

Review of the UNIDO Cluster Twinning (CT) Approach¹

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1. Introduction and Background

This document is a UNIDO-internal review paper, not an evaluation. Its purpose is to contribute to the further development of the UNIDO Cluster Twinning (CT) approach and it is primarily based on the results of the parallel terminal evaluations of two UNIDO projects:

- Consolidated Project for SME Development in India (TE/IND/04/001), especially the Cluster Twinning Component;
- SME Cluster Development in Viet Nam (TE/VIE/08/003).

Both projects can be considered to have pioneered a specific form of cluster-related technical assistance, namely the establishment of productive partnerships between clusters in developed and developing countries, generally referred to as “cluster twinning”.

The purpose of the review is to verify the relevance and usefulness of the CT approach and to arrive at conclusions, recommendations and lessons with regard to its further use within UNIDO technical cooperation.

The review is not meant to repeat findings of the project evaluations but instead to provide some common insights and leanings for eventual future cluster twinning projects.

2. The UNIDO Cluster Twinning Approach

UNIDO has implemented cluster development projects and programmes across the world since the early 90ies. While mostly aiming at the same impact (i.e. poverty reduction), over time, cluster projects have taken different forms and have been used to pursue different outcomes. There have been dedicated cluster projects to promote corporate social responsibility, environmental sustainability of enterprises and poverty-focused work with rural communities. The fundamental principle of cluster development is the promotion of linkages, both, between firms and between firms and institutions. A particular case of a specific approach emanating from UNIDO cluster work is the formation of export consortia².

The CT approach is one of the more recent attempts to use the benefits of clusters; in this case through a business-driven cooperation between clusters in different countries, whereby one of them is a developing country (here India and Viet Nam) and one is an industrialised country (here Italy). The CT approach is meant to induce lasting partnerships between clusters, based on a combination of north-south business-to-business cooperation, north-south cooperation between industries and technical assistance.

¹ This paper has been commissioned by UNIDO Evaluation Group.

² <http://www.unido.org/exportconsortia.html>

CT has to be seen in the wider context of UNIDO's industrial upgrading efforts. A recent thematic evaluation³ has classified the applied approaches in three broad categories: (1) the innovation perspective (focusing on single enterprises); (2) the cluster-based perspective (focusing on networks or clusters of local firms and export consortia); and (3) the global value chain perspective (i.e. production networks “controlled” by lead firms).

CT can best be classified as something of a hybrid between the latter two industrial upgrading approaches with the added element of cooperation with clusters in developed countries. In that respect, the CT approach has the potential to overcome shortcomings of a standard cluster approach: "Cluster approaches [...] often overlook global dynamics and the relations to firms and institutions outside of the local environment. The global value chain approach incorporates important insights into these global relationships and into the role of actors and factors external to clusters – particularly relationships between local firms, industries and clusters with lead firms that structure their access to markets."⁴

3. Projects' Design and Planning

Both projects were funded by *Cooperazione Italiana* with the same approximate budget volume of € 3m, planned for duration of three years.

The project document gestation histories were rather complicated. Planning for the India project started in 2000, implementation lasted from 2006 to 2012. The Viet Nam project was planned from 2007, and implemented between 2009 and 2012.

Twinning of Italian with Vietnamese and Indian clusters, respectively, was the main project objective; additional activities were organised as preparation to this end.

New components were added after start of implementation and the respective steering committees changed essential elements of the original designs. The project concepts and approaches were thus often 'work in progress' during implementation.

