

Competition, Co-operation and Subcontracting

- Evidence from the Clothing Industry in Thailand -

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A close examination of the organisation of the clothing industry in Thailand exhibits a rather paradoxical situation : although the structural features of the sector – breaking down of the production process, high labour intensity, low asset specificity, low skilled labour – seem to legitimate a market co-ordination mechanism, it is a close, durable and multiform co-operation which cements, in Thailand, the relations between contractors and subcontractors, as well as between subcontractors themselves. We defend the idea that this kind of co-operative organisation of economic activities represents an appropriate answer to the flexibility required by ever changing markets. Co-operation is here understood as a mechanism of temporal co-ordination of economic activities which, far from substituting itself to the market co-ordination mechanism, rather completes it.

1. Introduction

The world market for clothes and textiles experiences wide, cyclical and unpredictable variations in the volume of demand, in the quality of the products and in the production mix (Mariotti, Cainarca, 1986).

On the demand side, various elements can explain such fluctuations : first of all, clothes are semi-durable goods and are therefore purchased according to the economic situation and to socio-cultural factors ; other exogenous factors must also be taken into account in order to explain the demand for clothes, such as climatic changes (which are likely to disturb the scheduling of orders made by the major customers) or the frequent fashion-driven changes of style, all of which expose the firms to risk ; finally, the calendar of the demand is likely to cause

some disturbances : customers usually launch their orders one season in advance, causing production to peak at more or less regular time spans.

On the supply side, the very structure of production is a cause of instability : the variety of actors which operate at various levels of the textile industry and the lack of harmonisation and co-ordination between the targets followed by these actors contribute to amplifying shocks and disturbing the business cycle. Moreover, competitive strategies developed by the firms are based on product differentiation, frequent fashion changes and the access to a variety of materials and alternative production processes, all of which can lead to instability. These strategies are aimed at obtaining a price advantage and at inciting the consumers to renew their wardrobe frequently. Such competition, which is not based on prices, contributes to increase the volatility and variability of products (Mariotti, Cainarca, 1986). Finally, market globalisation, the international diffusion of products, the arrival of new producers and the implementation of protectionist measures have rendered competitive relations more unstable and unpredictable.

In such an unstable environment, standardisation allows the firms to cope with the variety of the demand : firms control the potentially unlimited demand by standardising their products, thus increasing the predictability of the market. The degree of standardisation within the sector actually varies according to the quality of the products. While the production of high quality items is very little standardised – patterns change over the year according to the fashion policy and each piece of garment has distinctive features which require distinctive skills – suppliers of medium or low quality products are usually specialised in one or two items that they make all year around, the main difference from one year to the other being the colour and the kind of fabric used. Standardisation has important implications in the organisation of production : manufacturers of highly standardised products may achieve economies of scale and economies scope by receiving many similar orders from different customers, and take advantage of reductions in unit costs for their purchases of supplies. Moreover, the pace of production can be improved if the production process can be fragmented into many sequential steps that can be technologically separated : in many garment factories, the work is fragmented in distinct

tasks undertaken by specialised workers. A high degree of standardisation may allow the firms to diversify their production, thus limiting their exposure to seasonal variations and uncertainty ; it may also help them improve the quality of their work through the accumulation of experience and the establishment of routines ; finally, standardisation relaxes the constraint imposed by deadlines (Waldinger, 1986). One of the most important consequences of product standardisation is that it leads to low barriers to entry on the market, since standardised products need standardised machines that will be easily available, either first or second-handed. Manufacturers of standardised products may even be able to buy more elaborate machines able to undertake specialised tasks, that are common to a great number of products (hemming, double stitches, button holes, etc.). Low barriers to entry, combined to a highly fragmented production cycle, allow the multiplication of many small enterprises, which explains the presence of a great number of micro-enterprises working as subcontractors (Mariotti, Cainarca, 1986).

The very features of both the market and the technological conditions of production thus determine a very specific mode of competition based on the ability of the actors to cope with change. Confronted to such competitive process the enterprises of the garment sector in Thailand have developed a very specific mode of co-ordination of their activities. Indeed a close examination of the organisation of the clothing industry in Thailand exhibits a rather paradoxical situation : although the structural features of the sector – breaking down of the production process, high labour intensity, low asset specificity, low skilled labour – seem to legitimate a market co-ordination mechanism, it is a close, durable and multiform co-operation which cements, in Thailand, the relations between contractors and subcontractors, as well as between subcontractors themselves. Such co-operation, far from substituting itself to the market co-ordination mechanism, rather completes it.

