PROJECT
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SME Cluster Development

Promoting industrial clusters in Vietnam: a proposal

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Executive summary

The economic rationale for industrial clusters policy

The existing empirical evidence suggests that there is a compelling case for cluster development policy; in particular, in developing countries like Vietnam.

Cluster policy are justified by the **existence** of **market** or **systemic failures** which might prevent a cluster to deliver its full economic potential. There is a strong evidence that clusters produce **positive externalities** and that the concentration of economic activities is associated to **productivity gains**. The channels through which these gains arise are the following: **technological externalities**, **finer division of labour within the local economy**, **better access to capital and credit market**, **development of a "cluster brand"**.

The benefits of clustering are magnified by the existence of a network of interconnected actors and by the density of these "connections". This implies that, in particular in initial phases of clusters' formation, policy can play a large role in **reinforcing and promoting 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.

The agglomeration of economic activities in the geographical space is conductive not only to positive externalities but might also generates some **negative external effects**. For Vietnamese policy makers who are considering to implement cluster development policies, it is important to be aware also of potential drawbacks of this kind of policy measures. The typical negative effects, extensively emphasized by geographers and economists, are **congestion costs** due to co-location in a limited geographical area of economic activities (pollution, traffic and congestion, excessive increase in land rents). It is important to notice that these costs are not specific to clusters but are associated to spatial concentration of economic activities in general. Another possible disadvantage is the so called **lock-in effect**. When the cluster is characterized by the existence of one or few leader firms and by a dominant technological paradigm, we can assist to an over-specialization and to a reduction of dynamism and inventive and innovative activity within the cluster. The existence of a dominant technology might reduce the incentive to move away from it and when a new technological paradigm emerges the cluster might observe a sudden erosion of its competitive advantage ("negative path dependency").

Like any policy intervention there are several potential risks in the implementation of cluster measures. Some potential source of risk which emerged by the analysis conducted by UNIDO international experts during the fieldwork are the following:

- ***Complexity of the policy actions***. Industrial clusters might be highly heterogeneous (according to the sector, specific local characteristics, nature of the players, existence or not of leading firms, life-cycle phase, etc.) and hence there is no universally applicable model of cluster policy. The main risk resides in possible government failures which prevent the possibility to articulate in a coherent and effective way a complex policy measure.
- ***Policy coordination***. Given the heterogeneity outlined above, a prerequisite for a successful cluster policy is the existence of institutional coordination both at horizontal and vertical level. Uncoordinated measure might result in a reduced effectiveness of cluster policy actions and waste of public resources.
- ***Lack of intermediate institution / lack of cluster governance***. This is a real risk in Vietnam where "intermediate representative bodies" such as business associations are still relatively weak.
- ***Rent-seeking behaviours, collusion with political power***. A fundamental aspect of government intervention in cluster promotion is the focus on collective needs and measures which benefits the local economic system and not individual firms or needs. In fact, resources devoted to cluster development should ideally be capitalized in clusters and the local economy rather than end up in the pockets of a few powerful and influent firms.

Notwithstanding the potential risks, it is our opinion that that policy intervention is crucial and might be very cost-effective in initial phases of cluster life-cycle (for instance through initiatives aimed at attracting or boosting potential "pioneer firms" in the cluster or developing vertical/horizontal linkages between firms and other institutions such as Universities and research centres). This is exactly the stage at which most clusters are in Vietnam and hence this policy option - which is greatly connected with the objective of SMEs development (a policy target that the Vietnamese Government has rightly decided to pursue) - should be carefully considered.

Critical factors for the design and implementation of cluster policy in Vietnam

The design and implementation of cluster policy should take into consideration the peculiarity and critical elements of the institutional and socio-economic framework of a country. What follows are crucial policy nodes for an effective policy implementation in Vietnam.

Policy target: identifying and selecting clusters in Vietnam. A cluster development strategy should be defined on the basis of the existing "potential": the government should identify the already existing clusters and the potential "seeds" which might develop into competitive clusters.

Where should the government look? Who and where are the "seeds" of clusters? Significant agglomeration of firms operating within the same sector already exist in many Vietnamese provinces. The number of local SMEs in most sectoral agglomeration is large although foreign Multinational firms and supporting industries often play a key role within the agglomeration. Other important actors in cluster development might – at least in principle – be State-Owned Enterprises (SOEs). In theory, as the economic history of several countries reveals, SOEs represent an import industrial policy tool; hence they might be an important vehicle for the creation and diffusion of knowledge, technological innovation and best practices to the benefit of SMEs. SOEs are mainly perceived by the private sector as a drain rather than a gain; since they still absorb a great deal of public resources although the Government has initiated a process of privatization an structural change.

A risk that should be avoided is the temptation to support all the existing agglomeration of firms, in other words, to spread too thinly the resources devoted to cluster policy. **Clusters to be supported should be selected**. This requires good tools to map and analyze clusters, and investing adequate resources in the exploratory and diagnostic phase before a full scale intervention.

Avoiding institutional complexity. An analysis of the current Vietnamese institutional framework underlines the need for an improvement in coordination of policies both at the ministerial level and between different levels of governments. The existing institutional complexity might represent a stumbling block for the implementation of an effective cluster policy; hence policymakers should ensure that cluster policy does not result in adding a new layer of complexity in Vietnamese policymaking. Based on experience of other countries, the implementation of cluster policy might be seen as an opportunity to implement coordinated and system actions which might constitute a best practices that could be extended to other policy areas.

Supporting industries and clusters' promotion. The adoption of policy measures aimed at facilitating and promoting the location of supporting industries is an explicit policy strategy of the Vietnamese government. The development of **supporting industries (above all local SMEs) is an important component of an industrial cluster policy** insofar these industries can contribute to reinforce the competitiveness of the supply chain.

Reinforcing the innovation system and educational infrastructure. The technological infrastructure and the mechanisms which enable a fluid mobilization of innovation and knowledge are the cornerstone of cluster policy in both rich and poor countries. The fieldwork has highlighted that for the private sector, the current state of the innovation system and educational infrastructure (in particular higher education) is a barrier to the development of successful clusters, and in general to the expansion of individual existing firms.

Do not dream only Silicon Valley. There is a large potential for promoting successful cooperative R&D in many industrial clusters. One perceived risk is the tendency of policymakers to focus mainly on high-tech sectors; although it is understandable and reasonable to aim at the promotion of knowledge intensive sectors this should be realistically seen as a medium-term goal. There is a strong case for supporting knowledge creation and transfer also in traditional sectors – from agroindustry and food processing to furniture, textile and garments and other light manufacturing – or sectors dominated by FDIs (for example, motorbike, mechanical and electronic industry) where Vietnam has a clear and visible comparative advantage.

Boosting the voice of the business sector. The existence of formal bodies which represent the clusters is highly desirable for the implementation of cluster policies. In fact, the existence of a unique body which represents the "voice" of the actors of the clusters helps the policymakers in tailoring the actions more closely to the real needs. A necessary condition for the emergence of effective governance institutions (which really represents the voice of clusters stakeholders) is the development of the private sector and in particular of **strong** and **representative business associations**. With this respect, our field study has pointed out that these institutions are still at their infancy in Vietnam and weakly affect the current design of public policy.

Improving the business environment: a pillar for cluster development. Specific policies for cluster development might be effective only within a general effort to remove obstacles for the private sector, and in particular SMEs that have generally less resources to overcome such

obstacles. During the field study the main elements perceived by the business community and policymakers as being fundamental for doing business in Vietnam are the following: a well-functioning credit market, policies aimed at training a skilled workforce, improvement of the quality of Universities and of the innovation system in general, transparent rules for conducting business, a reduced weight of bureaucratic burden for the firms, fight against corruption, more coordination between different ministries and between central and provincial governments. The implementation of cluster policy should not be done in a vacuum but should be embedded in the general attempt to remove market and government failures which limit the expansion of a competitive and sustainable economic system.

Recommendations on cluster policy development in Vietnam

The identification of clusters. The starting point for cluster policy is to **map** and **analyze embryonic clusters** (agglomeration of firms in which it is possible to find the basic elements, or some of them, that can lead to mature cluster), and investing adequate financial resources in the exploratory and diagnostics phase before intervention. Clusters to be supported should be selected because of their strong presence in the economy, but avoiding one of the main risks associated to cluster policies: picking winners.
The identification of clusters can be top-down, bottom-up or a combination of the two. A statistical method, such as a mapping study based on a high concentration of employment, may be used and complemented by qualitative analyses. Other options include a cluster self-selection process. Moreover, public actors may use selection mechanisms that are competitive (based on an open competition, a call for proposals or similar) or non-competitive (the recipients are designated by the policymaker).

A pilot approach. Given the innovative nature of cluster policy within the Vietnamese context, an optimal strategy would be to adopt a **pilot project approach.** This implies to identify a small number of clusters (between 5 and 10) in which to experiment a set of cluster policy tools. There are several ways for identifying the pilot clusters (in Chapter 4 we present some options). No matter which option is chosen, a mechanism of **independent monitoring** and **evaluation** is fundamental in order to assess the policy experiment, identify weak elements and, eventually, upscale the policy initiative at country-level.

Definition and implementation of cluster policies. Cluster policy calls for **multi-level governance approaches** involving national, regional and local governments as well as third-

party stakeholders (firms, financial institutions, Universities, educational institutions, innovation centres, bridging institutions, industry associations). For any good result to be achieved, therefore, different levels of government, as well as being linked by hierarchical relations, must also cooperate with each other. Moreover, in order to avoid serious distortions, targets must be set by an upper level through technical and political consultation with the lower levels and their implementation must be followed by all levels through continuous diagnostic monitoring.

Together with institutional partnership, social partnership at local level between private and public agents plays a crucial role in implementing cluster policies.

In the light of these consideration we suggest the following allocation of responsibilities among the different levels of government.

The **Central Government** – as a preliminary action - defines a legal/institutional framework which enables the recognition of clusters as a target for specific policy actions and funds a pilot cluster initiative (see previous paragraph). Second, central level co-ordination is necessary to overcome governance barriers that could prevent the realisation of synergies from linking objectives of different policies that could potentially support clusters formation and growth. The central level co-ordination mechanisms that can overcome these biases could be based on **inter-ministerial** and/or **inter-agency committee** in charge of designing cluster programme guidelines and connecting policy interventions which are not explicitly linked with the cluster policies. The inter-ministerial committee could be the political body for regular dialogue and consultation processes between national and provincial governments. Moreover, "**contracts**" across levels of government could be used for joint actions in cluster policy. A contract approach requires the definition of a clear target for policy action as well as a known path to reach that target. Enforcement mechanisms are triggered when parties do not perform their agreed tasks. This approach offers a framework for long-term planning and co-financing (including a number of investments related to cluster policy) between several central level ministries and the province.

The **Provincial Government** appears, in the current Vietnamese framework, to be the most appropriate level for the **implementation** of cluster policies. Given the national institutional framework and the general guidelines defined at central level, local policy makers have the necessary information for tailoring policies to specifics group of firms and adapt policies over time. They have the possibility to put in place precise strategies, stimulating the firms to modify their behaviours in order to create joint-actions and to monitor the progresses and (eventually) modify strategies in order to take into account the dynamic evolution of clusters' interactions.

Embedding cluster policy in SMEs development. The Government of Vietnam has rightly recognized - at all government levels - the importance of promoting the development of SMEs. The implementation of policy measures targeted to SMEs is still at an initial phase with some Provinces more active than others. It is crucial for the Vietnamese Government to consider cluster development policy within the more general framework of SMEs development policy. In fact, the main aim of cluster policy is to boost the competitiveness by reducing the barriers which limit the surge or expansion of a cluster which are typically more severe for micro, small and medium enterprises. Another important reason for coordinating these policies and SMEs policies is the necessity to reduce – as argued above – policy complexity.

Final remarks

From the analysis presented in this Report it emerges clearly a strong case for cluster development policy as well as that cluster policy is difficult to design, since it is not a list of actions, decided somewhere by someone, but a process involving several actors. In the light of the considerations presented in the Report, we report below a final checklist that might help Vietnamese policy makers in the challenging but fundamental process of defining a new policy tool which might greatly contribute, in our opinion, to the general task of promoting the industrial competitiveness of the country.

* **Be realistic**. Define realistic targets, clusters cannot be created from scratch and not all clusters can be created.
* **Be intelligent**. In the choice of clusters, and in the definition of the policy, take account that the "seeds" of a cluster should be in place before activating cluster policy.
* **Be curious**. Investigate what are the specific market failures: clusters are different according to sector, stage of life-cycle, structure of governance etc. and require "tailored" policy and tailored governance structures.
* **Be patient and flexible**. Policy intervention is crucial and highly effective in initial phases of cluster life-cycle, but is much more difficult.
* **Work a lot on local public goods**. Public policy should focus on consolidating and boosting clusters by investing on human capital, promote cooperative behaviour, provide local services and infrastructures.
* **Learn from action**. Induce cooperation and experience sharing among clusters (a cluster club); evaluate the policy measures: a good cluster policy is a matter of policy making learning.

Introduction

The existing evidence suggests that there is a compelling case for cluster development policy, in particular in developing countries like Vietnam. Clusters development policies aim at stimulating and boosting networking and cooperative efforts among different actors (firms, research centres, Universities, public bodies and intermediate institutions) within a defined economic and geographical space with the final goal of promoting competitiveness both at regional and national level.

Given the presence of heterogeneous actors and the complex nature of their interactions, the design of a policy-toolkit and a system of governance for promoting and sustaining clusters is at the same time a crucial (for its success) and challenging task for policymakers. Like a "puzzle", an effective cluster policy requires to be harmonized within the existing policy framework. In fact, it involves a complex set of measures which typically belongs to different policy areas such as industrial policies, land use policies, internationalization policies (export promotion and FDI attraction), innovation and R&D policies, training and education, etc..

Each country has its own peculiarity in terms of socio-economic context and Institutions. Vietnam is following a sustained and largely successful process of transition from planned to market economy. Clusters of firms are already arising but are far from being consolidated. Vietnam is a late-comer in the industrialization process within the world's most dynamic area (South-East Asia): this feature brings both challenges and opportunities for cluster formation.

The aim of this Report is to provide a background analysis and suggestions on the design and implementation of a cluster policy initiative in Vietnam. In particular, the following issues are addressed:

- ✓ What are the most relevant institutions to be involved in the *definition* of a cluster policy?
- ✓ What is the most appropriate level of government to be in charge of cluster policies (national, regional, local)?
- ✓ What are the most relevant institutions that can play a role in *implementing* and *financing* cluster initiatives?

- ✓ What crucial elements of the current Vietnamese institutional and socio-economic framework the policymakers should consider for an effective design and implementation of clusters' policy?

The report is organized as follows. In the **first chapter** we analyze the theoretical background and briefly survey the existing literature on the main feature of industrial clusters and on the economic rationale for cluster policies. In the **second chapter**, we provide a selective review of international experiences on cluster policy. The aim is to highlight an "ideal-type" of institutional and policy framework which allows clusters to fully release their competitiveness potential. A brief analysis of the crucial issues that the upcoming discussion on cluster policy in Vietnam should consider is presented in the **third chapter**. This step is fundamental in highlighting the "crucial policy nodes" that needs to be addressed in order to set-up an effective toolkit for cluster development. The elements considered in this chapter are the result of a fieldwork conducted by a team of national and international experts (including the authors) in Vietnam during July and August 2011. Based on the fieldwork and a benchmarking with other international experiences, in **chapter four** we present some reflections and proposals on the "architecture" of cluster policies in Vietnam. This chapter aims to provide insights for the definition of the governance and, in particular, identify the most appropriate level of government for the different phases/tasks (design; implementation; financing; coordination with other relevant policies).

