knowledge within the cluster, provide the basis to strengthen local institutions, and help firms upgrade. But social capital can also serve to raise local competition as much as it helps local cooperation. Divisions within communities can reduce local cooperation and serve to worsen poverty impacts. Also we need to note the differentiated ways in which social capital works for different types of firms (large versus small) and workers (men versus women, or high versus low castes). Finally, it is important to recall that social capital is not static. Its forms, and how it works, can change over time. In particular, it is affected by economic changes (and growth) within the cluster.

4. Industrial clusters and poverty reduction

Industrial clusters are often regarded as a tool for improving productivity and competitiveness of firms, industries and the economy as a whole. However, scholars and policy makers recently have increasingly paid attention to the impacts of clusters on poverty reduction and improvement of clustered population's well-being. The links between clusters and poverty reduction can be identified on the benefit aspects of clusters, including cluster features, cluster process and cluster dynamics.

4.1. Types of industrial clusters

In literature, there are many types of industrial clusters. Namely:

- Modern urban clusters and artisanal rural clusters: The former serves large metropolitan and export markets, while the latter caters to more local demands.
- Dormant clusters and dynamic clusters: Dormant clusters at one end manufacturing simple items for poor rural consumers and providing distress employment for those with limited income generating options. Dynamic clusters at the other end where firms are closely networked and can enter wider, even global, markets.
- Incipient clusters and mature clusters: Incipient clusters those at an early stage of industrial development, usually located in poor areas, producing for local markets with simple technologies and labour skills. Mature clusters relatively more advanced in terms of technology and skills, often producing for global markets and thus vulnerable to global competitive pressures.

It is necessary to consider which types of clusters are particularly significant in

employment and income generation that could have a greater impact on the working poor. Obviously incipient or survival clusters are the first choice in terms of direct poverty impacts. But more mature clusters can also have an impact on poverty by generating employment and incomes for relatively low waged workers and their households and for the indirect effects on the wider economy. Incipient clusters may not survive in the face of growing market whereas supporting mature competition, clusters may result in more sustainable development for local communities and poverty reduction. The critical point, in terms of cluster features and their relationship with poverty are the location of clusters, the type of sector that a cluster is engaged in, the nature of firms within clusters, and the types of employment the cluster generates. All affect the well-being of cluster-based workers and producers, and are directly relevant to poverty.

4.2. Locations

Poverty incidence can vary sharply in the developing countries, and between regions in a country. Historically, rural poverty has accounted for a significant proportion of total poverty. This underlines the importance of farm incomes on the one hand. non-farm employment can be critical to the survival of poor rural households on the other hand. Rural clusters, especially in agro-processing and agroservice activities that rely heavily on casual, landless and family labour, can be potentially providers of critical income for the rural poor. Rural to urban migration is another choice taken by the rural poor to improve their livelihoods and capabilities. However, nonfarm migration may reduce the presence of key skilled labours in the rural economy, and make particular groups of the rural population (such as women, children and the elderly) more vulnerable. Rural to urban migration also fuels the fast-growing urban informal sector, which results in the fact that urban poverty is significantly growing compared to rural poverty. Households who fall within the urban informal economy often have levels of income and consumption below the poverty line. Many clusters are emerged in informal settings; and this sector can also provide an environment for more dynamic clusters. For example, many of export products of developing countries originated from clusters in informal settings.

4.3. Sectors and firms

The types of industries and firms within clusters also have influences on poverty. It is in the belief that clusters with a predominance of SMEs will largely and positively impact on poverty reduction by using more labours; generate employment and income for labours and their households. Therefore, many clusters in the developing countries are to be found in labour intensive industries such as manufacture of shoes, garments, wooden furniture and food processing.