Our paper tries to provide an explanation for this paradox, in order to evaluate the “efficiency” of this very specific mechanism of co-ordination of economic activities. We defend the idea that the kind of co-operative organisation of economic activities that prevails in the garment sector in Thailand represents an appropriate answer to the flexibility required by ever

changing markets. Indeed we explain that, if such co-operation represents a mechanism of co-ordination of economic activities, alternative to both market and hierarchy, its relative efficiency cannot really be appreciated using the same criteria than those usually applied for a choice between market co-ordination and hierarchical co-ordination. The reason is that the efficiency of this very specific form of co-ordination must be mainly appreciated in a temporal perspective. In fact, co-operation is basically a mechanism of temporal co-ordination of economic activities, which provides an answer to the constraints faced by the firms in a changing economic environment.

The paper is organised as follows : section 2 is devoted to the analysis of the co-operative dimension of the co-ordination mechanism used between contractors and subcontractors in view of pointing out the specificity of the “contractual arrangements” which prevail in this very competitive sector. Section 3 proposes a production-oriented explanation of this reality which highlights the productive flexibility of subcontracting. Section 4 develops the idea that the industrial district mode of organisation of subcontractors enables them to face the flexibility constraint transferred by the contractors on the subcontractors. Section 5 argues about the coherence of the whole system and examines the theoretical implications of our analysis concerning the relationship between co-operation, competition, and subcontracting.

2. The co-operative dimension of subcontracting relations : some stylised facts

Garment manufacturing comprises of various stages. The first step, design, consists of transforming the idea of a product into a pattern. Once the pattern is complete, the labour-intensive phase of production may begin : the different parts of the garment are first sewn together according to the specifications enclosed in the pattern/the sample. The finished products are then checked, packed and sent to the customers to be marketed. Distribution involves finding potential customers and sending them the products in the best delays (Hanson, 1995). These different steps usually take place within vertically disintegrated subcontracting networks and most manufacturers, despite being able to undertake all production stages,

usually resort to subcontractors for the manufacturing and focus on design, marketing and retailing (Christerson, Appelbaum, 1995).

A close examination of the subcontracting relations in Thailand exhibits the following stylised facts concerning the organisation of the productive process (Vagneron, 1997)¹.

In the Thai garment sector, technological differences (in terms of machines and human capital) between manufacturers are rather small : micro-enterprise in this field have roughly the same technological expertise and innovations, although they exist, remain rare. The main challenge for small subcontractors is to undertake as many production steps as possible, from the highly strategic stage of cutting the fabric to the final responsibility of designing the clothes.

(Insert Figure 1 here)

Indeed, while some subcontractors only assemble pre-cut pieces of fabric provided by their contractor (a), others receive rolls of fabric that they cut themselves according to the patterns/samples sent by the contractor, and then assemble the pieces together (b). Others still, follow the instructions given by the contractor in the pattern/sample, but choose the inputs themselves (c). Finally, the highly skilled subcontractors control the entire process of making a piece of garment, from its conception to its completion (d and e) (they are the only subcontractors to use specialised machines, such as laser machines to cut the fabric or computers). These most competent subcontractors are contacted for top-quality orders which need an irreproachable quality (d), or for the creation of a new collection (e) following the customer's specifications (size, range of colours, type of fabric, etc.). As the subcontractor takes charge of an increasing number of specialised tasks, requiring more and more qualifications, he increases his bargaining power towards his contractor.

In this context of extreme diversity of the tasks and actors, it is nevertheless possible to establish a distinction between what Watanabe (1971) calls "primary subcontractors" (in direct contact with the contractor) and "secondary, tertiary, quaternary and still lower-ranked

subcontractors” (who have no direct contact with the final customer) (p. 60). Indeed, subcontractors may be ranked according to their degree of expertise and technological autonomy², to the length of their relation with the contractor, to the degree of integration between the subcontractor and the contractor and thus to the balance of power which exist between them. The contractor’s dependence increases as the subcontractor’s knowledge becomes more specialised and as “relation-specific skills” emerge (Asanuma, 1989). Such cases are thus likely to produce special modes of co-ordination and may lead to different modes and degrees of technological spread and information sharing.

These elements determine how the transaction will be carried and the nature of the relations between the contractor and the subcontractor : primary subcontractors usually have long term relations with their contractors. Due to their specific technical know-how, their task is to deliver the goods at the right time and place and with a perfect quality. On the other hand, in the group of lower-ranked subcontractors competition is fierce, relations are not so developed and the firms have a limited technical expertise. The exchange thus concerns a simple good perfectly specified *ex ante* (*ibid.*). The more specific the subcontractor’s know-how, the longer the relationship and the more costly will be the separation : cost of looking for a new subcontractor, of renegotiating the contract and “relational learning” from long term relations.