Chapter 1

Industrial clusters: a theoretical framework

The promotion of clusters has obtained a central place in the toolkit of economic development policies in many developed and developing countries. The main reason for the growing popularity of this industrial policy tool resides on the largely accepted idea that clusters boost the competitive advantage of regions and nations.

In this section we briefly present the theoretical underpinning of clusters and the case for policy intervention aimed at promoting industrial clusters emphasizing its advantages but also potential risks and disadvantages.

1.1 What is a cluster?

Although the purpose of the report is not the definition of what is a cluster, an analysis of its distinctive characteristics is an essential step. According to the most well-known definition, a cluster is a "*geographical concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (for example universities, standards agencies and trade associations) that compete but also co-operate*" (Porter 1998, p. 197)[1]. The above definition contains three **keywords** which allows to operationalize the concept of clusters:

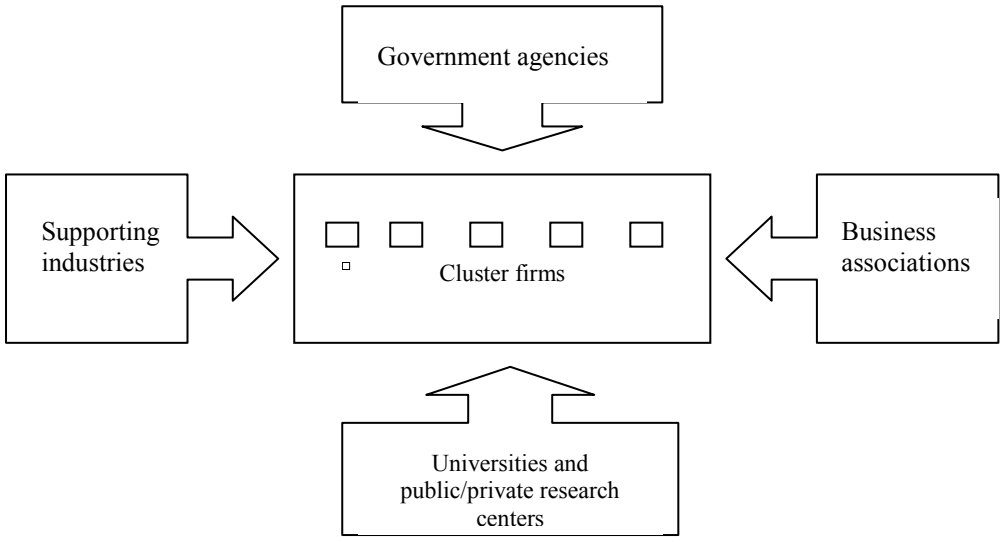
1. ***geographical concentration of related firms and institutions***. Clusters have a geographical dimension within which they operate. Although clusters are "open systems" (i.e. interact with economics agents located in many different areas) it is possible – and desirable in order to target policy actions - to identify precise geographical boundaries. These boundaries typically do not overlap with administrative boundaries (i.e. clusters might be across one or more municipalities or provinces). In addition, the policymakers should be aware that the boundaries of a cluster are not static but might evolve over time;
2. ***interconnections between firms and other institutions (networks)***. A cluster can be considered as an "archipelago" of firms that are related by a dense set of formal and informal interactions. These relationships might be built around the production process (customer-supplier relationships), production factors' markets (ex. labour

[1] Porter's concept of clusters arises from the wide and well-developed literature in the field of regional and urban economics, originating from Marshall's (1920) initial ideas.

market, production of intermediate inputs, development of innovation and technology) and final products markets. Within a cluster several actors might operate: firms, financial intermediaries, Universities and research centres, intermediate bodies such as business associations, local and central governments;

3. ***cooperation and competition among the actors of the industrial clusters***. Firms operate within one or few related industries and it is possible to observe both strong competitive pressures (for instance between service providers or firms serving the same final market) and cooperation for sharing costs, reducing inefficiencies, creating new knowledge or transmitting knowledge and best practices along the production chain.

Figure 1 - A stylized cluster map



The elements outlined above evolve over time following what is known as **cluster "life-cycle"** (Swann *et al*. 1998). The first ***embryonic phase*** is very seldom artificially induced by public policy; the empirical research shows that clusters cannot be created from scratch but are the natural evolution of "seeds" that are localized in the local economy (van der Linde 2003). The initial "spark" is often the result of the seizing of market opportunities by some pioneers (local firms or foreign multinationals) and/or the development in the local economy of an innovative process or product as well as the absorption (and re-adaptation) of knowledge already available in other locations. In the ***growth phase*** the cluster expands both thanks to the growth of existing firms (for instance the pioneers) and to the entrance of new players (spin off / imitation / external investments). The development of the clusters spurs entrepreneurship by reducing the cost of entry for new players, in particular Small and

Medium Enterprises (SMEs). During this phase a great deal of external effects are generated by the co-location of firms and intermediate institutions in a given geographical area and fiercer competition stimulates investments and innovative behaviours. The third stage is the ***maturity phase*** when the processes or products become more and more standardized and new entries are limited due to reduced market opportunities. This phase represents the peak of the development of the cluster and some consolidation and aggregation of players within the cluster often occurs. When the innovative efforts by the main stakeholders of the cluster is gradually reduced and, as a consequence, the competitive advantages vis-à-vis other producers in low cost locations is eroded, a ***decline phase*** is often observed.

A clear awareness of the policymakers of the evolutionary nature of clusters is crucial since optimal policy measures differ according to the cluster's phase. For instance, while in the embryonic and growth phases a support to boost market access or to reduce production costs (for instance by investing in local public goods) might be more appropriate, in the maturity stage it might be fundamental stimulating investment in R&D and innovation.

1.2 The economic case for cluster policy

Clusters are the spontaneous result of a complex interplay of market forces and seldom are the result of public policy; in most cases clusters emerge and prosper in the absence of explicit cluster support policies. One might be tempted to consider this policy tool not effective given the fact that it is difficult (if not impossible) to generate a cluster from scratch or since a cluster will emerge even in the absence of public policy intervention.

The temptation to jump to the conclusion above might be ill-placed since the case for cluster policy relies on the **existence of market or systemic failures** which might prevent a cluster to deliver its full economic potential. There is a strong evidence in the existing literature that **clusters produce externalities**: the actions undertaken by individual actors within the clusters produce benefits for other actors and in turn for the local economy. Clustering of economic activities is associated to productivity gains.[2] The channels through which these gains arise are the following:

[2] The magnitude of these productivity gains is subject to debate. According to the critical survey of Duranton (2011) these gains are positive but not substantial. On the contrary Porter and other scholars argue that these gains are large and cluster promotion is a very effective tool for boosting the competitiveness of local economies.

- ***technological externalities***. The geographical proximity of firms and institutions 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. Competitive pressure force firms to invest in order to advance and improve their technological and market frontiers. Imitation within the clusters implies that innovation are rapidly "absorbed" by new entrants and competitors. This process stimulate a continuous effort to boost competitiveness through investment in innovation or search of new market niches. The learning process might be reinforced by relationship with other institutions such as Universities, research centres, chamber of commerce, government agencies.
- ***Labour market efficiency and finer division of labour within the local economy***. The larger is the labour pool of a cluster the more effective will be the match between workers and employers. In addition a larger cluster will imply the typical gains due from a finer division of labour. 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. In this respect, it is interesting to notice that within consolidated industrial clusters (such as the ceramics cluster of Sassuolo or the textile districts of Prato) banks often play a very active role in promoting structural change and competitive investments.
- ***Development of a "cluster brand"***. Firms which operate in a successful and competitive cluster are able to benefit from the cluster brand which has the feature of being a semi-public good (it benefits also the firms and actors who have not or have only partially contributed to the development of this reputational good). In many Italian industrial 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.

It is important to underline that the benefits of clustering highlighted above are magnified by the density of "connections" between the actors of the cluster. The presence of a critical mass of companies is a necessary but not a sufficient condition for a successful cluster: what matters is the existence of a network of interconnected actors. This implies that, in particular in initial phases of clusters' formation, policy can play a large role in reinforcing and promoting cooperative efforts and networking of firms in order to mobilize and spread knowledge and ideas, information and technology within the cluster and/or creating soft infrastructures which enable clusters' actors to import knowledge and best practices from other locations.

1.3 The potential disadvantages or risks of clusters (and cluster policy)

The agglomeration of economic activities in the geographical space is conductive not only to positive externalities but might also generates some negative external effects. For a country like Vietnam, who is considering to implement cluster promotion as a policy tool, it is important to be aware of potential drawbacks of policy measures aimed at promoting and reinforcing clusters.

The typical negative effects that have been extensively emphasized by geographers and economists are ***congestion costs*** due to co-location in a limited geographical area of economic activities (pollution, traffic and congestion, excessive increase in land rents). It is important to notice that these costs are not specific to clusters but are associated to spatial concentration of economic activities in general (even if these activities are totally un-connected and unrelated as in industrial zones, industrial parks and urban areas). From international experience it is safe to affirm that these costs are not generally particularly severe. In the case where these negative externalities are strong, the first-best policy options are actions directly aimed at correcting these externalities rather than preventing clustering of economic activities.

Another possible disadvantage associated with clusters, investigated in the economic literature, is the so called ***lock-in effect***. When the cluster is characterized by the existence of one or few leader firms and by a dominant technological paradigm, we can assist to an over-specialization and to a reduction of dynamism and inventive and innovative activity within the cluster. The existence of a dominant technology might reduce the incentive to move away from it and when a new technological paradigm emerges the cluster might observe a sudden erosion of its competitive advantage ("negative path dependency").

Like any policy intervention there are several potential risks in the implementation of cluster measures to be duly taken into consideration. In the following list, we discuss what we perceive as the most likely potential risks that Vietnam might face on the bases of the result of UNIDO international experts fieldwork:

- ***Complexity of the policy actions***. Industrial clusters might be highly heterogeneous (according to the sector, specific local characteristics, nature of the players, existence or not of leading firms, life-cycle phase, etc.) and hence there is no universally applicable model of cluster policy. A successful and effective cluster initiative should be tailored to individual circumstances – identify and solve the specific market and systemic failures which characterize each cluster - and be flexible enough to evolve with the cluster itself. Cluster policy is at the intersection of different policy areas (innovation policy, regional policy, industrial policy) and the menu of actions is wide (see *Table 1.1* for measures that are typically employed under the umbrella of cluster development initiatives). The main risk resides in government failures which prevent the possibility to articulate in a coherent and effective way a complex policy measure.[3]
- ***Policy coordination***. Given the heterogeneity outlined above, a prerequisite for a successful cluster policy is the existence of Institutional coordination both at the horizontal level (across Ministries at the Central level or across Department and agencies at the Provincial level) and at vertical level (between different level of Government). Uncoordinated measure might result in a reduced effectiveness of cluster policy actions and waste of public resources.
- ***Lack of intermediate institution / lack of cluster governance***. A top-down approach in the policymaking without the existence of "intermediate representative bodies" increases the risks of failures and might lead to inefficient or even distortive policies.
- ***Rent-seeking behaviours, collusion with political power***. A fundamental aspect of government intervention in cluster promotion is the focus on collective needs and measures which benefits the local economic system and not individual firms or needs. In fact, resources devoted to cluster development should ideally be capitalized in clusters and the local economy rather than end up in the pockets of a few powerful and influent firms.

[3] This complexity suggests the need, in country like Vietnam, to start by experimenting pilot cluster initiatives and eventually scale-up after a critical assessment of the policy experiment. See Chapter 4 for proposals on how to implement the pilot initiative.

Finally, it is important to stress that policy intervention is crucial and might be very cost-effective in initial phases of cluster life-cycle (for instance through policy aimed at attracting or boosting potential "pioneer firms" in the cluster or developing vertical/horizontal linkages between firms and other institutions such as Universities and research centres). This is exactly the stage at which most clusters are in Vietnam and hence this policy option - which is greatly connected with the objective of SMEs development (a policy target that the Vietnamese Government has rightly decided to pursue) – should be carefully considered.

Table 1.1 - Policy measures in the toolkit of cluster development initiative around the globe: a schematic view

A. Actions for understanding and benchmarking regional economies
• Identify clusters
• Model and map systemic relationships
• Benchmark against competitors
• Identify main market failures within each clusters

B. Actions for engagement of clusters' actors
• Recognise or, where an unmet need exists, create cluster associations
• Formalise communications channels
• Foster inter-firm collaboration

C. Actions for organising and delivering services targeted to the cluster
• Organise and disseminate information by cluster
• Establish one-stop cluster hubs
• Form cross agency cluster teams
• Create cluster branches of government
• Facilitate external connections

D. Actions for promoting human capital formation in the cluster
• Training activities
• Use clusters as context for learning
• Establish cluster skill centres
• Form partnerships between educational institutions and clusters
• Support regional skills alliances
• Create inter-regional cluster alliances

E. Actions for stimulating innovation and entrepreneurship
• Invest in innovation and business start-ups
• Support cluster based incubators
• Encourage entrepreneurs' networks
• Finance and promote innovation networks
• Establish cluster-based technology hubs in collaboration with the local innovation system

F. Actions for marketing and branding a region
• Target inward investment
• Promote clusters
• Form export networks
• Look for opportunities to brand regions

G. Actions for allocating resources and investments
• Give incentives or set aside funds for multi-firm projects only
• Invest in cluster R&D
• Fund critical foundation factors

Source: based on Rosenfeld (2002)

Chapter 2

Clusters policies experiences: a selective review

2.1 Introduction

Regional policy began in many developed countries in the 1950s and 1960s; over the decades it has evolved from a top-down, subsidy based group of interventions designed to reduce regional disparities, into a new 'paradigm' characterized by: (*i*) a development strategy that covers a wide range of direct and indirect factors that affect the performance of local firms; (*ii*) a focus on endogenous assets, and less on exogenous investments and transfers; (*iii*) a collective/negotiated governance approach involving national, regional and local government plus other stakeholders (OECD 2009, 2010a).

Table 2.1 - Paradigm shift of regional development policy

	Old paradigm	New paradigm
Problem recognition	Regional disparities in income, infrastructure stock, and employment	Lack of regional competitiveness, underused regional potential
Objectives	Equity through balanced regional development	Competitiveness and equity
General policy framework	Compensating temporally for location disadvantages of lagging regions, responding to shocks (e.g. industrial decline) (*Reactive to problems*)	Tapping underutilised regional potential through regional programming (*Proactive for potential*)
– theme coverage	Sectoral approach with a limited set of sectors	Integrated and comprehensive development projects with wider policy area coverage
– spatial orientation	Targeted at lagging regions	All-region focus
– unit for policy intervention	Administrative areas	Functional areas
– time dimension	Short term	Long term
– approach	One-size-fits-all approach	Context-specific approach (place-based approach)
– focus	Exogenous investments and transfers	Endogenous local assets and knowledge
Instruments	Subsidies and state aid (often to individual firms)	Mixed investment for soft and hard capital (business environment, labour market, infrastructure)
Actors	Central government	Different levels of government, various stakeholders (public, private, NGOs)

Source: OECD (2010a)

This paradigm shift in regional policy has led to a growing interest in **cluster policies** and similar instruments to build co-operation and share knowledge among firms, particularly SMEs (regional innovation approach).