4.4. Employment

Many of the labour intensive sectors, where obvious evidence of clustering exists, attract a substantial pool of unskilled workers. The nature of skills can act as a proxy to identify the poorest; generating employment to unskilled labours is likely to have a stronger pro-poor effect than skilled labour. Although it is often noted that increasing skilled labour and incomes to skilled labour may generate greater multiplier effects that have a wider poverty impact, but it is necessary to distinguish between clusters where unskilled labour predominates from with clusters predominantly skilled labour.

Clusters are always dynamic. They evolve as a consequence of local and external linkages. A key process of change within clusters comes about through local upgrading. This results in enhanced human capital and improved technological capacities for firms and enhanced capabilities for workers and small producers. In what ways does such upgrading improve the abilities of clustered actors to address poverty concerns? This leads to a more dynamic framework for understanding the growth trajectories of clusters and their impact on poverty reduction. In recent discussions on cluster upgrading, there has been consensus that cluster raises the competitiveness of firms, improves their ability to appropriate a larger share of value added, and enhances their position within global value chains through distinct forms, including product, process and function upgrading.

Process upgrading means that firm restructures production system or applies more advanced technology to make the same type of product with higher quality or lower price or both.

Product upgrading means that firm transfers to using the new production line to make the different type of product with higher sophistication.

Function upgrading means that firm transfers to, strengthens its ability to undertake the new function in value chains such as design, marketing, etc.

Why is cluster upgrading significant for poverty? Process upgrading will expand the production scale, generate more employments, and raise incomes for related households; at the same time, this can enhance efficiency and productivity, thereby raise incomes for related workers and investors.

Product upgrading means that firm make products with higher sophistication, higher

value-added, and thus create new employments or/and raise incomes for related workers and producers.

Upgrading not only relies on local and external linkages, it also has consequences for such linkages. The process of upgrading is often determined by the nature of governance of ties within the cluster, as well as linkages between clustered actors and external actors within the value chains in which the cluster involves. Global lead firms can exercise significant power in determining the actions of local firms, and thus the autonomy of clustered firms to engage in tasks that enhance their human and technical capacities. Moreover, external ties can over time erode local linkages and weaken cluster governance.

Therefore, clusters have to be seen in the context of dynamic trajectories, in the process of movement and development, where certain types of producers and workers gain and others lose. For example, firms' upgrading of technology and position can increase the demand for skilled labours, at the same time lower the demand for unskilled labours, thus reduce incomes for their families. Thus, central to an understanding of clusters and poverty is the issue of difference, namely the reduction of poverty for whom, which types of firms and which types of workers? Moreover, within a dynamic process of change, how can negative effects be minimized and positive effects maximised through better policy initiatives.

4.5. Establishment of industrial clusters and its role in poverty reduction

Clustering sets into motion a range of potential benefits that can directly affect the poor, including waged workers, home workers, own-account workers as well as small entrepreneurs. This can be through externality gains, joint action, and local social capital.

sum. existence. movement development of clusters have positive effect on poverty reduction through: (i) generating more employment for the poor, vulnerable groups by expanding the production scale of firms, related actors within clusters, developing markets of products and services provided from clusters; (ii) helping poor households access to information, access to and learn new methods from realities or other households within cluster, thereby they can improve their production, enhance efficiency, improve productivity and raise incomes for their families; (iii) improve productivity of clustered individuals and firms, thereby raising their incomes; (iv) upgrade production and business activities to the value chain with higher valueadded, thereby gradually upgrading the value chain of cluster to involve in the value chain with higher value-added, thus raising incomes and welfare for related actors, including the poor and people who were once poor.

If the cluster is expanding production scale, expanding the market, at the same time, aims to create new employments and upgrade the quality of employment for the poor and the vulnerable group, it will contribute much to the effort of poverty reduction. Thus, the clusters have great impact on poverty reduction if they have the following characteristics:

- Manufacturing products that have market and potentials of market;
- Production is concentrated in rural areas with high poverty rate;
 - In labour intensive sectors;
 - With involvement of many SMEs.

If the cluster develops and upgrades successfully to higher value chain, its positive impact on poverty reduction will be replicated and improved; it not only helps local people escape from poverty, but also helps them become rich.