Written contracts are seldom used by Thai entrepreneurs, especially when small firms are involved and when business is done on a local basis : most arrangements are made orally and legal contracts are rare. Once an agreement has been reached, the partners write down its details (amount of fabric provided by the supplier, number of pieces to produce, terms of delivery, price per piece, etc.) on a document which has no legal value³. After this first encounter, the relationship evolves quickly : once the partners know each other, many problems are solved in a non formal way and personal relationships play a much more important role. The orders then follow each other as if the first order was continuously extended and claims are discussed as they appear. Some kind of organisational routine thus settles, which is only interrupted when products change : the partners then spend more time

talking about the methods of production and the quality of the products, and negotiating the price and the terms of delivery.

The sample is a crucial element of the subcontracting relationship, which enables the contractor to make sure that the supplier masters the production techniques needed for the production of a particular garment. A great flow of technical and practical information (concerning the machines required, where to find the supplies, organisation of the production line, etc.) circulates thanks to the sample. By complying to the contractor's specifications embodied in the sample, the subcontractor benefits from his technological lead, his know-how and his experience. The sample thus partakes to the process of knowledge dissemination. As the relationship extends, the sample is progressively abandoned⁴. Throughout the relation, the subcontractor benefits from the fact that the contractor examines his factory with a critical eye, thereby helping him identify his weaknesses and correcting them.

Quality control is yet another aspect of the relationship between the contractor and the subcontractor, although it is not used by all enterprises (it indeed becomes more frequent as the quality of the products increases). For high-quality products, the contractor sends his own quality controllers to check the products, to train in-house quality controllers, and improve the co-ordination between the phases of production and quality control.

3. A production-oriented approach of subcontracting

Contractual approaches, especially transaction cost economics, consider that repeated transactions involving a low degree of asset specificity owned by a large number of potential co-contractors, are best organised in a context of low uncertainty by the market through what Williamson calls the classical contract (1979). Although these conditions are met in the subcontracting relationships in Thailand, reality clearly shows that the preferred governance structure rather resembles – following Williamson again – the bilateral structure with a personalised contract. Indeed the focus on quality control, on the repeated exchange of technical information from the contractor to the subcontractor concerning the machines, the

raw material and the organisation of production⁵ all contribute, in transactional words, to the creation of a quasi-organic relation between co-contractors (*ibid.*, p.250) indicative of the bilateral governance structure.

However, a transaction cost analysis, which grounds the choice of a mode of governance on the criterion of transaction cost minimisation, does not restore the entire dimension of the subcontracting relation in the garment sector in Thailand⁶. The specificity of this relation is that it devotes a great importance to time : the decision, made by both the contractor and the subcontractor, to keep working together explains the very existence of these relations.

Taking into account the diachronic character of this relation requires, in our point of view, to focus on the co-operative dimension of the subcontracting relation, that is on the idea of a coordinated behaviour in time, implemented by the firms and based on more or less defined mechanisms (Dulbecco, 1998). Indeed, as noted by Arena, Ravix and Romani (1992), subcontracting must be viewed as a form of co-operation between firms rather than the result of the strategy thrust by the large firm on small ones.

The instance of “waterfall subcontracting” described above is, in this perspective, significant of the co-operative nature of the relationships developed between the large firm and the small ones. More precisely, the co-operative dimension of the relation between contractors and subcontractors appears in the exchange of the technical information required for production and through a joint quality approach. The relation is cemented by a long-term relation based on trust and sometimes by the fact that both actors belong to the same family or region : this drives the contractor to consider the subcontractor as a worker of his own enterprise.

However, the degree of co-operation depends on the characteristics of the subcontracting relationship. In the case of “capacity oriented” subcontracting, the contractor will share his knowledge more cautiously, by fear that this might reduce his bargaining power based on the technological gap with the subcontractor. Conversely, “specialisation oriented” subcontracting will be more likely to lead to technological transfers since the contractor and the subcontractor carry out complementary activities. In all cases, the technological improvement of the subcontractor will have positive effects on the team composed of the contractor and his

subcontractor. More often than not, the contractor will be reticent to share with a subcontractor information concerning the market by fear that this may threaten his position of middleman. This risk decreases as the gap between the contractor's know-how and that of the subcontractor increases. This risk is high in the case of "capacity oriented" subcontracting, but close to zero when the contractor possesses a particular advantage over the subcontractor (specific skills, knowledge of international markets, export licence, etc.). On the local market, the risk is all the greater since the contractor must make sure that the final customer will not try to contact the subcontractor directly. This explains why contractors develop various strategies to protect their markets (by not sharing all the information, by splitting the work between many subcontractors, etc.).

The interest for the contractor of such co-operative relations is threefold and can be explained by different kinds of theoretical arguments.

First of all, co-operation allows to bring together economic units in a selective perspective of election and exclusion, *e.g.* in the perspective of choosing subcontractors with which the work relation will be pursued. To co-ordinate boils down to chose and to eliminate through the system of interactions which defines the agents. While this selective function is carried out on the market by prices, and in the hierarchy by authority, the use of a co-operative mechanism of co-ordination which mobilises trust as the main source of interaction, also brings to the fore the problems of adjustment, feedback and reshaping (Menard, 1995).