At first cluster initiatives were mainly associated with advanced economies, but especially in the last fifteen years **hundreds of cluster initiatives have been implemented in**

developing and transition economies as well.[4] Moreover, international donor organizations have to a large extent become involved in cluster initiatives. Several multilateral agencies (including UNIDO, the World Bank, UNCTAD, and ILO) have begun to recognize the benefits of clustering and to reframe their SME and private sector development programs.

The interest in cluster policies comes from the evidence that industrial clusters agglomerated in specific geographic zones and operating in specific industrial sectors have been proven to have possibilities of reaching and maintaining good positions on international markets, thanks to their capacity to innovate in terms of production processes and product qualities (Andersson *et al*. 2004). Over the last few years, a further impulse comes from the observation that many of the leading firms in new-economy industries have tended to cluster together.

Although interventions are diverse in terms of scale, type and objectives (OECD 2007), many researchers and policymakers identify the cluster policy focus in the need (*i*) to stimulate and support the emergence of networks of production of strongly interdependent firms (including specialised suppliers), knowledge producing agents, bridging institutions and customers; and (*ii*) to strengthen the inter-linkages between the different parts of the networks, in particular supporting actions which leads to cooperative behaviours such as, for instance, the promotion of joint research and development, training activities, joint marketing strategies. Most of the literature also accepts that the more extensive are networks the more industrial clusters will deliver competitive advantages.[5]

Policies that enhance the quantity and quality of the local asset base (human capital, infrastructures, business environment) are also commonly cited as being important for the development of industrial clusters.

A recent study commissioned by the European Commission considered public policies towards industrial clusters in 21 European countries and found that the main thrust of the policies was to encourage the development of co-operative networking between firms and supporting agencies and to improve the local asset base (European Commission 2002).

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[4] There is a growing number of case studies detailing characteristics and growth paths of clusters in developing countries. For example, two issues of the journal *World Development* (Vol. 23, No. 1 (1995) and Vol. 27, No. 9 (1999)) were dedicated to the study of clusters in developing countries and each contain a number of case studies.

[5] Extensive networks are based on high and well developed flows of goods, services, and information in local supply chains that deliver internal and external economies of scale and flexibility in production and distribution.

The purpose of this chapter is to identify trends and best practices in cluster based approaches with respect to programme objectives, targeting, instruments and inter-governmental role sharing.

2.2 Cluster policies: the international experience

Clustering basically is a bottom-up, market-induced and market-led process, nevertheless, policy makers can contribute to creating the conditions which encourage the formation and growth of clusters. The primary task of government should be to facilitate the dynamic functioning of markets and make sure that co-operation does not lead to collusive behaviour which restricts competition. At the same time, however, as many cluster studies have revealed, it is necessary to redefine the role of the government as a facilitator of networking and an institution builder, creating an efficient incentive structure to remove systemic inefficiencies such as "organisational thinness", "lock-in" and "fragmentation".[6]

Indeed, in most countries with cluster-based policies these initiatives have originated from a trend towards designing governance forms and incentive structures to reduce systemic imperfections. These policy responses to systemic imperfections can be categorised as follows: (*i*) establishing a stable and predictable economic and political climate, (*ii*) creating favourable framework conditions for the efficient and dynamic functioning of free markets, (*iii*) stimulating interactions and knowledge exchange between the various actors, (*iv*) removing informational failures by providing strategic information, (*v*) removing government failures and government regulations that hinders the process of clustering and innovation.

The changing role of industrial policymaking coincides with a shift from direct intervention to indirect inducement. Subsidies and compensatory policy are no longer the tools for modern industrial policy making (OECD 2010a). Subsidies, designed to directly support industries, distort competition and there is clear a risk of protecting established but non competitive industries and postponing the upgrading and restructuring process towards a knowledge-based economy. In most countries this changed perspective resulted in creating supporting structures, like initiating broker and network agencies and schemes and providing platforms for constructive dialogue and knowledge exchange. Most countries use the cluster

[6] Systemic failures arise where connections and linkages of the system are poor or not sufficiently conducive to knowledge generation. The systems failure rationale implies that public intervention can promote collective learning and that the relationships of the system with its components, coherence and possible dysfunctions can be acted upon, institutionally coordinated and perhaps even constructed (Rondé and Hussler 2005).

approach to organize a market-led economic development strategy by initiating dialogue between the various actors in their relevant economic systems and fostering knowledge exchange and knowledge transfer.

Table 2.2 - Common instruments used in clusters

Goal	Instruments
Engage actors	
Identify clusters	· Conduct mapping studies of clusters (quantitative and qualitative) · Use facilitators and other brokers to identify firms that could work together
Support networks/ clusters	· Host awareness raising events (conferences, cluster education) · Offer financial incentives for firm networking organisations · Sponsor firm networking activities · Benchmark performance · Map cluster relationships
Collective services and business linkages	
Improve capacity, scale and skills of suppliers (mainly SMEs)	· SME business development support · Brokering services and platforms between suppliers and purchasers · Compile general market intelligence · Co-ordinate purchasing · Establish technical standards
Increase external linkages (FDI and exports)	· Labels and marketing of clusters and regions · Assistance to inward investors in the cluster · Market information for international purposes · Partner searches · Supply chain linkage support · Export networks
Skilled labour force in strategic industries	· Collect and disseminate labour market information · Specialised vocational and university training · Support partnerships between groups of firms and educational institutions · Education opportunities to attract promising students to region
Collaborative R&D and commercialisation	
Increase links between research and firm needs	· Support joint projects among firms, universities and research institutions · Co-locate different actors to facilitate interaction (*i.e.*, science parks, incubators) · University outreach programmes · Technical observatories
Commercialisation of research	· Ensure appropriate intellectual property framework laws · Overcome barriers to public sector incentives in commercialisation · Technology transfer support services
Access to finance for spinoffs	· Advisory services for non-ordinary financial operations · Public guarantee programmes and venture capital · Framework conditions supporting private venture capital

Source: OECD (2010b)

Denmark was one of the first countries to promote cluster policies of various forms that have been replicated around the world. In 1989, the Ministry of Trade and Industry initiated a three-year program for the development of inter-firm co-operation and networking. The main purpose was to improve the co-operation culture in Denmark and to show Danish companies the value of networking. Brokers were trained to create networks and groups of companies were funded for the conceptualisation, planning and implementation of joint projects. They included research and development, joint marketing, production, problem solving and purchasing. Even though the program ended after only three years, it became a prototype for several countries around the world.

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" (UNIDO 2010a).

In several countries the clustering process have been initiated by the establishment of forums, platforms and regular meetings of firms and organisations related to a particular value chain. Strategic information (technology foresight studies and strategic cluster studies) is often used as an input to the process of dialogue. The way this is actually organised differs

between countries, depending on (*i*) national traditions and culture in policy making; (*ii*) the way dialogue between industry, research and governments have institutionalised in a country; and (*iii*) the specific composition of economic activities and relevant technologies in a country's economy. Scottish Enterprise, for example, emphasised network building through the use of a range of events and meetings organised by a facilitator who visited firms and built interest in the idea of a network of common interest among firms in the region.

Often the cluster approach focuses on small firms because of the additional obstacles they typically face to grow and the clear scope for policy intervention.[7] The cluster programmes growing out of an SME policy are usually designed to promote networking among small firms and to provide basic, collective services to these firms. Italy's Law 317, approved on 25 September 1991, is perhaps the earliest example. The main innovation of this law was its focus on SMEs and, in particular, the scope that it gave for providing support to groups of small firms rather than concentrating only on individual, usually large firms. Article 4 of the law was particularly significant because it formalises the concept of "consortia" of small firms and gave prominence to the provision of collective services for groups of firms (often known as "real services").[8]

"Real services" to SME groups of manufacturing companies are expected to increase the competitiveness and market opportunities of user firms by modifying in a structural way their organisation of production and their relation with the market. For a number of reasons, such as their public good nature or excessive transaction costs for private providers, these services are not always readily available for purchase in the market by SMEs, thereby necessitating public intervention. For example, the ERVET centre in Emilia Romagna in Italy along with many craft and industry associations have provided these "real services" such as market information, testing of new materials or production processes and export support.

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[7] This point is particularly relevant for Vietnam, since the country is at an early stage of cluster development. One of the steps that Vietnamese public authorities should take, in order to produce the largest effects in this critical phase, is to coordinate cluster and SME support policies. They should not be seen in isolation (see also Chapter 3 and 4). The final goal of cluster policies is to promote competitiveness of the private sector through positive interactions between the actors of the clusters. Big private firms are by definition more competitive and less in need of public support. These firms might be beneficiaries of cluster policy initiative but only if it is aimed at strengthening cooperation of these firms with SMEs and/or other local actors.

[8] In Italy, the ongoing decentralization progress has shifted the emphasis of the legal framework provided by Law 317 (and subsequent decrees) from the national to the regional level. Regions are nowadays the main actors in defining their industrial districts and targeting funding to them. As regions have taken more control over innovation and related policies, public support for clusters has also become stronger at the regional level.

In a later stage of a cluster development, we often observe the emergence of bridging institutions which provide highly customised goods and services to firms (access to information on the evolution of markets/technology, client rating, consultancy, training, waste management, pollution control, quality certification, award of trademarks, product promotion, support to innovation, bulk purchase of inputs, and product testing). As the Italian industrial district experience demonstrate these actors are relevant to develop a well functioning and competitive cluster.

Examples of cooperation of SMEs in Latin America

The actual situation of Vietnam can be compared to that of many Latin American countries where clusters consist almost exclusively of micro and small firms in activities with low barriers to entry, such as production of garments, shoes, furniture, and auto repair. Typical features of these clusters are low trust and poor contract enforcement mechanisms that compromise the potential to reap the benefits of clustering. An adequate mix of general SME support and specific cluster policies is necessary. It may be useful to link support for individual firms to cooperative behaviour. A positive example of how to promote cooperation of SMEs in Latin America is provided by the *Proyectos de Fomento* (PROFOs) in Chile. PROFOs are based on three-year contracts between a group of five or more SMEs (excluding microenterprises) and a public or private support agency serving as a network broker. The groups receive subsidies for joint activities, such as market surveys, feasibility studies or participation in trade missions and fairs. In the first development stage of a PROFO, a network broker promotes the idea of collective action, helps to build up the group of enterprises, supports the formulation of project proposals and helps to apply for public funding. The main objective of the second stage is to consolidate trust relations between members of the group and define rules of interaction. In the third stage, the group becomes independent of public support and starts to operate like any other private-sector firm.

Over time, a number of countries have changed the objectives and instruments used to promote regional specialisation and clusters. Policies need to evolve over time and consider the evolution of clusters and value chains. One of the most notable distinctions that impacts the use of instruments is the cluster lifecycle; in fact as mentioned in Chapter 1 of this report a

cluster at a different stage of its lifecycle will have different needs.[9] A noteworthy example comes from the Chilean salmon cluster, where policy requirements and accomplishments have evolved over time with the development of the local system (Maggi 2003). Initially, pre-competitive investments in R&D and pioneer risky initiatives, both private and public, were favored. This produced a remarkable demonstration effect. Later, the imperative was to standardize production quality and increase production scale, and the cluster was helped with better infrastructure and promotion and marketing initiatives in foreign countries. Finally, in the current globalization phase, public policies are enhancing technology transfer (foreign missions), biotechnology research and the introduction of environmental controls.

Example of a cluster organisation

The Technological Institutes in Valencia in Spain were established from the mid 1980s and onwards and are located close to the firms agglomerated in specific industrial districts in Valencia. The most important task of the Institutes has been to assist Valencian SMEs in technological upgrading. The idea is that the Institutes offer SMEs the technical services necessary for improving their innovation capacity. Indeed, many firms have changed from being mostly imitators to having some internal innovation capability, albeit only incremental innovations.

A strong point of the Valencian Technological Institutes is their embedment in the regional clusters of SMEs. The Institutes co-operate closely with, and have built up detailed knowledge about, local SMEs, while at the same time being well connected to similar centres internationally. Thus, the Institutes play a two-fold intermediary role: they keep abreast of technological improvements taking place in other areas (role of technological "antennas"), as well as having close contact with Valencian firms in order to be aware of their problems.

[9] Because of continual changes in markets, competition, and technology, clusters tend to evolve continually, with some clusters ebbing or dying even as new ones form and grow. As clusters evolve, the factors that drive their success change. The economic factors that give rise to a cluster can be very different from those that keep the cluster going. Once a cluster is established, positive feedback effects help drive cluster growth.

2.3 The cluster policy governance

Cluster policies are promoted by different levels of government: supra-national (like the European Union), national, regional and local. Which level should implement what policy is determined by several factors, such as the footprint of the expected positive spillovers of the clusters to be supported, the resources and instruments available, and the capacity to design and implement such policy.

Moreover, the articulation of national and regional roles in these policies is clearly dependent on the institutional framework. Unitary or centralized countries may simply develop the programme at the national level. Federal countries - and certain unitary countries - have to rely on financial incentives to engage their more autonomous sub-national governments. Strategies to develop policy coherence across levels of government for cluster-based policies include several common approaches to vertical governmental relations.

In many countries the design and implementation of industrial clusters policies is carried out by local governments while the involvement of the central government is generally confined to the definition of the general settings (policy framework) and funding (or co-funding with local governments) of the policy measures. The ratio for a deeper involvement of local governments is rooted in the theoretical argument of a higher degree of proximity between the local policymakers and the beneficiaries of the policy.[10] This in turn should guarantee a more effective tailoring of the policies toward the specific needs of each cluster.

[10] "In the presence of sizeable differences among regions, and of important effects on regional competitiveness exerted by immobile, localized factors, local policies can help differentiate the interventions required in an appropriate manner. In theory, it is certainly possible that the central planning of local interventions may be able to select the optimal mix of measures for each region. Economic history, however, highlights the difficulty of planning local development from the centre, and instead shows that an array of 'bottom-up' policies may achieve differentiated goals more effectively. This consideration is based on one of the main assumptions of federalism: namely that more and better information on policies to implement is available at the local level, and that decisions taken at the local level regarding the local setting are probably better in terms of costs/benefits than ones taken centrally. Other arguments in favour of local development policies concern the governance of policies. An important consideration is that *by governing one learns how to govern*, and learning how to self-govern is part of local development. If local communities are responsible for selecting at least some of the economic policy measures that influence their future, this will probably have extremely positive effects in building 'social capital'" (Viesti 2002).

In some countries, *regional development agencies* (RDA) play a crucial role in the clustering process and in developing local business opportunities. Cluster strategies have been adopted for instance within several German Länder (Northrein-Westphalen and Baden-Württemberg), many states in the U.S. and many regions in Europe (Basque Country, Catalonia, Northern Ireland, Styria-Austria).

The importance of local government: an example from China

Analyzing the cluster development in China, the role of local governments cannot be ignored. In the 1980s when Chinese clusters in coastal area were developing (in provinces such as Guangdong, Zhejiang, Jiangsu and Fujian), the local government was active in providing public services for local enterprises, holding trade fairs and international exhibitions for local products and creating Internet webpages to promote local brands in national and/or global markets. Moreover, government-sponsored institutes were established to provide information about technology and markets to local firms.