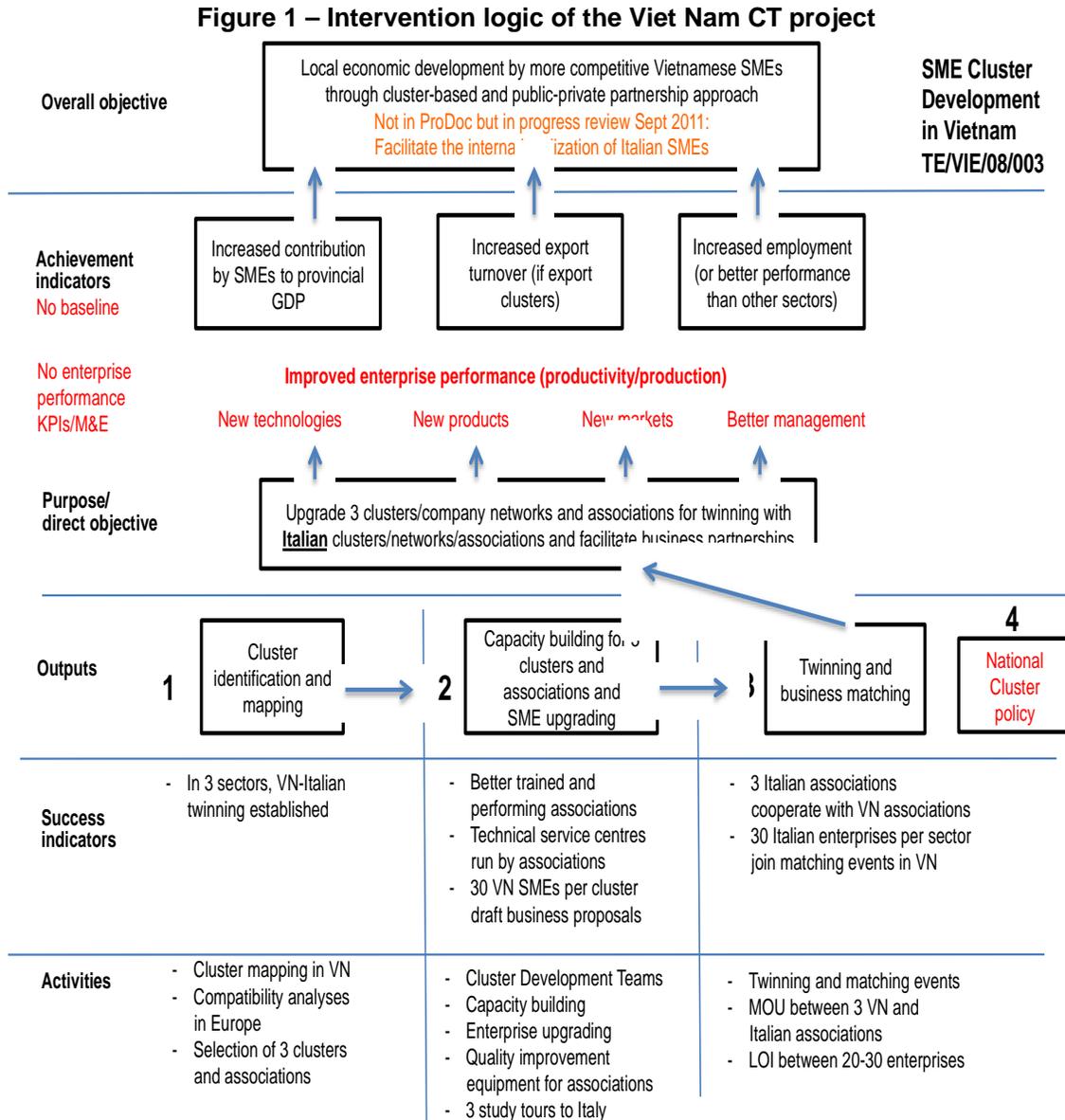
Overall, it can be said that the projects were overly ambitious in attempting to initiate substantive change in several sectors in several locations within only three years and with limited budgets.

³ Thematic Evaluation of UNIDO projects related to “Industrial Upgrading”, Vienna 2013, p. 15

⁴ Op. cit., p 9.

3.1 Coherence of the CT Approach

The overall intervention logic of the CT approach is shown in the below example of the Viet Nam project.



The impact logics, as given in the project logframes, were not stringent for both projects. This is mainly related to the fact that the key concepts of the approach were not clearly defined.

Firstly, the core notion of what a cluster is, or should become, remained ambiguous and was not appropriately defined and discussed beforehand between the partners. Basically, differences emerged between the understanding of a cluster as simple spatial amalgamation of (mostly competing) companies, versus the UNIDO cluster concept of companies with established cooperation linkages, functionally integrated through vertical and horizontal networks, including strong associations and a supporting environment of professional BDS.

Secondly, the concept of “twinning” between clusters was not explained through a logical sequence of steps, at the conclusion of which a “twinned” pair of clusters would have emerged. Twinning was mostly treated like a “black box” leading to supposed benefits on both sides without describing the kind of relations between enterprises that could lead to development impact (e.g. technology transfer vs. simple outsourcing). Similarly, the expected linkages between associations and other institutions were not defined and thus difficult to assess with a view to the expected impact on capacity building in the developing country partner institutions.

While the final step from outcomes (upgraded and twinned clusters) to impact (more and better jobs) is logical in principle, the two weaknesses signalled above led to an overall lack of coherence and impact orientation.