Consequently and on the other hand, these mechanisms of adjustment and feedback, which develop during the very process of implementing the co-ordination, will then act as a support for the development of learning processes. Co-operation between contractors and subcontractors, by making the agents' choices converge, will bring about cognitive phenomena which are reflected in productive routines but also learning phenomena. The whole will contribute to the development of a more efficient organisation of the production. These learning phenomena only reinforce, through a feedback effect, the convergence of choices and interests : thanks to co-operation, the actors learn about each other, thus improving their co-ordination.

The stake of the relation is for the contractor to stabilise a range of subcontractors large enough to make the ordered products under satisfying technical and competitive conditions. As everyone knows, the market does not allow for such temporality. In fact, what basically characterises the market⁷ is the existence of synchronistic interactions and anonymous relations among agents without any organisational specificity (Bruno, De Lellis, 1992)⁸. A close look at these first two explanations shows that the interest of resorting to a co-operative form of subcontracting is that the firms have the building power, and therefore the ability, to choose the outline of their relation system by taking advantage of the experience and learning effects, that is to implement *ex ante* deliberate modes of co-ordination. Co-operation will act as a convention aimed at stabilising the relations between the general contractor and its subcontractors : this is done through the regularity of orders, the nature of the quality control, the concession of payment delays... all elements contributing to transforming as much as possible “an *ex post* validation of the division of labour in an *ex ante* one” (Arena, Ravix, Romani, 1992, p. 263).

But the important point is that this temporality in the relation allows to develop a kind of productive flexibility, which is probably essential in the competitive context of the garment sector. Our thesis is that the choice of a co-operative organisation of subcontracting obeys to an industrial logic oriented towards the search of flexibility in a context of a turbulent demand. The contractor actually passes on the constraints of the final market on the subcontractors, through a waterfall type of industrial organisation⁹.

Aoki (1988) develops roughly the same idea in his works devoted to the study of industrial subcontracting in Japan. The model of the Japanese firm based on the establishment of long term co-operative relations between contractors and subcontractors seems more efficient than the alternative hierarchical one when markets become more competitive and the demand more volatile. The main reason is that the Japanese model exhibits a high degree of flexibility stemming from the operational co-ordination between contractors and subcontractors¹⁰. However unless Aoki explains that the Japanese model is more flexible than the hierarchical one, he cannot really develop this idea. In fact, his analysis remains essentially a comparative

one : Aoki compares economies and the behaviour of firms in regular situations in order to determine the organisational structure that produces the highest growth rate (Charbit, Gaffard, Longhi, Perrin, Quere, Ravix, 1993). Flexibility is conceived as the reduction of the time period between the moment an information coming from the final demand is taken into account and the moment the command orders are transmitted to the subcontractors (Aoki, 1986). His analysis makes sense only if there is equilibrium. Change is consequently perceived as a series of optimum equilibrium states, *e.g.* a regular growth process. Thus, the only economic problem faced by the firms is that of the choice, which might be inter-temporal, of an optimal combination (the least costly one) of production factors within a set of given resources. Here, the question of managing change processes is not essential.

It thus seems difficult to further develop our thesis by using the tools supplied by the traditional theories of the firm and of inter-firm co-ordination¹¹.

First of all, because the market conditions are given once and for all at the beginning of the analysis, essentially through the different failures relatively to the competitive market : “in the beginning there were markets” writes Williamson. The idea that markets may undergo continuous changes is consequently ruled out and the study of the repercussions of such changes on the actors’ behaviour are out of the scope of the theory. Yet these very phenomena ground the notion of flexibility.

Second, because the problem of industrial organisation is brought down to a problem of allocating a given set of scarce resources. The technical conditions of production are given, for example through the degree of asset specificity, and determine the most efficient form of production organisation, according to the well-known logic of cost minimisation. As Foss (1994) states it, “(...) outputs, inputs and technology are *given* through some process that is logically and historically prior to the issue of organization of economic activities” (p. 12). The idea at the core of a production economy, according to which economic units, activities, goods and agents are defined simultaneously according to the place they occupy in the productive system – that is, that the elements of the system are distinct but cannot be defined independently of the others – (Arena, Ravix, Romani, p. 257) has no sense in such context. Yet

the study of the structuring of subcontracting activities precisely requires to analyse these forms of complementarity between actors.

The challenge then consists in explaining co-operative subcontracting according to the “industrial organisation” in which it takes place, the term being used in its marshallian meaning to design the agents’ productive decisions and the socio-institutional features of the economic system. One can find the bases of such analysis in Richardson’s work dedicated to the organisation of industry¹². The reasoning is the following.