5. Analysis on some rural clusters and their impact on poverty reduction in Vietnam

5.1. The cardamom cluster in Lao Cai province

The Northwest is the poorest region of Vietnam, and its poverty rate is 39.4 percent. The region has 43 of the country's 61 poorest districts. Cardamom is the most valuable non-timber forest products sourced in Northwest Vietnam.

Lao Cai is one province of the Northwest, has about 7,000 hectares of cardamom. Lao Cai has many advantages in terms of natural conditions and climate for cardamom planting and production. Cardamom is a product of high economic value, but this sector has some constraints, namely:

- (1) Low productivity and yield of cardamom (150 dried kg/ha/year, or even as low as 50 dried kg/ha/year). The main reason is because most farmers have not learned to apply good cultivation techniques. Furthermore, production of cardamom seedlings does not follow appropriate technical guidelines.
- (2) Poor quality of dried cardamom: Although the quality of Lao Cai cardamom is acceptable to many traders, its potential is currently constrained by two factors: (i) Immature harvesting that result in lower yields and quality of final products; and (ii) Inefficient and unsustainable drying technology.
- (3) Lack of quality standards for the product and market approach. Over 90% of Lao Cai cardamom was for the Chinese market. However, stakeholders in the cardamom value chain and related departments still lack knowledge and information of cardamom in other markets (types of product, prices, usage, quality standards for products, export-import companies, etc.). This leads to limited access to other markets and low competitiveness.

(4) Lack of incentive policies for cardamom development.

It is believed that the lack of capacity in providing necessary production and marketing services for the development of the cardamom value chain; and weak links between private actors are key determinants of poverty in the province. Since 2008, with support of Netherlands Development Organization (SNV), cardamom cluster/value chain has been improved. Development of the cardamom value chain is based on four key factors: (i) Market development; (ii) Productivity improvement; (iii) Quality improvement and an (iv) Enabling business environment.

Stakeholders of the cardamom cluster in Lao Cai include the following key actors:

- The Department of Agriculture and Rural Development (DARD) co-ordinates government stakeholders and service providers.
- The Agricultural Extension Centre (AEC) provides technical support to cardamom producers in sustainable cardamom production, improvements in drying technology and access to essential information.
- The Departments of Trade and Industry (DTI) is responsible for providing cardamom market information to producers and traders, thereby empowering trader associations and facilitating market links.
- Spice export firms in Hanoi are the potentials of the cardamom chain and key actors in developing cardamom export markets.
- The cardamom business associations can support to create a sustainable business environment with commercial service providers through market-based solutions.
 - The cardamom farmers.

With the development of a cardamom cluster/value chain, productivity, value, and

quality of cardamom in the province increase 15-20%⁽³⁾. This sector has been playing a vital role in poverty reduction in the province. For example, development of cardamom cluster help poverty reduction for about 12,000 households among 70 upland communes in 5 districts in Lao Cai and Lai Chau since the year 2000, when cardamom trade activities between Vietnam and China were expanded (Le Anh Tuan, 2010). Especially, for Bat Xat district, annual income from cardamom planting, cropping and processing is about 80 billion VND, which accounts for 20% of the district agricultural output. Implementation of the sustainable Convention of cardamom production management, which is made and implemented by village farmers, reduces 70% of the area for immature harvest. Income of 400 households of cardamom production increase $10-20\%^{(4)}$.

5.2. The Rattan cluster in Quang Nam province

In Vietnam, the rattan clusters are defined as traditional cluster villages. There are about 713 rattan and bamboo villages in Vietnam⁽⁵⁾. Over the past years, rattan sector has been

developed tremendously in Quang Nam, and expanded rapidly in the rural areas of the province. This is because the rattan sector has absorbed a considerable number of idle labours in rural areas. According to Quang Nam PPC report, an average volume of 30% total raw rattan is imported from the neighbouring provinces such as Nghe An, Da Nang, Quang Binh, Quang Tri, and Quang Ngai) and from Laos as well.