In addition, both projects showed core deficits in their results-orientation: KPIs and related baselines & targets were developed neither for the clusters nor for the performance of supported enterprises; consequently, actual project outcomes and impact (beyond output levels) on clusters and enterprises were not monitored systematically and could consequently not be assessed in the evaluations.

Interestingly the two projects analysed do not appear to have benefitted from the remarkable work done by UNIDO’s Cluster and Business Linkages Unit (CBL) with regard to monitoring and evaluation of Cluster initiatives. Specific M&E guidelines for Clusters have been developed by UNIDO, that address important issues like definitions of different Cluster impacts, corresponding indicators, baseline information, etc⁵. The fact that some of these efforts started only after the two projects had been designed explains partially the shortcoming. However, earlier work on Cluster M&E⁶ could have been taken onboard.

Cluster twinning interventions are taking place in a very dynamic socio-economic environment and external factors do play a central role. The latter include local and international business cycles and economic trends that can be more important than the intervention itself when it comes to outcomes at the enterprise or cluster levels. The project documents have made clear reference to the risk of economic downturns in general. But other, more concrete external factors, such as whether a certain cluster is operating in a growing or declining market⁷ or whether the regulatory environment facilitates contractual relationships between SMEs of different countries have not been taken into consideration.

In this context, it also should be noted that UNIDO project management recently undertook a review of the CT approach on the basis of the India project experience⁸. The review addresses some of the design issues mentioned above and could be further developed to overcome conceptual weaknesses of the currently applied approach.

⁵ Monitoring Guidelines and Tools for Pro-poor cluster initiatives, UNIDO 2012, internal document

⁶ Report of the expert group meeting on cluster and network development with special emphasis on M&E issues, UNIDO 2003

⁷ Support to individual businesses (as opposed to horizontal or sectoral support) in a declining market involves a high risk of crowding out other enterprises that do not receive any assistance. See also: EU – DG Enterprise: Avoiding distortion of competition from regional aid for large investment projects – theory and application in the multisectoral framework. Leo Sleuwaegen, Enrico Pennings, Final report, 2001

⁸ Consolidated PROJECT for SME Development in India – Twinning (TFIND04A01) and Related Components: Understanding the Dynamics and Methodology Issues Related to Cluster Twinning, internal UNIDO working paper, 2012

4. Implementation and Results of the CT Approach

Several factors, internal as well as external, influenced the achievements of the CT projects. An important external factor was that both projects were confronted with a period when Italy as donor country experienced major economic problems. Increasing fear of competition and property rights' infringement on the side of Italian companies and associations curtailed their interest in what the project had to offer.

4.1 Enterprises

Participating enterprises have profited some of them substantially. However, the issue of market distortion through project intervention has not been discussed; hence the actual development impact of selective enterprise upgrading remains uncertain.

The numbers of participating enterprises remained low and both projects had difficulties in 'recruiting' companies for a variety of reasons. The low numbers of enterprises assisted was, however, not compensated through mechanisms that would have allowed other companies to benefit. This, in turn, was related to the too-hasty inception of twinning work before actual cluster governance and institutional environments had been established.

Evidence of individual B2B contacts and concluded business contracts were documented but not systemically monitored. Consequently, no fact-based statements on actual 'width' and 'depth' of impact have been possible. Next to no indications pointed to the sustainability potentials of induced changes once the project funds had stopped.

Not surprisingly, direct B2B matchmaking was most successful in the auto components sector (India, in particular Pune). The industry was already more sophisticated to start with and an advanced division of labour existed between different tiers of interlinked component producers.

4.2 Clusters and Cluster Twinning

The relevance of the cluster approach in general and the specific cluster-twinning objective remained unclear. The term cluster has been widely used in the project discourses but described, de facto, small numbers of similar project clients in a given sector and activity line.

The evaluations could not detect genuine cluster development in terms of new cooperation linkages between companies that would have evolved because of project activities. Integration, both in vertical and horizontal networks, remained very weak or non-existent. Also, viable supporting environments in terms of professional BDS and strong associations have not developed.

The presumed win-win situation expected to result from twinning of developed with developing clusters did not materialise. The developed Italian clusters and partner associations, on the one hand, did not see their part of the equation being beneficial enough to invest sufficient efforts. The concluded MoUs did concern foremost UNIDO project implementation and funding, and less the building up sustainable collaborations between

associations. Indian and Vietnamese associations, on the other hand, that were involved in the twinning efforts proved to be weak and showed insufficient ownership and commitment.

The service suppliers that partnered with the projects were foremost interested in the project budgets and it is doubtful whether they will continue to do the job on their own in the post-project periods. Consequently, the deficits in BDS availability will remain a crucial problem in the selected sectors.