Richardson (1972) first explains that it is convenient to think of industry as a set, a combination, of a large number of *activities*, “activities related to the discovery and estimation of future wants, to research, development and design, to the execution and co-ordination of processes of physical transformation, the marketing of goods and so on” (p. 888). These activities are carried out by organisation with appropriate *capabilities* that is “with appropriate knowledge, experience and skill” (*ibid.*). The organisation of industry will then result from the combination of the features of both activities and capabilities. Indeed as indicated by Richardson, it is necessary to distinguish *similar* activities from *complementary* activities: activities are similar when they “require the same capability for their undertaking” (*ibid.*); they are *complementary* “when they represent different phases of a process of production (...) and have to be co-ordinated both quantitatively and qualitatively” (*ibid.*, pp. 889-90). The increasing division of labour presents in this perspective the advantage of developing specific capabilities and complementarities -and consequently the economies of scale associated with larger-scale production- but also the drawback implied by increasing complementarity involved by non similar activities. In this case, the existence of complementarities requires some degree of control of the production but the presence of non similar activities forbids a profitable integration of the activity. The solution put forward by Richardson in order to resolve such dilemma is co-operation :

“Co-ordination is achieved through co-operation when two or more independent organisations agree to match their related plans in advance. The institutional counterparts to this form of co-ordination are the complex patterns of co-operation and affiliation which theoretical formulations too often tend to ignore” (*ibid.*, p.890).

The author considers subcontracting relations as totally exemplary of this set of industrial activities that the simplistic binary view of market economies based on the market-firm alternative ignores¹³. In other words, subcontracting is clearly considered as a form of inter-firm co-operation which can be explained by both the co-ordination of economic activities and the related division of labour.

As regards the firm, such analysis implies that two or more firms take advantage from cooperation only when their capacities are complementary. Indeed, the notion of capacity is used by Richardson to design the core business of the firm¹⁴. For complementary yet non similar activities, that is for activities which do not match the basic business of the firm and consequently require specific capacities, coordination by direction becomes inefficient. Thus when the firm does not own the complementary capacities required for production, it is necessary to coordinate activities namely by cooperation.

It is however important to specify that the complementary and non-similar nature of the capacities is not independent of the conditions which prevail on the markets¹⁵. Indeed, when the economic environment is uncertain – in the sense we gave to this term consequently to the study of the features of competition on the final market for clothes, *e.g.* when the market is subject to a constraint of continuous change – the dichotomy between the similarity and the complementarity of capacities lessens and a firm, say a contractor, may believe it is convenient to resort to subcontracting whereas the subcontractors’ capacities are weakly specific.

The reason is that such environmental conditions generate some kind of complementarity in the broad sense, a *soft complementarity* based on the principle of flexibility. It is then in the contractor’s interest to focus on his own know-how in terms of design, marketing and retailing and to resort to a range of subcontractors. This allows him to benefit from the appropriate mix of capacities detained by the latter and to increase the variety of products offered and thus to

face a volatile demand. The relative efficiency of the subcontracting relation hereby described is thus based on a judicious mix of variety and stability which allows the contractor to significantly enhance his flexibility – that is his capacity to adapt to a changing demand – but also, by constantly modifying his offer, to anticipate and in a certain way to shape this demand.

Of course, none of this is possible unless the subcontractors, on who is transferred the flexibility constraint, are able to face complex orders. The study of their system of relations leads us to think that the constraint of change is, here again, managed through an organisation of production based on the principle of co-operation between firms.

4. The organisation of economic activities between subcontractors : towards an industrial district-like model

The observation of the relations among subcontractors in the garment sector in Thailand are significant of an industrial district mode of organisation. Let us recall that industrial district has been defined as “a socio-territorial entity which is characterised by the active presence of both a community of people and a population of firms in one naturally and historically bounded area” (Becattini, 1990, p. 38). The ideal-type industrial district then presents the following principal features (Rabellotti, 1995, p. 30) : (i) clusters of mainly small and medium-sized enterprises spatially concentrated and sectorally specialised, (ii) a set of forward and backward linkages, based on market and non market exchanges of goods, information and people, (iii) a common cultural and social background linking economic agents and creating a behavioural code, sometimes explicit but often implicit¹⁶.

In such an environment the division of labour between firms is as much important as the division of labour within the firms : each of the numerous small firms is indeed generally specialised in one, or in a very small number of steps or functions of the same industry, the transactions among the firms being repeated during a long period. Such repetition is based on the fact that firms, and more generally agents, have the possibility to observe and remember the past behaviour of the people with whom they have had previous business relations and then to

punish those who behave incorrectly, chiefly by withdrawing the willingness to conclude future transactions with them.