As the Wenzhou footwear cluster shows, local governments also encourage local actors to build learning institutions. With the help of Italian businesses, Wenzhou established a footwear design centre. Moreover, constructing a specialized marketplace, opening a wholesale centres, and hosting regular national or international exhibitions are also important steps taken by local governments in China.

As a "quasi governance vehicle", regional development agency can offer a unique means to assemble both the resources and the authorities required to undertake certain economic development activities. RDA can be the instrument to overcome otherwise complex administrative arrangements and geographical borders (when the administrative regions do not align with "economic" regions). Equally, RDA may play a role in pooling resources between different "tiers" of government and between "spheres" of government (departments, agencies, authorities, etc.). Lastly, they can play an important role in bringing together public, private and civic sectors, through joint ventures, partnership, service agreements, or other vehicles.

Cluster policy at regional level: the Basque Country experience

The cluster-policy process in the Basque Country has been to an important extent shaped by the regional industrial-business systems. The cluster policies have been conducted through a process of construction and development of industry-government relations and collaboration. An encompassing policy intervention by the Basque government has indirectly fostered the constitution of associative organizations in key industrial sectors in the whole Autonomous Community of the Basque Country. This has had a double effect: (*i*) an institutional integration of emerging business and industry actors, especially industrial SMEs, within a highly federative industrial-business system; and (*ii*) a learning process of mutual public–private trust building. Despite the low financial aid to the cluster associations, their role in the policy networks and processes has slowly increased. This case suggests the importance of specific industrial policies directed at the particular needs of each regional industrial-business system.

Cluster policies are also promoted directly or indirectly by different policy streams such as: regional economic development policy, science/technology/innovation policy, industrial/enterprise policy, and even higher education policy. A cluster policy may be at the intersection of more than one policy stream given their increasingly shared goals.

This implies that there is a strong need for "horizontal policy", integrating the various aspects of functionally-organised policy instruments (e.g. education policy, science policy, trade policy, competition policy, technology policy, public works, fiscal policy and so on). Governments are not necessarily organised to manage cluster policy in the best possible way. Ministries usually have sectoral and functional responsibilities. Cluster policy demands for horizontal policies, which requires a co-ordinated contribution from a number of different sectors.

As with any national multi-sectoral and/or placed based programme, co-ordination at the central level can serve to increase the initiative's potential effectiveness. The central level co-ordination mechanisms that can overcome these biases are usually based on *inter-ministerial* or *inter-agency committees* to plan, finance and even implement programmes.[11]

[11] In the case of Japan, a co-ordinating committee at the regional level has also been introduced to ensure that the activities of two Japanese industrial cluster programme (METI Industrial Cluster and MEXT Knowledge Cluster) in each region are co-ordinated.

Contracts and other funding agreements for national/regional policy articulation are another vehicle for supporting policy coherence with respect to clusters. In Germany, finance for co-operation and cluster management is incorporated within the wider framework of negotiated funding agreements between the Federal and *Länder* governments. In France the latest round of the French seven-year *Contrat Plan Etat Region* explicitly prioritises funding for projects that support selected clusters. These joint plans specify the respective financial obligations of the national and regional governments.

Cluster policy in France: the importance of a dedicated lead agency

France has two separate programmes that explicitly support clusters. Both programmes are implemented by the Délégation interministérielle à l'Aménagement du Territoire et à l'Attractivité Régionale (DATAR), the French administration in charge of spatial planning and regional policy. The regional policy strategy for France has a long history with a dedicated lead agency since the 1960s. DATAR (now DIACT) serves a co-ordinating role among sub-national, national and supra-national entities. Thanks to its inter-ministerial nature, the agency is rather unique; albeit its budget remains a small portion of the funds spent on regional planning.

The first cluster policy provides support to groups of firms, located in the same area and belonging to the same industry, called the "Local Productive Systems" (LPS). In 1998, the DATAR issued a tender intended to fund collaborative projects between firms of a given industry located in the same area. The eligibility criteria, based on geographic concentration, include: (*i*) the presence in the regions concerned not only of a concentration of activities but also of a high level of inter-enterprise links; (*ii*) one or more facilitation structures; and (*iii*) operators qualified to stimulate interaction between enterprises. The purpose was clearly to promote agglomeration externalities and clusters dynamics trying to replicate the success of Italian industrial districts in the 1980's. Officially, the policy funds a project held by a collective organization. This is important since the subsidy is consequently not directly given to firms but to the collective structure. Very often, the official candidate organizing the project is a local public authority and private firms join once the structure has secured the necessary funding. A wide range of actions can be funded: a study of feasibility for the development of a common brand, the creation of a grouping of employers or the implementation of collective actions in the field of exports for instance. The geographical scale of a LPS is

generally the département or the employment area. The LPS can be seen as the first cluster policy in France.

A new policy, called *Pôles de compétitivité* ("competitiveness clusters"), started in 2005, is a more ambitious and costly cluster policy than the one analyzed before. While the SPLs are composed of SMEs, the *Pôles*, often driven by large firms, have typically not made SME inclusion a top priority. The French *Pôles de compétitivité* programme is an example of a multiobjective programme with significant resource investment. Indeed, both to industrial strategy and innovation approach is recognised a regional dimension. In the context of the *Pôles de compétitivité* policy, a legislative decision created special research and development zones around the *Pôles*. Firms participating in approved projects and located in a R&D zone may therefore benefit from social and fiscal exonerations. The conditions for the exonerations include: (*i*) co-operation among firms; (*ii*) the firms are located within the R&D zone; and (*iii*) the project was accepted by the *Pôle de compétitivité*. The zone boundaries were discussed with the cluster representatives as well as government representatives from the central government ministries, local representatives of the central government (*préfets*) and local governments and will be approved. Each *Pôle* has a governance structure which is typically that of a non-profit association in this first stage. The governance bodies include local and regional government actors as well as firms and other experts. The DIACT is also considering creating a national club for the *pôles de compétitivité* to promote knowledge sharing across entities.

For SPLs, there is a voluntary association of French Industrial Districts, the CDIF (*Club des Districts Industriels Français*) that covers SPLs (more than 5,000 companies and over 150,000 employees). The purpose of the club is: to promote knowledge sharing among SPLs; to serve as a resource centre to promote innovation and partnership between its members; and to support the development of other enterprise networks in France, Europe and worldwide.

2.3 Lessons learned

Our selected review of cluster policies experiences clearly points out at some **lessons** to be learned for cluster programme design that could help at least to improve the likelihood that the programmes will be successful in their ultimate goals of promoting competitiveness and welfare.

First of all, public policy interference only can be justified if there is a clear **market** (coordination problems and inability of markets to initiate or sustain inter-linkages; information asymmetry; suboptimal knowledge creation and diffusion) or **systemic failure** (mismatch or inconsistency between interrelated institutions, organizations or playing rules; lack of a unifying strategy and comprehensive approach). Moreover, a cluster policy does not necessarily correspond to the sanctioning of a new policy directive or legislation exclusively addressing "cluster development"; more often, it refers to the inclusion of "cluster development" into existing policy schemes (e.g. SME policies, industrial policies etc.).

A subsequent set of lessons learned indicate **leading policy principles** when designing a comprehensive cluster-based policy: (*i*) avoid to have a strong orientation towards directly subsidising industries and firms or to limiting the rivalry in the market; (*ii*) shift from direct intervention to indirect inducement; (*iii*) not try to take the direct lead or ownership in cluster initiatives, but basically let the government work as a catalyst and broker that brings actors together and supplies supporting structures and incentives to facilitate the clustering and innovation process; (*iv*) be realistic with respect to clarity of targets, funding and duration as compared to programme goals; (*v*) ensure that programmes can be adapted to the particular region and cluster context and flexibility with the instruments used so as to account for this diversity.

A third set of lessons learned is about the **risks** involved in such policies that cluster initiative carefully designed should try to mitigate: (*i*) **picking winners** and **lock-in** of existing clusters and technologies, this makes more difficult for new clusters or technologies to develop and potentially limit competition; (*ii*) **insufficient private sector engagement**; (*iii*) **excessive specialisation** in certain sectors or **dependency** on few firms, this leads to greater vulnerability to economic shocks; (*iv*) serve as a **barrier to the cross-sectoral collaboration** which is increasingly important to the innovation process; (*v*) **too fragmented** cluster support caused by administrative boundaries, often the functional area of the cluster spans such boundaries.

The last set of lessons relates to policy coherence within and across levels of government. The articulation of policies between national and provincial level is fundamental to avoid duplications, or worse, conflicts between different policy measures and different government levels.

Chapter 3

The economic, institutional and policy framework in Vietnam: some reflections based on a field survey

A clear understanding of the Institutional and socio-economic framework of a country is a fundamental pre-condition for the design and implementation of cluster policy. This step is particularly important in the case of Vietnam, which has only relatively recently moved away from a centrally planned economic system.

In this chapter we emphasize some elements – economic, legal, institutional - that are influential in the implementation of cluster policy in Vietnam. The aim is not that of providing a detailed representation of the actual situation. Instead, our aim is that of raising awareness and offering some initial discussion on elements of the current socio-economic and institutional framework which might constitute stumbling blocks in the process of design and implementation of a cluster policy.

Our analysis is mainly based on the results of a field study conducted in Vietnam during July and August 2011 and on documents provided by Vietnamese national experts.[12]

Policy target: identifying and selecting clusters in Vietnam. As extensively argued in this Report, clusters cannot be created artificially through public policy. This implies that a cluster development strategy should be defined on the basis of the existing "potential": the government should hence identify the already existing clusters and the potential seeds which might develop into competitive clusters. Where should the government look? Significant agglomeration of firms operating within the same sector already exist in many Vietnamese provinces. A background paper produced by UNIDO (2010b) highlights the presence of firms agglomeration in several provinces and sectors.[13] We report in *Appendix 2* a list (although not

[12] During the field study several interviews were conducted with representative of central and local governments, business associations, chambers of commerce, independent experts, multinational and local firms (*Appendix 1*). Moreover, background materials were collected and analysed.

[13] The agglomeration of firms within the same industrial sector is a necessary but not a sufficient condition for the development of a cluster since firms do not necessarily are interconnected by competitive pressures or cooperative actions. As already argued above, policy actions might be crucial in some cases in stimulating firms to create networks.

exhaustive) of current agglomeration which might constitute potential policy target.[14] The number of local SMEs in most sectoral agglomeration is large although foreign Multinational firms and supporting industries often play a key role within the agglomeration.

The available evidence suggests that clusters have emerged in Vietnam naturally as geographical concentration of firms operating in the same or related activities (for instance agricultural clusters in the Mekong Delta or fish farming in other costal areas; or light industry clusters in Hanoi and Ho Chi Minh City and neighbouring provinces). However, these clusters are mostly at the embryonic phase and - as argued in the Vietnam Competitiveness Report 2010 – are "focused on a narrow set of activities without the breadth of related and supporting industries, and active collaboration among companies remains limited".

A risk that should be avoided is the temptation to support all the existing agglomeration of firms, in other words, to spread too thinly the resources devoted to cluster policy. *Clusters to be supported should be selected*. This requires good tools to map and analyze clusters, and investing adequate resources in the exploratory and diagnostic phase before a full scale intervention. In principle a sound guiding principle is to allocate (more) resources where local firms and/or local institutions are willing to organize and perform a cluster policy; in other words, policy might be more effective where the cluster stakeholders are already aware of the importance of actions targeted to the cluster as a "collective body" rather than actions which target the individual firms. The implementation of this approach implies that the Central Government should design a mechanism through which the "potential" clusters (or the local governments where these potential clusters are mainly located) reveal their interest in developing a cluster initiative (a strong commitment might also be revealed through the willingness to co-finance these projects). In Vietnam the risk of a top-down approach where the central level of Government directly selects the pilot clusters to be supported is related to: (*i*) a high degree of Provincial heterogeneity in terms of quality of Institutional governance; (*ii*) large disparities across sectors and provinces in the development of the private sector – and in particular SMEs – and in their organization in "intermediate

[14] It is important to notice that the list does not identifies clusters but concentration of economic activities in the manufacturing sector at district level. Caution should be exercised due to the quality of the data employed (GSO enterprise survey 2007; which do not constitute Census data). A cluster might overlap two or more administrative areas, hence agglomeration of industries which encompass more administrative units will not be captured by the statistical approach used in the UNIDO background paper. Nevertheless, the figures in the *Appendix 2* highlight the existence of a clear provincial specialization pattern and agglomeration forces within the same industrial sector.

bodies" like business associations that are able to express the representative and collective voice of enterprises (see below). A pilot which involves the most dynamic clusters in provinces with adequate governance capabilities might increase the success of the policy and represent a best practice which might be followed by other clusters/provinces.[15]

Institutional complexity. An analysis of the current Vietnamese institutional framework underlines the need for an improvement in coordination of policies both at the ministerial level and between different levels of governments. The lack of coordination and the complexity of the administrative machine is clearly revealed by the exorbitant number of master plans that have been approved in the last 5 years. A detailed analysis of such policy documents reveals that often contradictory and/or overlapping policy objectives are pursued by different ministries/agencies/provincial departments. The lack of coordination is accompanied by feeble mechanisms which ensure the monitoring and the evaluation of what has been announced in master plans. The existing institutional complexity might represent a stumbling block for the implementation of an effective cluster policy; hence policymakers should ensure that cluster policy does not result in adding a new layer of complexity in Vietnamese policymaking. Based on experience of other countries, the implementation of cluster policy might be seen as an opportunity to implement coordinated and system actions which might constitute a best practices that could be extended to other policy areas.

SMEs development. The Government of Vietnam has rightly recognized - at all government levels - the importance of promoting the development of SMEs (Prime Minister Decision n. 236/2006). The implementation of policy measures targeted to SMEs is still at an initial phase with some Provinces more active than others. It is crucial for the Vietnamese Government to consider cluster development policy within the more general framework of SMEs development policy. In fact, the main aim of cluster policy is to boost the competitiveness by reducing the barriers which limit the surge or expansion of a cluster which are typically more severe for micro, small and medium enterprises. Another important reason for coordinating these policies and SMEs policies is the necessity to reduce – as argued above – policy complexity. It is our opinion that the natural bed for the implementation of cluster policy both at central and provincial level lies within the government structure which are currently responsible for SMEs policy.

[15] See Chapter 4 for a detailed proposal.

Supporting industries and clusters' promotion. The adoption of policy measures aimed at facilitating and promoting the location of supporting industries is an explicit policy strategy of the Vietnamese government. The development of **supporting industries (above all local SMEs) is an important component of an industrial cluster policy** insofar these industries can contribute to reinforce the competitiveness of the supply chain. Cluster policies support the supply chain by integrating academic institutes, government agencies, association and supporting industries in order to create new knowledge and spur innovation and enhance the flow of these knowledge along the supply chain. In the specific case of Vietnam, it is very important to encompass any intervention to attract or to sustain the operations of supporting industries in the general framework of a cluster industrial policy, in order to avoid the risks of proceeding in a parallel and uncoordinated way.