While individual companies have profited, the evaluations found no indication of cluster development or sustainable systemic change brought to the clusters. The assumption of a kind of self-propelling mechanism in terms of cluster differentiation and cluster cooperation (the Italian 'Marche model') that would automatically emerge after companies were trained and associations put into contact did not materialise.

4.3 Operational Issues

The original project designs could not be implemented as planned. Reportedly the Donor was pushing for fast-track twinning instead of applying the standard UNIDO cluster development approach first. The host governments oriented decisions on sector selection towards their own agendas.

Several operational problems negatively affected project implementation. In-term negotiations with donor and host governments were required; funding was even temporarily stopped (India) and staff turnover in the field and at headquarters, affected project performance.

The initial implementation schedules were too ambitious (partly due to the ambitious sectoral and geographical scope of the projects) and had to be extended several times. Consequently, both projects experienced substantial delays in implementation; the India project finally lasted six years instead of three.

5. Main Conclusions and Lessons Learnt

The two cases analysed revealed more weaknesses than strengths of the current UNIDO CT approach. Further development of the approach appears nevertheless warranted, as the identified shortcomings are mainly related to weaknesses in project design and implementation, while the CT concept remains relevant, provided external conditions allow its application. Furthermore, the cluster dimension can add a new and promising perspective to the otherwise too enterprise-focused UNIDO upgrading approach.⁹

The fact that the CT projects provided support to a small number of enterprises without visible effects of this support on the majority of cluster enterprises raises two issues. First, mechanisms to transfer positive pilot experiences to other enterprises need to be better planned for already during the design phase of the projects. Secondly, market distortion needs to be prevented more explicitly and proactively.

Embarking on CT activities without a preceding solid cluster development phase has not produced good results. In other words, a cluster must first exist and thrive (beyond a mere spatial amalgamation of companies in a given sector) – or be developed – before it can be twinned successfully. An obvious alternative would be to focus on matchmaking between single companies and refrain from twinning clusters.

External factors influenced the performance of cluster twinning in the evaluated projects to a significant extent. These external factors have not yet been analysed sufficiently and require more attention. This includes in particular those factors that influence the pathway from outcomes (upgraded clusters) to development impact (more and better jobs).

It is furthermore a truism that mutual willingness and firm commitments are essential from both the developing and developed clusters for engaging in twinning (above and beyond project agreements between governments). Consequently, the actual needs and demands of the potential private sector partners must be clarified beforehand and the projects' offer structured accordingly. Sector and enterprise selection should be solely based on a set of objective criteria, including the interest and potentials in the private sector.

Finally, operational issues should not be neglected. Long gestation periods and delays are to be avoided, as international markets are dynamic. Project designs (including sector selections) can become out-dated if several years pass before implementation can start.

5.1 Strategic Orientation

At the outset it has to be stated that UNIDO's mandate as development organisation is to focus on fostering pro-poor economic growth in developing countries. If this is to be achieved through cluster twinning, first, the overall strategic orientation has to be decided, based on the potential impact on the developing country's enterprises and markets. Not to declare the overriding strategic focus in advance is bound to result in later difficulties.

Basically, two starting points for the overall strategic orientation exist: the direct promotion of exports for developing clusters and/or the promotion of outsourcing for developed clusters (including what is termed delocalisation).

⁹ See in particular the above-mentioned Thematic Evaluation of UNIDO projects related to "Industrial Upgrading", Vienna 2013.

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- (1) For export promotion for developing clusters, the start must be made from the demands and needs of companies and clusters in a given sector in the developing country. Then, matching markets clusters and companies are identified in developed and/or developing countries.
- (2) For outsourcing and delocalisation from developed clusters, an initial assessment is required of actual demand and potential in the industrialised markets and their clusters. Then, matching destinations as well as potential partner clusters with capable and interested companies in developing countries are required. Many developed countries already have standard export promotion instruments and mechanisms focusing on matchmaking on enterprise level that can be tapped into, especially for the matchmaking efforts. Of course, the expected benefits for the cluster in the partnering developing country (e.g. technology transfer and resulting competitiveness gains) need to be demonstrated.

In one CT project, both strategic orientations may be pursued, as long as the respective development impact, i.e. pro-poor growth in the developing country, is clear from the beginning. The cooperation might also go through phases, starting with outsourcing and then leading to exports. Clarity and an agreement are required at the beginning on the final vision for the twinned pair of clusters.