For poor and landless households in Quang Nam, rice is the most important source of their income, and rattan is the second most important source of income. Rattan is important for supporting livelihoods and directly involved in poverty alleviation of poor communities of ethnic minorities who live near forests in mountainous areas of Quang Nam. As Thai Thanh Ha et al. (2005) found, income of harvesters from rattan occupied about 40% of total household income in the communes that have large natural resources and about 10% household income in communes that have moderate rattan resources.

The linkages among the actors in the rattan cluster in Quang Nam are depicted in Figure 4.

⁽³⁾ See at http://www.mard.gov.vn/Pages/news_detail.aspx?NewsId=17366.
(4) See at http://www.laocai.gov.vn/sites/sokhcn/ungdungtienbokhcn/ungdungchuyengiao/Trang/20110705154157.aspx.

⁽⁵⁾ See Thai Thanh Ha et al. (2005).

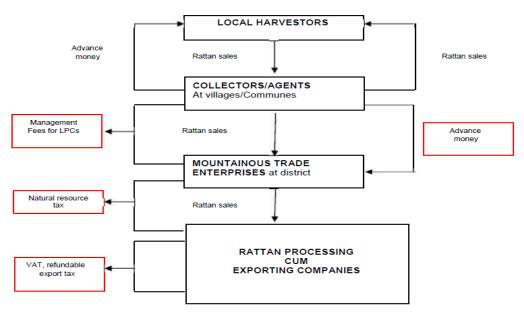


Figure 4: Relationship among clustered actors in rattan value chain in Quang Nam. Source: Thai Thanh Ha et al., 2005

Looking at Figure 4, there are four clustered actors in rattan value chain in Quang Nam province, including:

- Local ethnic rattan harvesters

Local rattan harvesters are mainly ethnic people. They mainly live in the mountainous districts of Quang Nam province such as North Tra My, South Tra My, Phuong Son, Nam Giang, and Dong Giang.

- Commune rattan collectors/Rattan collecting agents

The commune rattan collectors/agents are mostly Kinh ethnic people who have small groceries in the communes for selling such things as rice, salt, fish sauce, etc. The rattan collecting agents do not have groceries because they only specialize in rattan trading. Their job is to go to the commune for rattan trading and then re-sell them to the processing workshop. They are the middle men between the local harvesters, the processing enterprises and export companies.

- Mountainous trade companies at district level

In every district at the mountainous areas, the district authorities establish the mountainous trading companies which are organized vertically to collect rattan products. There are six mountainous trade companies in the mountainous districts of Quang Nam province. These companies establish networks of collecting agents and outlet at the commune level in order to trade for the rattan raw materials.

- Rattan processing and exporting firms in Quang Nam

The rattan processing and exporting firms in Quang Nam are all small and medium firms.

The rattan cluster in Quang Nam generates employments for over 3,500 people (not including rattan harvesters). According to the WWF (2003) report⁽⁶⁾, 61% of these profits are for the processing and exporting firms, and the local rattan harvesters just enjoy 29% of the profits while collectors only take the smallest share of the profits because of their high payment of the natural resource tax and the transportation costs.

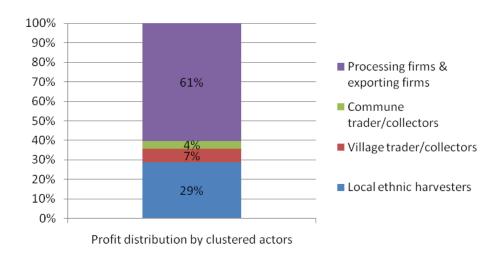


Figure 5: Average profit distribution by clustered actors. *Source:* Thai Thanh Ha et al., 2005

5.3. The cassava clusters

The cluster/value chain cassava characterised by a high participation of the poor as cassava farmers, as micro processors of starch or as employees. Poor farmers are able to apply high yields varieties of cassava and this helps them to be linked with the starch processing sector. Because high yields varieties of cassava can be grown in low quality land, and farmers still acquire a reasonable yield without much requirement of irrigation, fertilizers and pesticides. The dissemination of high yields varieties of cassava follows the growth of the starch processing sector in the country. In some regions of Vietnam, the research and extension centres have played a crucial role in facilitating the adoption of high yields varieties of cassava in compliance with the requirements of the starch processing sector.