All these elements induce a very specific mix of co-operation and competition where prices and quantities are defined and exchanged as well as information, codes, routines, strategies, ideas and knowledge (*ibid.*). The analysis of the Thai reality is from this perspective both significant and instructive.

Although most entrepreneurs often declare not having close relationships with others working in the same field, they know where the latter are located and what items they produce, which can be explained by the high concentration of the enterprises in small areas. Roughly 95% of the enterprises of the garment sector are located in Bangkok. Moreover, they are concentrated in a few number of well-known clusters near the main wholesale markets (Pratunam, Bobae), or in other areas where there the space and workers are plenty (Samlae, Bangkhen).

When asked about their contacts with other firms, it is surprising to notice that, despite the competition that prevails in the apparel sector, the entrepreneurs mention rather friendly and co-operative relations. One may recognise here an important feature of an industrial district already pointed out by Marshall : because they live near to each other and share common culture, the people who live in the district have frequent direct face-to-face which contributes to the implementation of co-operative relations¹⁷. The most striking fact is in this context that most entrepreneurs admit sharing or having once shared orders with others as well as various kinds of information.

Sharing orders is a widespread practice between subcontractors that can be initiated by either partner : jobless entrepreneurs ask for orders from their friends or from neighbouring factories, while subcontractors who know they will have problems meeting their deadlines ask others to help them complete the order in time. In all cases, the entrepreneurs who shared their orders declared imposing no price difference between their piece rate and the one they applied to the enterprises they shared their orders with. Sharing orders usually occurs between firms that are

geographically close to one another and between entrepreneurs who know each other, which makes the work easy to organise and the quality easy to monitor.

Such practice is rational in a context of extreme competition, where the small firms' basic rule for survival is to refuse as few orders as possible, for the contractor might not make an offer again. The instability of the garment sector spares no one, not even the contractor who seeks stable suppliers in order to be able to respond quickly to his own customer. By being able to accept large orders and to complete them in time, the subcontractor thus sends a strong signal of reliability to his contractor. On the other hand, this kind of assistance acts as an insurance against risk for the one who provided it – based on reciprocity – which can be expressed as : “I share my orders now so that when I experience problems, I will be able to expect help from those I supported once” and which can best be understood in a long term perspective. The entrepreneur who benefited from the help is in debt towards the one who provided it and can only pay back by doing him the same favour. One may recognise here another decisive feature of the people who live in the district that is the norms of reciprocity and the practice of self-help so that both individual initiative and the economic success which it may bring are generally approved, provided that they are obtained within the rule of reciprocity (Dei Ottati, 1994). In a more dynamic perspective, this might also be the beginning of a dynamic process through which some subcontractors progressively extend their activity, develop their organisational skills and start being contractors themselves. As Mead noticed, the firm is as :

“a child looking for a parent. If it succeeds in doing that, then perhaps after it has gained experience and self-confidence, it may find itself in a position to run the system itself: instead of selling its services to others to fill in their gaps, it buys the services of others to fill in its gaps” (Mead, 1984, p. 1097, quoted by Arena, Ravix, Romani, 1992, p. 262).

This hypothesis is confirmed by the few cases of entrepreneurs who admit taking more orders than what their production capacity authorises them to make, in order to spread orders around

them. By doing so, they stabilise their bargaining power and remain the sole interlocutor of the contractor.

Not only do subcontractors share orders, they also share factors of production, such as qualified workers and special machines. If an order requires special machines that are available nearby and can be easily displaced, the owner of the capital may lend his machines. The same happens with skilled workers.

Finally, entrepreneurs share a large amount of information about the potential customers, the problems they encounter (meeting deadlines, paying their suppliers, being paid by their contractors, etc.) and how to solve them, the new machines available, cheap sewing supplies, etc. Such sharing of information is widespread among subcontractors who work for different contractors (*e.g.* who are not direct competitors) : many entrepreneurs mention sharing information about the new machines available, their cost, performance, but also about the shops selling cheap second-handed machines. Because investing is a crucial stage of the enterprises evolution towards more profitable markets, the sharing of information concerning new techniques of production is very important. Subcontractors also warn each other against dishonest contractors and “black lists” of unscrupulous contractors are widespread.