A feeble innovation system and educational infrastructure. The technological infrastructure and the mechanisms which enable a fluid mobilization of innovation and knowledge are the cornerstone of cluster policy in both rich and poor countries. Benchmarking Vietnam with other countries at a similar level of development, it is evident that the country needs to improve the scale and quality of its public and private innovation systems and of the quality of its workforce. The fieldwork has confirmed that this is perceived by the private sector as a barrier to the development of successful clusters but also to the expansion of individual existing firms.[16] Local and foreign firms are mainly employing the factor of production which is overwhelmingly abundant in the country: cheap unskilled labour. The interactions between firms and Universities and research centres are limited. Policy actions should be implemented in three main directions: (*i*) boosting the research capacity of the University system and the creation of specialized public-private research centres; (*ii*) supporting firms to invest in innovation and technological upgrade[17]; (*iii*) boosting cooperation between firms and Universities.

There is a large potential for promoting successful cooperative R&D in many industrial clusters. One perceived risk is the tendency of policymakers to focus mainly on

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[16] On the basis of our interviews on the field, several high-tech firms have scrapped plans to extend the operations or initiate new line of business in the country claiming the lack of skilled workers as the main obstacle. This limit is also perceived by many observer the reason why the spillover-effects from FDI have been son far rather modest.

[17] In this respect, several policy measures are in place and others are in the policy pipeline (Ministry of Science and Technology, Science and Technology Strategy 2010). It is a rather diffuse opinion that the procedures for accessing to R&D funding are rather complicated and hence mainly accessible to large enterprises.

high-tech sectors; although it is understandable and reasonable to aim at the promotion of knowledge intensive sectors this should be realistically seen as a medium-term goal. There is a strong case for supporting knowledge creation and transfer also in traditional sectors – from agroindustry and food processing to furniture, textile and garments and other light manufacturing – or sectors dominated by FDIs (for example, motorbike, mechanical and electronic industry) where Vietnam has a clear and visible comparative advantage.[18]

Boosting the voice of the business sector. It is important to notice that considering the international experience, not all clusters have "formal governance institutions", i.e. some form of representative body of the clusters stakeholders. The existence of formal bodies which represent the clusters it is highly desirable although, strictly speaking, it is not a fundamental prerequisite for the implementation of cluster policies. In fact, the existence of a unique body which represents the "voice" of the actors of the clusters helps the policymakers in tailoring the actions more closely to the real needs. A top-down approach in the policymaking without the existence of such "intermediate representative bodies" increases the risks of failures and might lead to inefficient or even distortive policies.

The development of formal governance cluster institution might be for Vietnam a medium-term goal linked to the maturity stage of clusters. A necessary condition for the emergence of effective governance institutions (which really represents the voice of clusters stakeholders) is the development of the private sector and in particular of **strong** and **representative business associations**. With this respect, our field study has pointed out that these institutions are still at their infancy in Vietnam and weakly affect the current design of public policy.

Industrial zones. The development of industrial zones is not strictly connected to cluster development. Industrial zones aim at concentrating plants in a specific area for reasons related to an ordered and efficient use of land resources or to avoid negative externalities such as pollution, congestion, depletion of landscape, etc.. Industrial zone can promote the co-location of firms but this is not a sufficient condition to develop a cluster. In fact, geographical proximity may facilitate the exchange of knowledge but it is neither a necessary or sufficient condition for producing these positive externalities. Many industrial clusters in countries like Italy, France, etc., historically, precede the development of industrial zones; the agglomeration of economic activities within a specific geographical space was spontaneous and unrelated with government land planning.

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[18] See *Appendix 3* for a short description of FDI recent trends in Vietnam.

Improving the business environment: a pillar for cluster development. Specific policies for cluster development might be effective only within a general effort to remove obstacles for the private sector, and in particular SMEs that have generally less resources to overcome such obstacles. The effort to create a business environment which reduces the barriers that limit the competitiveness of the private sector is a fundamental pre-requisite for the development of successful clusters. During the field study the main elements perceived by the business community and policymakers as being fundamental for doing business in Vietnam are the following: a well-functioning credit market, policies aimed at training a skilled workforce, improvement of the quality of Universities and of the innovation system in general, transparent rules for conducting business, a reduced weight of bureaucratic burden for the firms, fight against corruption, more coordination between different Ministries and between Central and Provincial governments. The implementation of cluster policy should not be done in a vacuum but should be embedded in the general attempt to remove market and government failures which limit the expansion of a competitive and sustainable economic system.

Chapter 4

Recommendations on cluster policy development in Vietnam

In this final chapter we propose some suggestions on the "architecture" of cluster policies in Vietnam. In particular, we will focus on the following questions:

* What are the most relevant institutions to be involved in the definition of a cluster policy?
* What is the most appropriate level of government to be in charge of cluster policies (national, regional, local)?
* What policies already exist that can be geared towards supporting the development of clusters?
* What intervention are necessary to avoid a duplication, or worse, a conflict between different policy measures and different government levels?

4.1 The identification of clusters

The identification of clusters can be top-down, bottom-up or a combination of the two. A statistical method, such as a mapping study based on a high concentration of employment, may be used and complemented by qualitative analyses. Other options include a cluster self-selection process. Moreover, public actors may use selection mechanisms that are competitive (based on an open competition, a call for proposals or similar) or non-competitive (the recipients are designated by the policymaker).

There are strategic reasons for using these different types of mechanisms based on factors such as programme goals, policy maker knowledge about the universe and quality of potential participants, and ambitions for leveraging additional funds. Different selection mechanisms may also entail varying transaction costs which can be compared with the benefits of different options. Competitive selection is most appropriate for policies with significant resources and has the benefit of identifying programmes with the best potential impact.

As we said in the previous chapters, cluster cannot be artificially created. The starting point is, therefore, to **map** and **analyze embryonic clusters** (agglomeration of firms in which it is possible to find the basic elements, or some of them, that can lead to mature cluster), and investing adequate financial resources in the exploratory and diagnostics phase before intervention. Clusters to be supported should be selected because of their strong presence in

the economy, but avoiding one of the main risks associated to cluster policies: picking winners.

Given the innovative nature of cluster policy within the Vietnamese context, an optimal strategy would be to adopt a **pilot project approach**. This implies to identify a small number of clusters (between 5 and 10) in which to experiment a set of cluster policy tools. Two are the alternative we propose to identify the clusters where running this policy experiment.[19]

Alternative 1: in the **first stage**, Vietnamese central authorities (preferably in cooperation with provincial governments) identify the clusters adopting not solely a statistical mapping, but using the flexibility of a *dialogue* or *negotiated process*. In the **second stage**, central authorities define a budget and identify all the actors to be involved ensuring sufficient private sector engagement. In the **last stage**, in strict cooperation with the government of the provinces where clusters are localized the cluster policy are implemented.

Alternative 2: this second option is based on a *competitive mechanism* among Vietnamese provinces. In the **first stage**, Vietnamese central authorities define a budget for the pilot projects (which should preferably contemplate a co-financing from provincial authority) and the competitive mechanism through which a Province might access to these funds. In particular, the criteria used by the central authorities to evaluate the competing proposals have to be delineated in order to guide the definition of the plans as well as the ministries / agencies in charge of the selection[20]. In the **second stage**, provincial government (preferable through DPI) compete for the centrally allocated resources by defining and submitting a cluster development plan in cooperation with the private sector and other clusters' relevant stakeholders. The central authorities selects according to the pre-defined criteria the best plans, and in the **last stage** pilot initiatives are implemented.[21]

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[19] Whatever the alternative chosen, assistance could be asked to UNIDO, as the UN Agency with in-depth expertise in industrial policies and strategies and on promoting industrial clusters, for supporting such pilot projects.

[20] For example, actions proposed in the cluster development plan should be "cooperative"; the joint actions clearly targeted to resolve some existing market failures; priority could be given to promotion of joint R&D activities, etc..

[21] Another alternative might be to combine the two options: first, Vietnamese central authorities identify the clusters, as in the option 1, and, then, there is a competition, as in the option 2, among the provinces where the selected cluster are localised.

No matter which option is chosen, a mechanism of **independent monitoring** and **evaluation** is fundamental in order to assess the policy experiment, identify weak elements and, eventually, upscale the policy initiative at country-level.

Two examples of clusters selection through a competitive process

The experience of Macedonia and Jamaica illustrate how a competitive bidding process plays out in practice (Ketels *et al*. 2006).

The USAID-funded competitiveness initiative, **Macedonia Competitiveness Activity** (MCA), supports clusters that have been selected through a competitive bidding process. As a first step, the project team conducted numerous workshops around the country in order to introduce the cluster concept and the application process that would be used to select clusters. Then, the project held three rounds of a "request for applications" from potential clusters. From the received proposals, five were selected. Macedonia's National Entrepreneurship and Competitiveness Council (NECC), a public-private body comprised of 23 nationally-recognized leaders from government, the private sector, and civil society, plays a major role in the cluster selection process and makes final decisions on cluster selection. The selection criteria used are: (*i*) cluster leadership; (*ii*) cluster vision and strategy; and (*iii*) economic impact for Macedonia. For the MCA, the most important advantage of using a competitive bidding approach is that it demonstrates a more open and transparent selection process (particularly significant in an environment that is so highly politicized).

As early as 1996, Jamaica identified eight industries in its National Industrial Policy Paper. However, for several years, there was little action to support and stimulate these industries. In 2002, the Jamaican Exporters' Association (JEA) returned to these industries as the starting point for its **Cluster Competitiveness Project** with modest support from Department of International Development (DFID), USAID, and the Government of Jamaica. Initially, the project team met with leaders in each of the industries to introduce competitiveness principles and generate interest in participating in the project; the industry leaders, then, designated specific individuals to prepare a bid. The bids were generated in two rounds of workshops. Then, the JEA and the project team presented the proposals to a national-level steering committee comprised of leaders from the public and private sector for its selection. Like MCA, the group used three criteria as the basis for discussion and selection: (*i*) the size and economic importance of the

cluster; (*ii*) the cluster's potential for growth; and (*iii*) the cluster's degree of openness, enthusiasm, and willingness to change.

It is important to note that the selection criteria, both in Macedonia and Jamaica, were used to frame the questions to be examined by local stakeholders; however, there was also considerable room for discussion, consensus building and group decision-making, and this was considered to be extremely valuable by the project technical assistance teams. Similarly, for both projects, final decisions for cluster selection were placed largely in the hands of local public and private leaders. Nevertheless, the project technical assistance teams also played an important role in developing selection criteria, analyzing the proposals, and providing preliminary recommendations to these stakeholders.

4.2 Definition and implementation of cluster policies

As discussed in chapter three, the articulation of national and regional roles in cluster policies crucially depends on the institutional framework. In many countries the design and implementation of industrial clusters policies is carried out by regional governments, while the involvement of the central government is generally confined to the definition of the general settings (policy framework) and funding (or co-funding with local governments) of the policy measures. The ratio for a deeper involvement of local governments is rooted in the theoretical argument of a higher degree of proximity between the local policymakers and the beneficiaries of the policy. This in turn should guarantee a more effective tailoring of the policies toward the specific needs of each cluster.

Cluster policy calls for **multi-level governance approaches** involving national, regional and local governments as well as third-party stakeholders (firms, financial institutions, Universities, educational institutions, innovation centres, bridging institutions, industry associations). The institutional framework that arises from this consideration is inspired by *new public management*, a system of public management that has been increasingly experimented in several industrial countries (Kettl 2000; Lane 2000; Mc Laughlin *et al*. 2002). As in that model, allocative and managing functions are entrusted to some 'agency' institutions (local governments), while the 'principal' (a single central administration) retains the conceptualisation, coordination and monitoring power, through targets. Nevertheless, a full contractualisation of relations between different levels of government or among branches of the same level cannot suffice and the move towards *new public management* must be accompanied with the establishment of a strong and operational

institutional partnership between levels of government. The paradigm of incomplete contracting, whereby agents cannot delegate functions to each other by means of verifiable contracts, seems appropriate for the case of cluster policies (Barca 2003). For any good result to be achieved, therefore, different levels of government, as well as being linked by hierarchical relations, must also cooperate with each other. Moreover, in order to avoid serious distortions, targets must be set by an upper level through technical and political consultation with the lower levels and their implementation must be followed by all levels through continuous diagnostic monitoring.

Together with institutional partnership, social partnership at local level between private and public agents plays a crucial role in implementing cluster policies. The design and implementation of local cluster projects requires local knowledge to be extracted by local authorities from several private agents, to be combined and tuned into projects. Local governments need to make a relevant and preliminary part of cluster policies: the establishment of technical partnership with local agents taken either individually or via their coalitions or associations. This is a very delicate part of the whole strategy since local private agents behave in an opportunistic way and individually rather than collectively. Furthermore, private agents tend to be particularly resilient to cooperation in backward areas where this behaviour has not yet been seen as a catalyst for growth.

In the light of these consideration and based on the field study carried out in Vietnam by the UNIDO international expert during July-August 2011, we suggest the following allocation of responsibilities among the different levels of government.

The **Central Government** – as a preliminary action - defines a legal/institutional framework which enables the recognition of clusters as a target for specific policy actions and funds a pilot cluster initiative (see previous paragraph). Second, central level co-ordination is necessary to overcome governance barriers that could prevent the realisation of synergies from linking objectives of different policies that could potentially support clusters formation and growth.[22] The central level co-ordination mechanisms that can overcome these biases could be based on **inter-ministerial** and/or **inter-agency committee** in charge of designing

[22] The lack of synergies can be due in some cases to programmes emanating from different sectoral policies and in others because they are emanating from different levels of government. The fragmentation of resources across different programmes is confusing to both public and private actors. At best, the programmes are simply co-existing but with potential increased transactions costs for the participants. At worst, the programmes divide actors that should otherwise be working together, such as when administrative boundaries don't map to the clusters or certain relevant actors are not eligible for support in the context of the programme.

cluster programme guidelines and connecting policy interventions which are not explicitly linked with the cluster policies.

The articulation of policies between national and provincial level is another vehicle for supporting policy coherence with respect to clusters. It is also a way to avoid a duplication, or worse, a conflict between different policy measures and different government levels. The inter-ministerial committee could be the political body for regular dialogue and consultation processes between national and provincial governments. Moreover, "contracts" across levels of government could be used for joint actions in cluster policy. A contract approach requires the definition of a clear target for policy action as well as a known path to reach that target. Enforcement mechanisms are triggered when parties do not perform their agreed tasks. This approach offers a framework for long-term planning and co-financing (including a number of investments related to cluster policy) between several central level ministries and the province.

The **Provincial Government** appears, in the current Vietnamese framework, to be the most appropriate level for the **implementation** of cluster policies. Given the national institutional framework and the general guidelines defined at central level, local policy makers have the necessary information for tailoring policies to specifics group of firms and adapt policies over time. They have the possibility to put in place precise strategies, stimulating the firms to modify their behaviours in order to create joint-actions and to monitor the progresses and (eventually) modify strategies in order to take into account the dynamic evolution of clusters' interactions.

The concrete actions, the provincial government should implement to support cluster development, need to target three main objectives:

1. **facilitating development of external economies** (build a specialized cluster-specific labour force; facilitate the dissemination of specialized know-how and information);
2. **promoting linkages between firms** (create and enhance trust between firms; promote the establishment of collective projects; create and strengthen business associations; strengthen the local supply of financial and nonfinancial services; facilitate the cluster's external connections; promote innovation at the cluster level);
3. **strengthening the local position within value chains** (attract the chain leaders into the clusters; sustain the upgrading of local suppliers; facilitate their interactions within value chains; promote access to new markets and new value chains; assist SMEs in meeting international standards).