The second strategic decision to be taken before the project is designed relates to (1) whether the ultimate aim of the intervention is on the institutional level, i.e. developing clusters, associations, BDS, or (2) on the enterprise level. If the latter is the case, it again has to be decided (a) whether the main focus is on improving their performance and competitiveness, including cost reduction, or (b) on functional upgrading (for instance from a tier III to a tier II auto component company). Again, selecting one strategic focus naturally also requires inputs and efforts for the other, as they are mutually interdependent. The point is rather which side (institutions or companies) constitutes the core target of the project's interventions.

5.2 Project designs

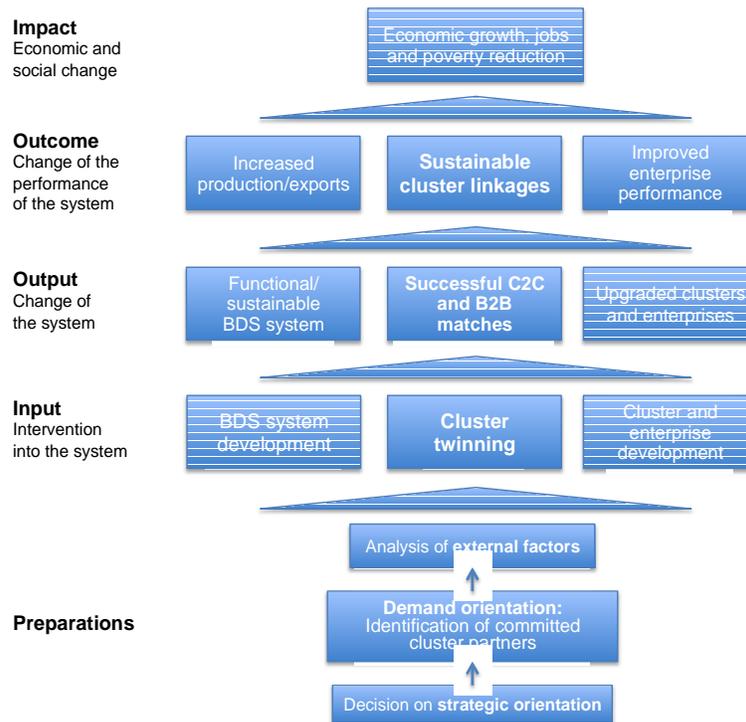
Consequently, before the detailed designing of a new project, a solid preparatory phase (with commensurate budget) is required for (i) deciding the overall strategic orientation, (ii) perform preliminary assessments of potential markets, enterprises, clusters and professional associations, as well as (iii) analysing external factors that may influence project performance.

A project should only be started if explicit demand for cluster twinning exists, both with the developing and the developed clusters and enterprises. If this is not the case, alternatives to cluster twinning need to be identified.

The purpose of CT is not to develop a few enterprises but to leave behind institutionalised relationships between mutually benefitting clusters, including a BDS system that is able to cater to the needs of SMEs for improving competitiveness and export readiness, as well as the institutional framework for SME oriented research, vocational education, and finance.

The following flow diagram presents the main elements of the proposed CT project intervention logic:

Fig 2 – Main elements of proposed CT Intervention Logic



The thinly spread project resources were a major barrier to effectiveness and impact in the case of the two evaluated projects. Future project designs must be less ambitious. Dissipation of energies and resources over several sectors does not bring additional benefits of scale. Best is to select a single sector and concentrate resources in order to be able to go 'deep and wide'¹⁰. Core conceptual elements need to be agreed beforehand, like a common understanding of what a cluster is, and the exit and handing over strategy needs to be clear already at the start. Finally, projects should not be tied to a donor country's industries, associations and consultants.

Professional and committed associations and private sector consultants are to take over the role from international experts, requiring tailor-made organisational and professional development programmes. Instead of many short-term international consultants, fewer long-term technical experts are to be based in the country in order to (i) improve overall cost-effectiveness, and (ii) provide advice better adapted to local realities of associations and SMEs. Using the ITPO delegates programme to provide support to relations between Clusters might be an alternative to be considered.

While allowing for operational flexibility at output level, the ProDocs need to concentrate on formulating clear outcomes, impacts and post-project situations, with benchmarks and KPIs on these levels (instead the output level). The emphasis should be on working for systemic change and on considering post-project institutionalisation.

¹⁰ The evaluation team is aware of other Cluster Twinning projects that have not been labeled under the CT approach. For example, an automotive sector support project in Russia, which has not been evaluated for the purpose of this exercise, has been described as quite successful in achieving concrete results at firm AND cluster level, focusing on a single sector and region.