These examples show that the lack of orders, capital or labour boils down to the same problem, which is that of matching orders to the capacity of production : neither can the enterprises afford to have idle machines/workers, nor can they refuse orders because their production capacity is insufficient. The degree of instability on the market makes it almost impossible for subcontractors to be individually efficient : the optimal balance between their production capacity and the (fluctuating) volume of the demand is beyond their reach if they reason individually because no other firm can act as a buffer between them and the market. The only way for small subcontractors to make an efficient use of their factors of production is to answer collectively to the variations of the demand. The fact of belonging to a district then enables the firms to bear lower production and transaction costs with respect to isolated enterprises, but also to accumulate know-how and knowledge and to benefit from synergy effects, the whole contributing to improve both the efficiency of each firm (Camagni, 1991)

and the collective efficiency of the district (Schmitz, 1990). Last but not least, permanent co-operation between independent subcontractors makes it possible to provide collectively, through an almost infinite assortment of individual production processes, the volume, quality and delays demanded in the changing orders of the contractors. One can find here one of the essential and well-known features of the district, its capacity to develop highly flexible production processes as a result of the temporal co-ordination of the plans of small size, often competitive, firms¹⁸.

Thus in Thailand, the position of small subcontractor seems to be enough to create a community of interests, a link strong enough to bring about the solidarity observed between enterprises that could be qualified as competitors. The fact that subcontractors are conscious of their structural weakness may explain that they help each other, while everything seemed to predestine them to harsh competition.

5. Co-operation, competition and subcontracting : lessons from the Thai garment sector

Through the study of the structuring of enterprises in the garment sector in Thailand, we have been able to highlight a certain number of analytical results of a more general range than the object of our study.

First of all, the coherence of the subcontracting system studied here is clearly based on the principle of co-operation understood as a mechanism of temporal co-ordination of the firms' activities. Indeed whether the objective is to organise the productive relations between contractor and his subcontractors, or to harmonise production plans within this very group of subcontractors, co-operation – by introducing some kind of stability in the relations – allows to co-ordinate the *ex ante* decisions of *a priori* independent economic agents, yet whose activities are inter-connected (whether for technical or competitive purposes).

Our thesis is that the motivations which lie behind this mode of co-ordination must be found in the study of the conditions which prevail on the markets, especially on the final demand market. The idea is that co-operation represents a form of industrial organisation particularly

adapted to changing economic environments, in the sense that it generates flexibility. The notion of flexibility we refer to does not only deal with the ability of firms to confront with fluctuations in the demand for their output, but also includes the opportunity of changing their product mix over the course of the business cycle as well as their ability to reposition themselves in a market, make production plans for new ranges of products, or dismantle their current strategies when the customers they serve are no longer as attractive as they once were¹⁹.

The quest of flexibility thus implies resorting to elements of permanency, of stability that may not be reached through pure market co-ordination. Firms are thus incited to organise their market relations through more or less developed forms of co-operation. The very close co-operation implemented between subcontractors of the garment sector may then be explained by the fact that they undergo the bulk of the flexibility constraint. The co-operation between the contractor and the subcontractor is, as we have seen, relatively more limited since it is mainly aimed at passing on the subcontractor the constraints imposed by the final market.

Finally, it is clear that co-operation as we have grasped it is absolutely not opposed to competition. This idea, which is currently accepted when co-operation serves innovative activities²⁰ is as relevant in the context of traditional activities and sectors. Let us indeed recall that the kind of co-operation implemented between the contractor and the subcontractor leads, in the garment sector, to increase the diversity of the supply and thus to spur the competitive process. Moreover, the co-operative relations developed between competing subcontractors partake of the competitive process aimed at strengthening the respective positions occupied by each one of them within the group of subcontractors – especially by aiming at the ascension within this very group. However, this analysis of co-operation can really make sense only outside the static concept of competition presented by the traditional theory. It should be considered as an alternative concept of competition, a dynamic concept based on the idea of a discovery process and for which the verb “to compete” takes its full meaning (Hayek, 1976) : competition ceases to be an exclusively market phenomenon, the firm or rather the production

conditions of the firm play a primary role in the implementation of the competitive process on markets whose institutional components are not forgotten.

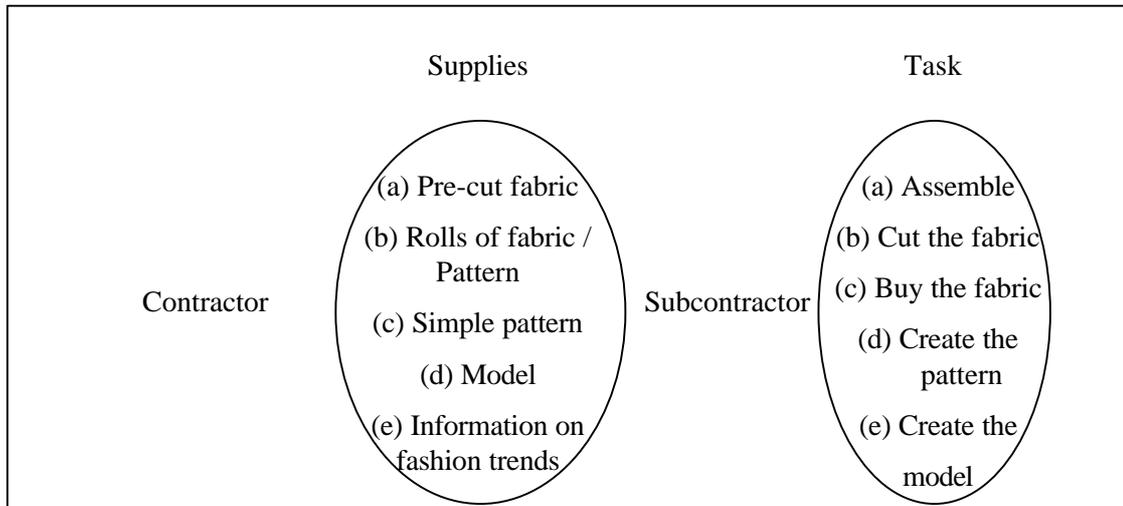
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Figure 1 – Division of labour between the contractor and the subcontractor