Figure 4.1 – The cluster policy governance architecture

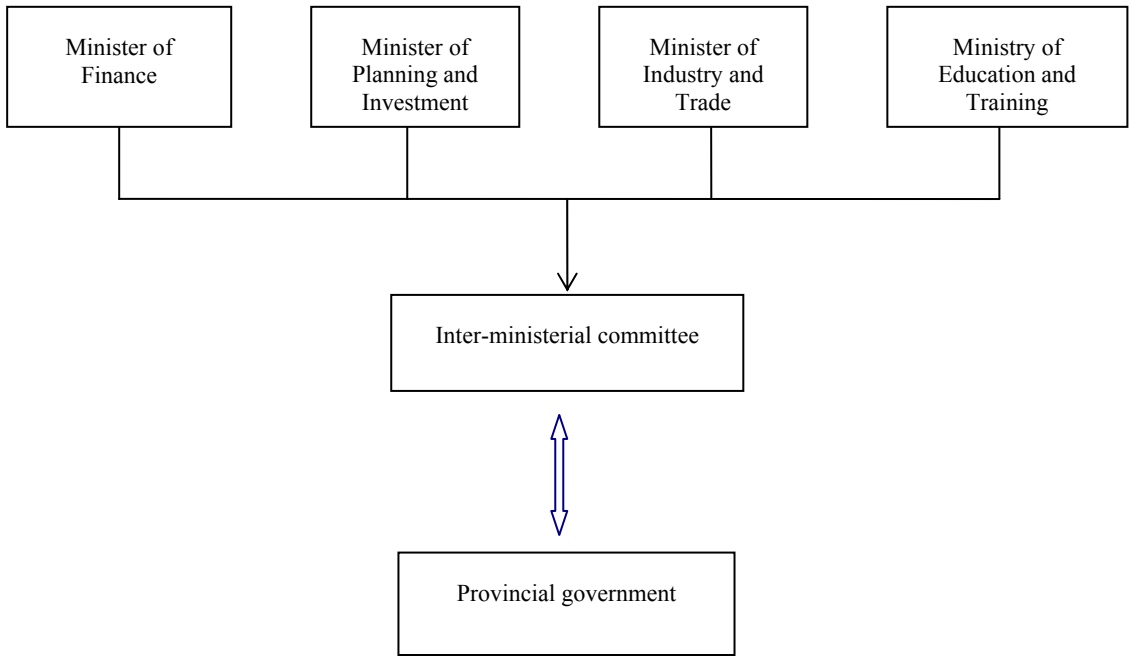
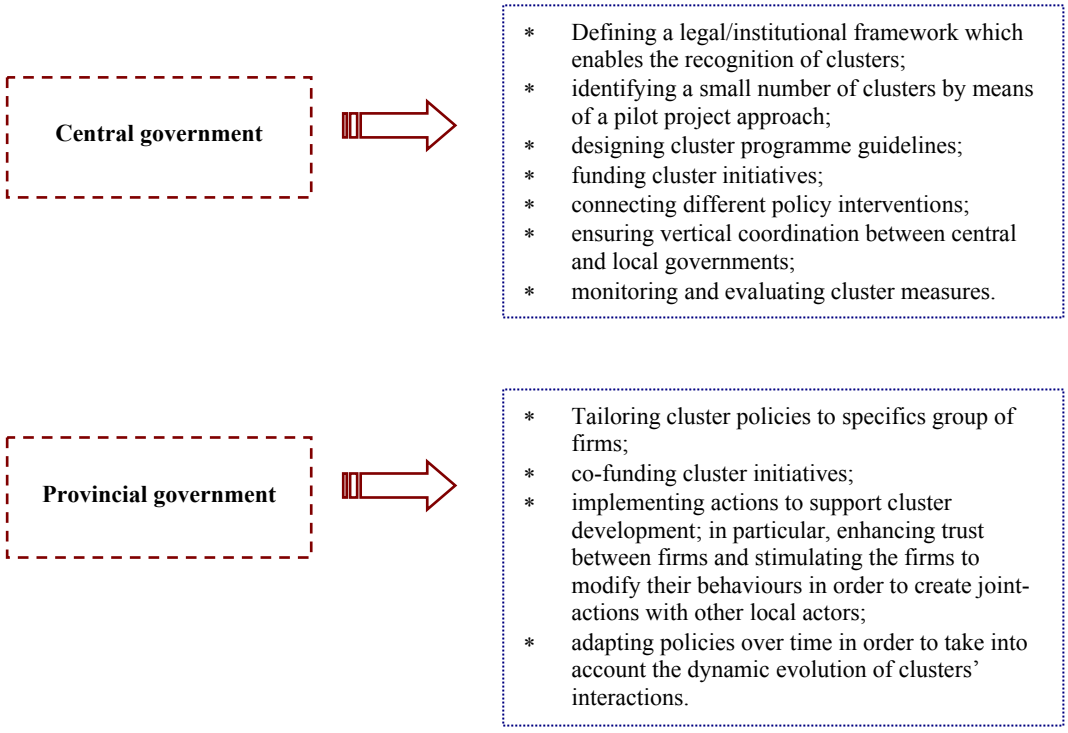


Figure 4.2 – Cluster policy: who does what?



4.3 Internal cluster governance

The cluster governance calls also for a **well defined internal organizational structure** in which private actors play a central role. Usually, this internal structure is quite different according to the stage of cluster development (growth phase, peak phase, maturity and consolidation phase).

Although not all clusters have "formal governance institutions", that is some form of representative body of the clusters stakeholders (firms, local institutions like universities or business associations, etc.), the existence of formal bodies which represent the clusters is highly desirable as argued above in order to allow policymaker to tailor actions more closely to the real needs of clusters' stakeholders.

With this respect, the field study has pointed out that these institutions are still at their infancy in Vietnam and weakly affect the design of public policy.

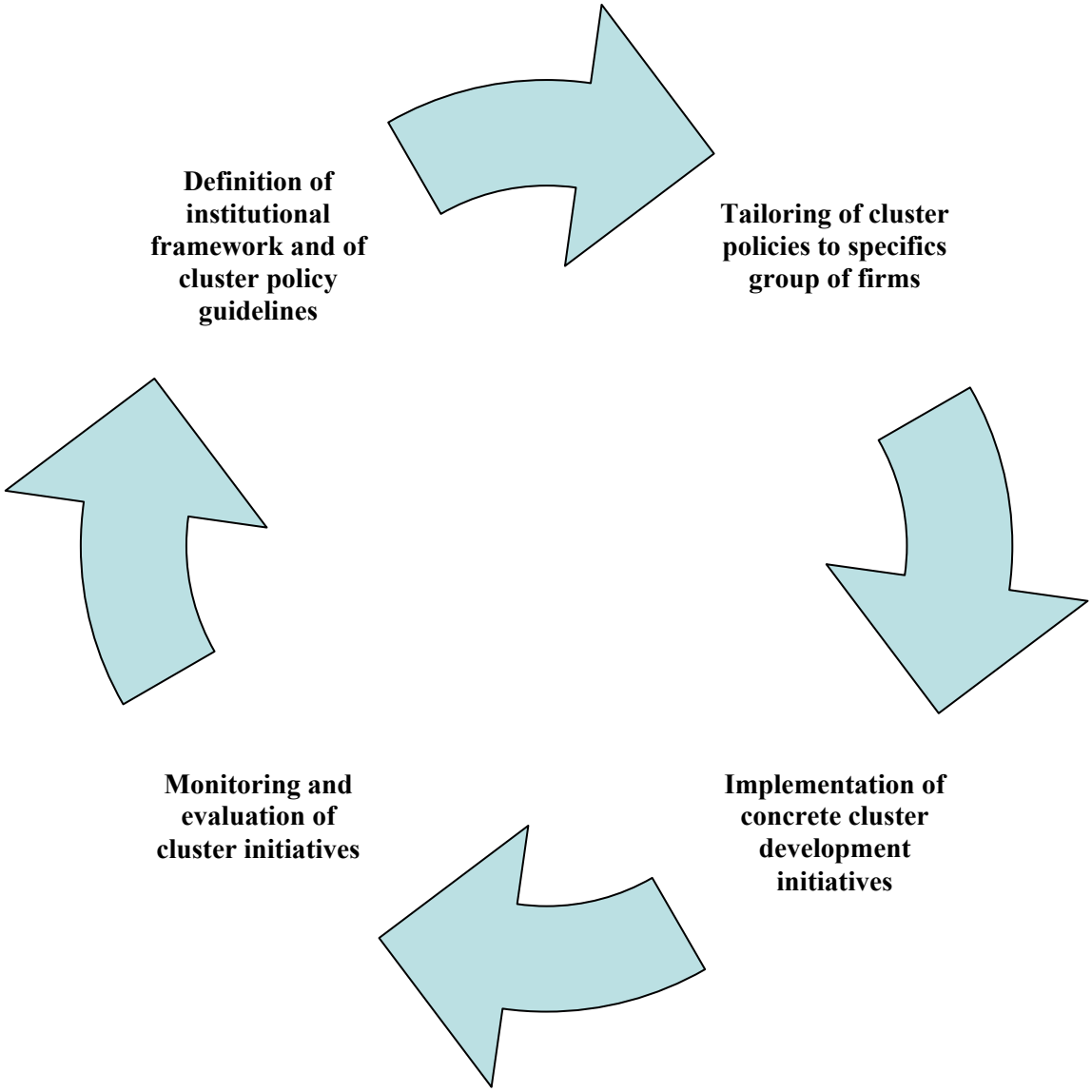
4.4 Final remarks

From the analysis presented in this Report it emerges clearly a strong case for cluster development policy as well as that cluster policy is difficult to design, since it is not a list of actions, decided somewhere by someone, but a process involving several actors. These actors must agree on priorities and actions and must act, for their respective responsibility, in an integrated and timely mood. In the light of these considerations, our final suggestions for Vietnamese policy makers are the following:

* **Be realistic**. Define realistic targets, clusters cannot be created from scratch and not all clusters can be created.
* **Be intelligent**. In the choice of clusters, and in the definition of the policy, take account that the "seeds" of a cluster should be in place before activating cluster policy.
* **Be curious**. Investigate what are the specific market failures: clusters are different according to sector, stage of life-cycle, structure of governance etc. and require "tailored" policy and tailored governance structures.
* **Be patient and flexible**. Policy intervention is crucial and highly effective in initial phases of cluster life-cycle, but is much more difficult.
* **Work a lot on local public goods**. Public policy should focus on consolidating and boosting clusters by investing on human capital, promote cooperative behaviour, provide local services and infrastructures.

* **Learn from action**. Induce cooperation and experience sharing among clusters (a cluster club); evaluate the policy measures: a good cluster policy is a matter of policy making learning.

Figure 4.3 – The cluster policy cycles: "learning by doing"



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APPENDIX 1

List of interview conducted by the UNIDO team with the collaboration of CIEM

* CIEM experts
* National Institute for Science and Technology – Hanoi
* Vietnam Chamber of Commerce and Industry – Hanoi
* Vietnam Competitive Initiative (VNCI) – Hanoi
* Vietnam Development Forum – Hanoi
* Embassy of the United States of America - Hanoi
* Danang Industrial and Export Processing Zones Authority – Da Nang
* Institute for Industrial Policy and Strategy - Hanoi
* AIP (Ministry of Industry and Trade) – Hanoi
* Vietrade (Vietnam Trade Promotion Agency) – Hanoi
* State Agency for Technological Innovation – Hanoi
* Foreign Investment Agency - Hanoi
* DPI (heads and responsible of several divisions) - Ho Chi Minh City
* DOIT - Ho Chi Minh City
* Investment Promotion Agency - Ho Chi Minh City
* Several company executives (both local and foreign firms) – Hanoi, Vinh Puk, Da Nang, Ho Chi Minh City
* Several independent experts / academics – Hanoi, Da Nang, Ho Chi Minh City

APPENDIX 2

List of industrial agglomeration in Vietnamese Provinces by sector (GSO Enterprise Survey 2007)

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
I. Textile and Garment									
1.	Ho Chi Minh city	District 12	172	165	33	42626	4.7	4.7%	57.1%
		Thu Duc	82	74	29	33653	2.1	3.7%	25.9%
		Tan Phu	271	265	22	29911	2.4	3.3%	29.3%
		Cu Chi	42	39	20	26015	3.8	2.9%	46.4%
		Binh Tan	144	143	40	25787	1.3	2.9%	16.4%
		Go Vap	139	135	10	24652	2.6	2.7%	31.5%
		Tan Binh	222	219	4	20343	1.4	2.3%	17.0%
		District 9	42	38	10	13738	3.0	1.5%	36.6%
		Hoc Mon	94	94	24	11756	2.8	1.3%	34.6%
		Binh Chanh	70	70	17	11567	1.9	1.3%	22.6%
		District 7	59	56	28	20766	1.6	2.3%	19.1%
		District 8	47	45	6	12416	3.1	1.4%	37.9%
		Group	***1384***	***1343***	***243***	***273230***	***2.3***	***30.3%***	***27.8%***
2.	Binh Duong	Thuan An	106	100	78	42093	1.5	4.7%	17.8%
		Di An	50	42	24	35782	1.7	4.0%	21.0%
		Ben Cat	12	25	25	3206	1.6	1.5%	20.0%
		Group	***183***	***167***	***127***	***90949***	***1.6***	***10.1%***	***19.3%***
3.	Dong Nai	Bien Hoa city	63	51	42	39273	1.3	4.4%	15.6%
		Nhon Trach	25	14	25	17169	2.8	1.9%	34.6%
		Group	***88***	65	67	***56442***	***1.5***	***6.3%***	***18.7%***
4.	Nam Dinh	Nam Dinh city	68	63	3	33402	4.2	3.7%	51.0%
5.	Hanoi	Hoang Mai	44	42	1	12278	1.4	1.4%	16.5%
		Long Bien	20	18	3	12616	1.2	1.4%	14.6%
		Group	***64***	60	4	***24894***	***1.3***	***2.8%***	***15.5%***
6.	Hai Duong	Hai Duong city	32	32	7	11003	1.7	1.2%	20.3%
		Nam Sach	12	10	7	11926	0.0	1.3%	69.5%
		Group	***44***	42	14	***22929***	***2.6***	***2.6%***	***32.2%***
7.	Phu Tho	Viet Tri city	30	26	14	21936	3.5	2.4%	42.7%
8.	Thai Binh	Thai Binh city	35	30	3	16638	3.7	1.8%	45.1%
9.	Tay Ninh	Trang Bang	20	20	19	12070	4.1	1.3%	50.2%
10.	Vinh Phuc	Vinh Yen city	8	4	7	10039	3.5	1.1%	42.3%
	Total		***1924***	***1820***	***501***	***562529***			