Starch processing micro enterprises can develop with tiny investment. The traditional method is through manual means. Small capital

and simple equipment and facilities are required, which are most often easily available in farmer households. This processing technique has created a traditional non-farm activity, and it is very appropriate for the poor and underemployed farmers since it does not require much capital.

The development of cassava value chain has created significant employment opportunities not only in the cassava/starch production sector, but also in the emerging sector of starch by-product sector. Starch by-product can in fact be utilised for animal feed that is showing a significant growth, especially in the South of Vietnam.

However, although the poor involve in the cassava value chain, their benefits from participation is very limited. This is because the following reasons: (i) Lack of governance: The value chain actors operate in an un-coordinated and un-organised way, which negatively impacts on the generation of value added and the coordination existing between value chain participants; (ii) Presence of many layers such

⁽⁶⁾ Cited in Thai Thanh Ha et al., 2005.

as village assemblers, commune assemblers, cassava traders and trade facilitators results in high transaction and transportation costs and a lower profit margin occurring to cassava farmers; (iii) Weak market coordination: most of transaction in the cassava value chain take place in spot markets, and rare chances are available for contract farming and information sharing between the ultimate producers and processors, as well as wholesalers and retailers within the cassava value chain; (iv) Low incentives for upgrading; (v) Low generation of value: The cassava value chain is recently operating on a low-quality market segment, mostly composed by un-modified starch, there are few incentives to promote the generation of higher value along the chain.

6. Conclusions

Some rural areas in Vietnam have remained poor. The major constraints in these areas are difficult physical environment, which limits agricultural development and restricts access to markets. A new approach for poverty reduction is enhancement of industrial clusters that linking poor rural areas to growth centres. Clustering sets into motion a range of potential benefits that can directly affect the poor.

This paper develops a framework of developing the regional approach of industrial clusters for poverty reduction, identifying the connections from rural areas to urban areas and growth centres, and clusters' impact on poverty reduction. Industrial cluster is argued as a tool for improving productivity and competitiveness of firms, industries and the economy as a whole; and poverty reduction and improving clustered population's well-being.

Market access is the most critical in clusters for poverty reduction. For rural clusters, periurban centres play a very important role. Urban centres, especially peri-urban centres, are seen as market for agricultural products that are produced in rural areas; or internal market or intermediate market to link with the national market and export market.

With the regional cluster approach, clusters are not restricted by administrative boundaries. Thereby, the strengths of the clustered stakeholders in various provinces and areas can be supported, used in the best way to serve their own interest. However, there is no regional administrative government in Vietnam. Therefore, the support policies for the regional clustered stakeholders require the cooperation of related provincial People's Committees and donors.

The paper shows the principles for selecting clusters and policies of developing clusters for poverty reduction are (i) Fairness and efficiency in poverty reduction; (ii) Beyond administrative geographical boundaries; and reduction (iii) Poverty and growth. Accordingly, the orientations for selecting a particular cluster and particular value chain include: (a) Select a particular cluster and particular value chain in a given area to be "centre"; thereby coordinating policies or support measures comprehensively to foster the operation and development of the whole cluster and the value chain effectively; (b) Together with the related departments, implement improvement of the provincial business environment by developing and implementing of improving provincial programs competitiveness index; and (c) The project can support of infrastructure, micro-credit, training, innovation of technology or/and production methods. providing marketing, market information, access to distributional channels, etc.

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