Note : (a) “the contractor supplies the subcontractor with pre-cut pieces of fabric that he must assemble together”... (e) “the contractor provides the subcontractor with information on the fashion trends on the final market and the subcontractors undertakes all tasks from creating the model to assembling the clothes”.

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¹ The situation described in this paper is based on a study carried out by one of the authors in Thailand before the outbreak of the financial crisis (1994-96). Therefore, it does not take into account its repercussions, although the garment sector is likely to have been severely affected by the recent currency crisis.

² Aoki (1988) mentions that the "stratification of the subcontracting group" arises according to the "technological expertise and tenure" of the subcontractors (p. 219).

³ Things are quite different when large firms are involved and/or when the products are intended for foreign markets, partners then use a formal contract or a letter of credit with a legal value.

⁴ The contractor starts identifying a few subcontractors for each type of product, identical orders are then carried on continuously with each one of these specialised subcontractors. Hence, there is no need to keep checking the quality of the products, except when new subcontractors arrive or when the style changes.

⁵ See our above explanation about the role of the sample.

⁶ The same remark can be addressed to the whole set of traditional approaches of subcontracting, *e.g.* the works organised around : (i) the structure-conduct-performance paradigm, (ii) the make or buy paradigm, and (iii) the contributions which explained subcontracting as a deliberate strategy of large firms related to the control of wages and of labour force. The common feature to such approaches as well as the transactional one is to explain the emergence and permanence of subcontracting as a result of the cost-minimising strategies of big firms (Arena, Ravix, Romani, 1992).

⁷ In the standard theory sense.

⁸ However, "synchronistic coordination originates basically in an optical illusion that has a meaning only in an artificial world that always shows, time after time, the same characteristics (...); it is not very useful to those interested in understanding the real world" (Bruno, De Lellis, 1992, pp. 25-26). In other words, the coordination of activities among firms cannot be taken for or compared to a market spontaneous process; coordination is a specific process built in time.

⁹ This explains why the contractor, despite his ability to make the product and to carry out the tasks that he contracts out, chooses to resort to subcontractors.

¹⁰ For a more detailed analysis of the co-operative nature of the subcontracting group in Aoki's works, see for example Dulbecco (1998).

¹¹ That is through the contractual theories of the firm.

¹² This track has first been explored by Arena, Ravix, Romani (1992), and Romani (1994).

¹³ Indeed, as Romani (1994) points out, the idea of subcontracting continuously flecks the author's words. It is even one of the first examples he gives when, proposing a more realistic picture of both the organisation and the running of the industrial world, he underlines the importance of the dense network of co-operation and affiliation by which firms are inter-related : "But if the student closes his textbook and takes up a business history or the financial pages of a newspaper, or a report of the Monopolies Commission, he will be presented with a very different picture. Firm A, he may find, is a joint subsidiary of firms B and C, has technical agreements with D and E, sub-contracts work to F, (we underline -Ph.D., I.V) is in marketing association with G and so on" (Richardson, 1972, p.884).

¹⁴ As Richardson states " (...) clutch lining are complementary to clutches and to cars but, in that they are best made by firms with a capability in asbestos fabrication, they are similar to drain-pipes and heat-proof suits. Similarly, the production of porcelain insulators is complementary to that of electrical switchgear but similar to other ceramic manufacture " (Richardson, 1972, p.889).

¹⁵ This use of Richardson's analytical categories is left to our own responsibility.

¹⁶ Rabellotti adds a fourth element related to the network of public and private institutions supporting the economic agents acting within the cluster, which is not significant in the case we study.

¹⁷ For an analysis of the role of face-to-face relations in the structuring of the district see Bellandi (1989).

¹⁸ On this point, see for example Pyke, Becattini and Sengenberger (1990).

¹⁹ One may recognise here the distinction made by Carlsson between operational, tactical and strategic flexibility (Carlsson, 1989).

²⁰ See for example Teece (1992).