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
II. Manufacture of leather and related products									
11.	HCM city	Thu Duc	18	12	7	33876	3.1	5.5%	26.0%
		Go Vap	24	22	1	17132	2.6	2.8%	21.9%
		Binh Chanh	27	27	3	11998	2.8	2.0%	23.4%
		Hoc Mon	20	20	6	6927	2.5	1.1%	20.4%
		District 6	12	10	1	6283	2.0	1.0%	16.5%
		Binh Tan	52	46	13	73074	5.6	11.9%	46.3%
		Cu Chi	11	10	5	10280	2.2	1.7%	18.3%
		Group	***164***	**147**	**36**	***159570***	***3.5***	***25.9%***	***29.3%***
12.	Dong Nai	Bien Hoa	21	15	10	47563	2.3	7.7%	18.9%
		Nhon Trach	8	6	7	18419	4.5	3.0%	37.1%
		Trang Bom	5	2	4	37610	5.9	6.1%	49.3%
		Vinh Cuu	3	1	2	20448	10.0	3.3%	82.9%
		Group	***37***	**24**	**23**	***124040***	***3.7***	***20.2%***	***30.8%***
13.	Binh Duong	Di An	24	18	13	44419	3.1	7.2%	26.1%
		Thuan An	33	27	24	40323	2.0	6.6%	17.0%
		Thu Dau Mot	7	6	0	7647	1.8	1.2%	14.9%
		Tan Uyen	8	7	8	13053	2.4	2.1%	20.3%
		Ben Cat	10	8	10	12797	2.4	2.1%	19.6%
		Group	***82***	**66**	**55**	***118239***	***2.4***	***19.2%***	***20.1%***
14.	Long An	Duc Hoa	10	9	8	10036	5.3	1.6%	43.8%
		Ben Luc	9	8	3	26739	7.1	4.3%	59.1%
		Group	***19***	**17**	**11**	***36775***	***6.5***	***6.0%***	***53.9%***
15.	Hai Phong	Le Chan	8	6	2	20356	5.6	3.3%	46.5%
		An Lao	2	1	0	9707	9.4	1.6%	78.5%
		Group	***10***	***7***	***2***	***30063***	***6.4***	***4.9%***	***53.5%***
	Total		***312***	***261***	***127***	***468687***			
III. Wood processing and furniture									
16.	Binh Duong	Thuan An	174	159	71	51566	4.0	12.8%	21.8%
		Tan Uyen	102	85	46	29510	8.4	7.3%	45.9%
		Di An	101	95	14	24585	2.6	6.1%	14.5%
		Ben Cat	62	56	30	16918	4.7	4.2%	25.9%
		Thu Dau Mot	54	52	6	6300	2.2	1.6%	12.3%
		Group	***493***	***447***	***167***	***128879***	***4.0***	***31.9%***	***21.9%***
17.	Dong Nai	Bien Hoa	181	178	14	18484	1.3	4.6%	7.3%
		Trang Bom	31	27	7	15057	3.6	3.7%	19.7%
		Long Thanh	25	20	12	12835	6.1	3.2%	33.2%
		Group	***237***	***225***	***33***	***46376***	***2.3***	***11.5%***	***12.6%***

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
18.	Binh Dinh	Quy Nhon	85	73	1	37385	8.6	9.3%	47.1%
19.	Ho Chi Minh city	Thu Duc	48	46	9	8970	1.3	2.2%	6.9%
		Cu Chi	16	15	3	4360	1.4	1.1%	7.8%
		Group	***64***	***61***	***12***	***13330***	***1.3***	***3.3%***	***7.2%***
20.	Gia Lai	Pleiku	22	20	0	11114	5.9	2.8%	32.5%
21.	Khanh Hoa	Nha Trang	34	33	2	5561	1.5	1.4%	8.3%
	Total		***935***	***859***	***215***	***242645***			
IV. Manufacture of food products									
22.	Can Tho	Thot Not	53	49	0	9976	**14.8**	**2.4%**	**84.3%**
		Binh Thuy	22	16	3	8273	**6.8**	**2.0%**	**38.7%**
		Group	***75***	***65***	***3***	***18249***	***9.6***	***4.3%***	***54.9%***
23.	Dong Nai	Bien Hoa	34	22	15	16597	1.2	4.0%	6.6%
24.	An Giang	Long Xuyen city	30	24	1	16170	7.9	3.8%	45.0%
25.	HCM city	Tan Phu	54	48	4	14237	2.5	3.4%	14.0%
26.	Ca Mau	Ca Mau city	42	30	0	13449	10.6	3.2%	60.3%
27.	Khanh Hoa	Cam Lam	12	7	7	6315	11.0	1.5%	62.8%
		Nha Trang	55	54	1	4883	1.3	1.2%	7.3%
		Group	***67***	***61***	***8***	***11198***	***2.6***	***2.7%***	***14.6%***
28.	Dong Thap	Sa Dec	74	72	1	5913	11.9	1.4%	67.7%
		Cao Lanh	6	4	1	4649	5.8	1.1%	33.0%
		Group	***80***	***76***	***2***	***10562***	***8.1***	***2.5%***	***46.2%***
29.	Soc Trang	Soc Trang city	31	26	0	10085	10.6	2.4%	60.2%
30.	Tien Giang	Chau Thanh	59	59	1	4786	9.8	1.1%	55.8%
		My Tho	16	14	0	4278	2.6	1.0%	14.9%
		Group	***75***	***73***	***1***	***9064***	***4.3***	***2.2%***	***24.3%***
31.	Long An	Tan An	69	67	0	8261	6.6	2.0%	37.7%
32.	Ba Ria- VT	Vung Tau city	49	46	2	8167	2.6	1.9%	14.9%
33.	Binh Phuoc	Phuoc Long	59	58	0	6133	7.1	1.5%	40.4%
34.	Binh Thuan	Phan Thiet city	42	41	2	5776	4.2	1.4%	23.9%
35.	Ben Tre	Chau Thanh	13	10	0	4531	11.5	1.1%	65.3%
	Total		***720***	***647***	***38***	***152479***			
V. Manufacture of electrical equipment									
36.	HCM city	District 7	12	7	8	16975	9.7	14.2%	15.6%
37.	Dong Nai	Bien Hoa city	19	13	13	16952	4.2	14.2%	6.7%

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
38.	Hai Phong	An Duong	10	8	5	7432	12.0	6.2%	19.4%
39.	Hanoi	Dong Anh	17	15	9	4887	4.3	4.1%	6.9%
40.	Hai Duong	Hai Duong city	10	9	3	4238	4.9	3.6%	7.8%
	Total		***68***	***52***	***38***	***50484***			
VI. Manufacture of computer, electronic and optical products									
41.	Binh Duong	Thuan An	27	21	24	13841	5.0	16.0%	5.8%
42.	Hanoi	Dong Anh	6	4	5	10251	12.3	11.8%	14.4%
43.	Ho Chi Minh city	District 7	10	6	7	6053	4.7	7.0%	5.6%
44.	Bac Ninh	Bac Ninh city	5	1	5	4864	13.6	5.6%	16.0%
45.	Vinh Phuc	Me Linh	8	6	7	1836	9.7	2.1%	11.4%
	Total		***56***	***38***	***48***	***36845***			
VII. Manufacture of plastic products									
46.	HCM city	Binh Tan	156	152	11	10252	4.0	8.6%	6.5%
		Tan Phu	130	127	5	6453	3.9	5.4%	6.3%
		Binh Chanh	102	101	8	4078	4.9	3.4%	8.0%
		District 6	89	87	0	2775	4.5	2.3%	7.3%
		District 11	53	51	1	2549	4.4	2.1%	7.0%
		District 8	45	45	1	2107	4.0	1.8%	6.4%
		District 5	31	30	0	2095	3.2	1.8%	5.1%
		Hoc Mon	27	27	5	1626	3.0	1.4%	4.8%
		Group	***633***	620	31	***31935***	***4.0***	***26.8%***	***6.5%***
47.	Vinh Phuc	Me Linh	8	6	3	1637	6.3	1.4%	10.2%
48.	Long An	Duc Hoa	17	16	7	1601	4.3	1.3%	7.0%
49.	Bac Ninh	Bac Ninh city	5	3	3	1568	3.2	1.3%	5.1%
	Total		***663***	***645***	***44***	***36741***			
VIII. Manufacture of other metal products, metalworking service activities sector									
50.	HCM city	Thu Duc	57	55	14	7469	12.0	6.2%	19.6%
		District 6	44	44	0	1693	13.1	1.4%	21.4%
		Binh Chanh	75	74	10	2770	3.7	2.3%	6.1%
		District 7	44	37	20	7899	4.5	6.6%	7.3%
		Group	***220***	***210***	***44***	***19831***	***6.1***	***16.5%***	***9.9%***
51.	Hanoi	Dong Anh	16	16	4	332	0.3	0.3%	0.5%
		Long Bien	32	31	2	3933	2.8	3.3%	4.6%
		Soc Son	21	18	7	5455	13.5	4.5%	21.9%
		Group	***69***	***65***	***13***	***9720***	***1.7***	***3.5%***	***2.7%***
52.	Hung Yen	Van Lam	9	**7**	**3**	4209	10.5	3.5%	17.2%
	Total		***298***	***282***	***60***	***33760***			

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
IX. Building of ships and boats									
53.	Hai Phong	An Duong	7	4	0	3033	9.7	5.0%	7.9%
		Hong Bang	8	4	0	6388	18.0	10.6%	14.7%
		Thuy Nguyen	8	6	0	9865	47.0	16.4%	38.4%
		Group	***23***	14	0	***19286***	***22.0***	***32.0%***	***18.0%***
54.	Quang Ninh	Yen Hung	8	7	0	1238	33.1	2.1%	27.1%
		Ha Long	6	4	0	5787	9.2	9.6%	7.5%
		Group	***14***	11	0	***7025***	***10.5***	***11.7%***	***8.6%***
55.	Nam Dinh	Xuan Truong	13	11	0	3204	56.9	5.4%	46.1%
		Truc Ninh	7	5	0	2032	31.6	3.4%	25.6%
		Group	***20***	16	0	***5236***	***43.4***	***8.8%***	***35.2%***
	Total		***57***	***41***	***0***	***31547***			
X. Manufacture of motorcycles and motorbikes									
56.	Hanoi	Soc Son	16	13	16	6805	44.2	14.9%	27.4%
		Dong Anh	8	4	8	3763	8.6	8.2%	5.3%
		Gia Lam	2	1	1	1188	9.4	2.6%	5.8%
		Group	***26***	18	25	***11756***	***16.3***	***25.7%***	***10.1%***
57.	Hung Yen	Van Lam	6	5	1	3447	22.7	7.5%	14.1%
		Yen My	14	11	12	2275	22.1	5.0%	13.7%
		Group	***20***	16	13	***5722***	***22.5***	***12.5%***	***13.9%***
58.	Vinh Phuc	Vinh Yen	8	7	8	2925	19.9	6.4%	12.3%
	Total		***54***	***41***	***46***	***20403***			
XI. Manufacture of ion, steel and cast ion									
59.	Thai Nguyen	Thai Nguyen city	20	17	1	8728	37.2	23.0%	19.1%
		Song Cong	5	5	0	596	16.7	1.6%	8.6%
		Group	***25***	***22***	***2***	***9324***	***34.5***	***24.6%***	***17.7%***
60.	Hai Phong	Hong Bang	10	8	4	2266	10.2	6.0%	5.2%
61.	Ba Ria- VT	Tan Thanh	5	3	3	1373	12.7	3.6%	6.5%
62.	Bac Ninh	Tu Son	39	39	0	1306	19.0	3.4%	9.8%
	Total		***79***	***72***	***9***	***14269***			
XII. Manufacture of structural metal products, tanks, reservoirs and steam generators									
63.	Hanoi	Dong Anh	47	43	1	3536	6.6	6.3%	5.0%
		Soc Son	9	7	1	2253	3.5	4.0%	2.6%
		Tu Liem	29	29	1	1022	2.5	1.8%	1.9%
		Long Bien	13	13	0	468	2.5	0.8%	1.9%
		Group	***98***	***92***	***3***	***7279***	***4.1***	***13.0%***	***3.1%***
64.	Hai Phong	Hong Bang	17	15	3	2512	7.6	4.5%	5.8%

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
	Total		***115***	***107***	***6***	***9791***			
XIII. Manufacture of motor vehicles									
65.	Dong Nai	Trang Bom	36	31	36	6662	13.9	14.4%	8.7%
66.	Hanoi	Dong Anh	10	6	5	2686	8.9	8.6%	5.6%
	Total		***46***	***37***	***41***	***9348***			
XIV. Manufacture of paper and paper products									
67.	Bac Ninh	Bac Ninh city	93	93	0	3073	9.4	3.9%	10.1%
		Tu Son	13	13	2	1376	9.6	1.7%	10.3%
		Tien Du	12	11	0	811	6.8	1.0%	7.3%
		Group	***118***	***117***	***2***	***5260***	***8.9***	***6.7%***	***9.6%***
68.	Phu Tho	Phu Ninh	9	8	0	3534	57.6	4.5%	61.7%
	Total		***127***	***125***	***2***	***8794***			
XV. Shaping and finishing of stone sector									
69.	Thanh Hoa	Dong Son	94	94	0	6334	343.8	43.6%	67.6%
		Thanh Hoa city	16	16	1	1756	19.5	12.1%	3.8%
		Bim Son	2	2	0	159	5.2	1.1%	1.0%
		Group	***112***	112	1	***8249***	***59.3***	***56.8%***	***11.7%***
XVI. Manufacture of cement, lime and plaster									
70.	Hai Duong	Kinh Mon	10	8	1	5160	63.3	9.3%	47.6%
71.	Hai Phong	Thuy Nguyen	6	4	1	2860	14.8	5.2%	11.1%
	Total		***16***	***12***	***2***	***8020***			
XVII. Manufacture of clay building materials									
72.	Quang Ninh	Ha Long	6	5	0	4525	5.6	5.9%	5.8%
73.	Thai Binh	Tien Hai	12	11	0	3102	37.2	4.0%	38.8%
	Total		***18***	***16***	***0***	***7627***			
XVIII. Manufacture of other porcelain and ceramic products									
74.	Vinh Long	Mang Thit	43	43	0	3788	128.1	9.3%	70.5%
75.	Hanoi	Gia Lam/Bat Trang	49	48	1	2576	22.9	6.3%	12.6%
	Total		***92***	***91***	***1***	***6364***			
XIX. Manufacture of rubber products									
76.	HCM city	Tan Phu	14	13	0	2726	6.5	9.0%	2.7%
		District 6	3	3	0	1347	8.7	4.5%	3.5%
		Binh Tan	14	14	1	959	1.5	3.2%	0.6%
		Binh Chanh	11	11	1	568	2.7	1.9%	1.1%
		Hoc Mon	11	11	1	176	1.3	0.6%	0.5%
		District 11	1	1	0	29	0.2	0.1%	0.1%
		District 8	1	1	0	15	0.1	0.0%	0.0%

Sector	Province	District	N. of Enterprises	N. of SMEs	N. of Foreign firms (FDI)	N. of Emploees	Locational Quotient (1)	Sectoral share (% of sectoral National employment)	Distict Share (% of district total employment)
		Group	***55***	***54***	***3***	***5820***	***3.2***	***19.3%***	***1.3%***
XX. Manufacture of pharmaceuticals, medicinal chemical and botanical products									
77.	Can Tho	Ninh Kieu	8	6	0	2638	22.0	8.8%	8.9%
XXI. Casting of metals									
78.	Hai Phong	Thuy Nguyen	53	53	0	1645	82.6	28.7%	6.4%
XXII. Manufacture of glass and glass products									
79.	Thai Binh	Tien Hai	9	9	0	1602	138.4	15.0%	20.0%

(1) LQ: Localization Quotient - LQ, is calculated as the ratio of (*i*) the number of sectoral employees/total number of employees at district level; over (*ii*) the number of sectoral employees/total number of employees nationwide. An index LQ larger than 1 signals a specialization at the district level in that particular sector taking the National sectoral structure as a benchmark.

Source: UNIDO (2010b) Identification of the main Manufacturing industry clusters in Vietnam Through a statistical approach.

APPENDIX 3

VIETNAM'S POLICY FRAMEWORK FOR ATTRACTING FOREIGN DIRECT INVESTMENT[*]

Vietnam has opened its economy and started to attract foreign direct investment since 1987 with the enactment of the Law on Foreign Direct Investment. In the last 23 years, FDI have played an active role in the overall national growth and became an integrated part of the Vietnam economy.

The contribution of FDI to national GDP increased from 2% in 1991 to about 19% in 2009.[23] The rate of investment, export value and budget revenue of the FDI sector also increased strongly from year to year.[24]

One of main reasons explaining the impressive performance in attracting foreign direct investment is that Vietnam has gradually improved the policy framework for investment in order to create favourable conditions for foreign investors, and at the same time, to comply with basic principles of international trade and investment related agreements of which Vietnam is a member, including WTO agreements. Notwithstanding there remains room for further improvement.

FDI positive impact on government activity

- Adopting the Investment Law for both domestic and foreign investors has created an equal competition for enterprises, facilitated them to expand and diversify.
- Speeding up decentralization in encouraging, attracting and controlling foreign investment projects has helped local authorities to be more proactive. The procedure and management process over enterprises have become more simple and easier to bring into full play autonomy and accountability of enterprises.
- Based on local socio-economic development plans up to 2010, some provinces have worked out lists of projects in need of investment, and facilitated investors

[*] This appendix is based on World Bank and UNCTAD data and on a background paper prepared by Nguyen Dinh Tai (Vietnamese national expert).

[23] CIEM (2010) Vietnam's Economy 2009.

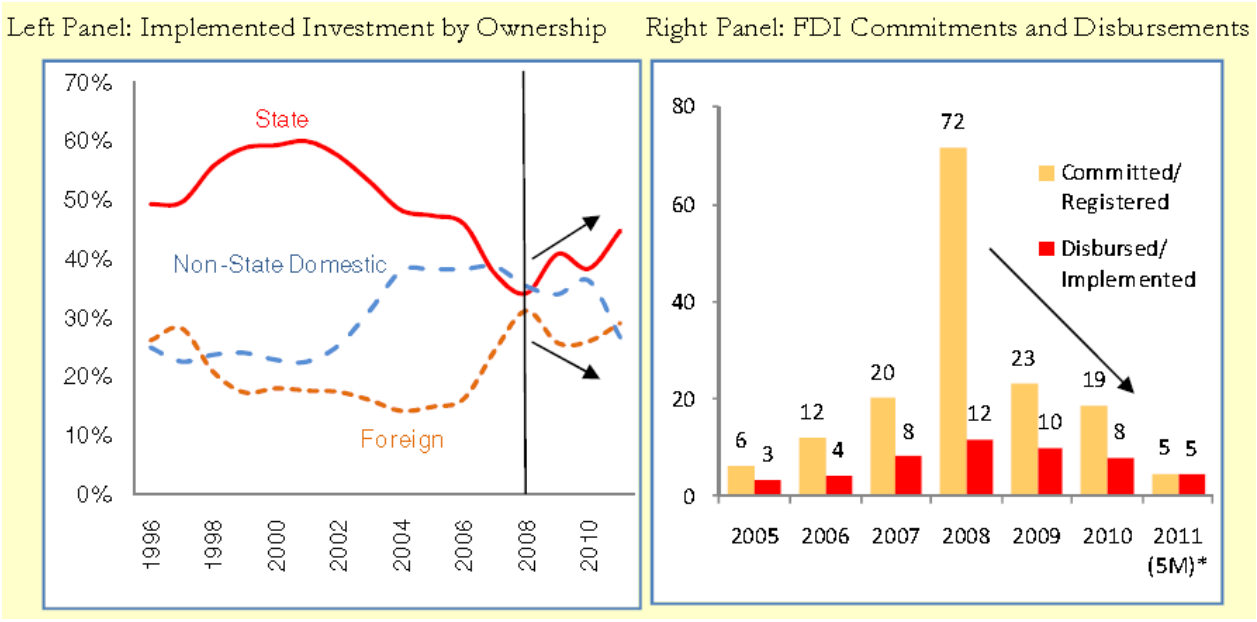
[24] FIA (2008) Report on 20 years of attraction of FDI in Vietnam.

shortening time, lessening the process of "pre-examination", implementing the process of one-door transactions, reducing costs of granting certificates of investment, concentrating on building infrastructures for industrial zones, creating "clean" sites for investors.

1. *FDI in Vietnam: recent trends*

Foreign direct investment accounts for the bulk of manufacturing exports and is a major source of financing for the country's current account deficit. In the past the level of FDI was unusually high. Recently, a decline higher than expected is registered In the first five months of 2011, US$ 4.7 billion FDI was committed to Vietnam relative to US$ 9 billion during the same period of 2010 – a huge 48 percent fall. In addition, committed FDI in 2010 was lower than in 2009, which in turn was lower than the corresponding number in 2008 (figure 1). Fortunately, the disbursed (implemented) FDI has held up well so far, despite a rapidly shrinking pipeline of new commitments. Moreover, given the slow disbursement rate, decline in commitment will not have an immediate impact on the economy.

Figure 1 - Level and composition of investment in Vietnam



Source: figure 7 in World Bank (2011) Taking stock. An Update on Vietnam's Recent Economic Developments

FDI has been one of the engines behind the transformation from an agriculture-based to an industry- and services-based economy and it continues to be a driving force of industrial growth and economic diversification in Vietnam. Although the first foreign investments were directed in the oil and gas sector, the industrial sector rapidly became the main magnet for FDI, as foreign investors used Vietnam as an export platform. By the late 1990s, the manufacturing sector accounted for almost 45 per cent of registered foreign investments. Other sectors that attracted significant FDI inflows included construction, real estate and tourism-related investments.

The FDI distribution across provinces has been very unequal with the regions with the most developed infrastructure and highest availability of relatively skilled labour attracting the lion's share of total FDI in the country. About 26 per cent of registered foreign investments in 1988–2006 were located in the Red River Delta region around Hanoi and Hai Phong, with the capital city alone attracting 16 per cent of the total (table 2). The disparity in FDI distribution across provinces is similarly strong when measured on a per capita basis.

Table 1 - Sectoral distribution of foreign investment projects, 1995–2007

(million dollars and percentage of total)

	Registered capital (million dollars)		Share of total registered capital (percentage of total)	
	1995–2000	2001–2007	1995–2000	2001–2007
Manufacturing	14 871	33 698	44.8	62.2
Real estate, renting business activities	3477	9068	10.5	16.7
Hotels and restaurants	2524	3090	7.6	5.7
Construction	4152	2209	12.5	4.1
Transport, storage and communications	2706	1493	8.2	2.8
Electricity, gas and water supply	716	994	2.2	1.8
Mining and quarrying	1541	716	4.6	1.3
Agriculture and forestry	1852	637	5.6	1.2
Other	1342	2296	4.0	4.2

Source: table 1.3 in UNCTAD (2008) Investment Policy Review of Vietnam

Table 2 - Provincial distribution of FDI projects, 1988–2006

(number of projects, percentage of total and dollars)

Province	Number of projects	Percentage of total	Registered capital (million dollars)	Percentage of total	Registered capital per capita (dollars)
Red River Delta	1781	21.5	20241	25.9	1.11
(Hanoi)	(949)	(11.5)	(12 561)	(16.1)	(3.90)
(Hai Phong)	(266)	(3.2)	(2648)	(3.4)	(1.47)
(Other)	(566)	(6.9)	(5031)	(6.4)	(0.38)
North-East	358	4.3	2445	3.1	0.26
North-West	27	0.3	115	0.2	0.04
North Central Coast	125	1.5	1473	1.9	0.14
South Central Coast	349	4.2	5276	6.7	0.74
Central Highlands	113	1.4	1041	1.3	0.21
South-East	5126	62.0	42 337	54.1	3.07
(Binh Duong)	(1315)	(15.9)	(6700)	(8.6)	(6.95)
(Dong Nai)	(870)	(10.5)	(10 410)	(13.3)	(4.70)
(Ho Chi Minh City)	(2504)	(30.3)	(17 896)	(22.9)	(2.93)
(Other)	(437)	(5.3)	(7332)	(9.4)	(1.62)
Mekong River Delta	334	4.0	2315	3.0	0.13

Source: table 1.4 in UNCTAD (2008) Investment Policy Review of Vietnam

2. *Developing Policy Framework for Investment for Attracting FDI*

In order to attract the FDI inflow in the last two decades, Vietnam introduced a series of incentives for foreign investors, especially incentives on taxes, financing and investment services. These incentives were not static, but gradually adjusted and improved through periods. The legal framework and foreign direct investment attraction policies have gradually been improved towards creating an attractive investment environment and enhancing socio-economic benefits from investment activities. Core principles of investment attraction policies like non-discrimination, transparency, predictability, ownership protection for investors, contract enforcement have gradually been established in the legal framework and policies of Vietnam and implemented in practice.[25]

The starting point of Vietnam's Policy Framework for Investment (PFI) was the Law on Foreign Direct Investment of 1987, the mission of which was to institutionalize the open-door policy of the country. This Law was amended, supplemented and improved many times (in 1990, 1992, 1996 and 2000). In 1994, the Law on Domestic Investment Promotion was

[25] OECD and MPI (2008) Policy Framework for Investment Assessment of Vietnam.

adopted by the Vietnam's National Assembly, and was amended in 1998. The parallel co-existence of these two Laws ended at the end of 2005 by emerging of the common "Investment Law". And this event also removed the state of "one game on two playing fields", creating a truly equal and fair investment environment for all investors.

The common Investment Law[26] together with the new Law on Enterprises[27] enacted in 2005 and the Law on Intellectual Property Rights in 2006 have unified fundamental regulations related to investment in Vietnam by domestic and foreign investors, making the investment mechanism in Vietnam gradually more suitable with WTO commitments, enhancing decentralization and providing further business autonomy to investors. Generally, the business–investment environment in Vietnam has been much improved towards creating more favourable conditions for investors, thanks to the legal reforms during the WTO accession process. Particularly, the common Investment Law has followed the non-discrimination principle by unifying investment regulations in Vietnam for both domestic and foreign investors. Moreover the common Investment Law is basically consistent with major WTO agreements, including TRIPs (Trade-Related Aspects of Intellectual Property Rights), TRIMs (Trade-Related Investment Measures), GATS (General Agreement on Trade in Services), SCM (Subsidies and Countervailing Measures), and ITA (Information Technology Agreement).

According to the Investment Law and its guiding documents[28], the right to investment by investors has been basically improved with a new approach, transforming from the "List of permitted investment sectors, areas and locations" of the previous investment laws to the "List of exclusion and conditionality". Investors are allowed to invest in all sectors of the economy excluding the forbidden and restricted ones. Restricted and conditional investment areas applicable to foreign investors are compliant with the international conventions endorsed by Vietnam.

The Investment Law has removed restrictions on investment right of foreign investors compared with that of domestic ones which was stipulated in previous laws, such as the right to access to and use of credit sources, land and natural resources, the right to hire and employ people, the right to direct export and import, compulsory localization proportion, etc.

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[26] This law was enacted to unify two previous laws, i.e. the Law on Foreign Investment (amended in 2000) and the Law on Domestic Investment Promotion (amended in 1998).

[27] In principle it is applied to all types of enterprises in all economic sectors, excluding cooperatives and business households.

[28] Decree 108/ND-CP of the Government on 22/9/2006 regarding regulations and guidance on the implementation of several articles of the common Investment Law 2005.

Previous regulations on the minimum capital contribution of foreign investors in joint ventures, and proportion of legal capital over investment capital were removed, creating more opportunities of capital mobilization for investors. In terms of employment, previously foreign employers had to go through a domestic recruitment agency to hire domestic labourers. Now they are allowed to recruit labourers directly. Restrictions on foreign investors in terms of a fixed export ratio and no export delegation were entirely removed and domestic and foreign investors have an equal right in doing business.

Nevertheless, the Investment Law (2005) and current regulations, including international commitments of Vietnam, still has different provisions on the right to investment between domestic and foreign investors, for example, in some service sectors (like finance, banking).

One of the breaking points of the new investment law was the strong decentralization of state governance over FDI activities. State governance over FDI activities was initially assigned to the State Committee on Cooperation and Investment (SCCI). This agency was later moved to Ministry of Planning and Investment (MPI). The new investment law has decentralized FDI governance functions to local (provincial) authorities that lead to significant simplification of investment procedures, enhancing accountability of local government agencies in FDI governance. The decentralized contents range from identifying and deciding investment guidelines, preparing investment projects, evaluating and making investment decisions, to allocating investment capital, monitoring and administering project implementation. Accordingly, the Prime Minister only makes decisions on important projects at the national level of which the investment guideline was approved by the National Assembly. All other projects (regardless of capital scale) have been decentralized to ministries, line authorities and local (provincial, district, commune) governments for approval.

3. Priorities for Investment Policy Reform

Priorities for investment policy reform that are under consideration by the Vietnamese government at different levels concentrate on the following pillars:

* rapidly and completely adopt fair treatment among foreign and domestic investors; guarantee early fulfilment of WTO commitments regarding market entry in the service industry; accelerate the equitization program of state-owned enterprises and provide for more integration of foreign investors in the program;

* improve the legal system and make investment policies transparent, clear, equal and effective. More importantly, it is essential to ensure the rapid and consistent implementation of investment policies by competent government agencies;
* continue improving the mechanism of one-door transaction in agencies in charge of granting certificates of investment and managing investment; building a mechanism of cooperation in dealing with, supervising, checking investment activities; dealing with procedures of land, tax, customs, etc timely to create an open environment in investment;
* speed up implementation of approved national investment promotion programs;
* make it possible for provinces to participate in programs and working teams of investment promotion at central level;
* promulgate the list of projects calling for national investment in the period of 2010-2015 and the program of attracting foreign investment in the period of 2010-2015 to lay a basis for lines, ministries and local authorities to launch activities.

4. Conclusions

In the years to come, East Asia (including South East Asia) is still predicted to be the most dynamic region of the world. In addition to the quickly growing economy, East Asia has a huge consumer markets, a rather cheap source of labour, and to some extent political stability. These are the key appeals to investors from other regions. East Asia's strong and persistent commitment to reform is also a marked difference relative to other regions. Together with trade and investment liberalization, the East Asian economies are also engaged in the production linkages/value chains. For example, total values of trade in intermediate goods and regional intra-industry trade is trending upward, while the transfer of technology to less-developed countries is undertaken via FDI flows. Since Vietnam is currently at the early stage in development, it should undertake further trade and investment reforms, to engage more deeply in that production networks. This is necessary, not only for the goal of integration, but also to strengthen Vietnam's competitiveness and to solve the problem of dualistic structure which makes the country potentially vulnerable to external shocks.

The remarkable socio-economic achievements and difficulties that the Vietnamese economy experienced in recent years have implied a profound policy lesson: deeper and wider economic integration brings about many fruitful opportunities but at the same time, entails increasing macroeconomic risk. The interaction between Doi Moi, especially the institutional reform, the integration process and the implementation of opening commitments

become stronger. The country could take advantage and mitigate the risk if it is proactive in preparing and carrying out policy response appropriately.