

Local Hyenas yet Global Leaders: the Implications of Italy's Industrial Structure.

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Abstract

This paper answers the question of how the production of diversified quality goods characterised by incremental innovation resulting from CME-type institutional set-ups, is possible when the necessary pre-conditions for it are absent (Streeck 1991). Italy offers the ideal institutional setup to investigate how high quality goods are produced when a national system for the provision of patient capital and of specific skills - and their certification - are not in place. This paper explains how functional substitutes are produced by particular inter-firm linkages which are found to arise from the overlapping of sub-national institutional systems, typical of Italy's political economy. We discuss the literature on inter-firm networks and organisations which explores the variety of ways in which the vertical disintegration of firms has taken place. Within this background, we confront VOC on the specific question of how typical CME-type inter-firm relations are structured with the evidence collected through the detailed analysis of Italy's textile producing firms. We find that Italy's most successful textile sector firms achieve global leadership status by constructing inter-firm networks simultaneously characterised by long term and stable relations and by organisationally flexible and market driven ones. The former typically identified in CME-type economies, whilst the latter in LME-type ones. We therefore show that diversified quality production is compatible with relations characterised by both strategic and market coordination, at odds with the Varieties of Capitalism literature (Hall and Soskice 2001).

Keywords

Sub-national institutional frameworks, high quality production, inter-firm networks, supplier chains, strategic and market coordination.

Introduction

The production of high quality goods is ruled out in theory when individual firms do not simultaneously possess adequate skill and capital input factors, yet practise and theory often differ and we find evidence for very high quality production in light manufacturing industries in Italy, despite the simultaneous absence of both input factors. Through case study evidence of the organisational structure adopted by the most successful firms in Italy's textile sector, we uncover the mechanisms which deliver functional substitutes to the VOC informed theoretical models. The surprising results which the behaviour of these firms suggest is that high quality production is actually based on the interaction of sub-systems governed by substantially heterogeneous logics and incentives: one where competitive market rationality prevails, and one where relational and reputational based behaviour does. The fragmentation of Italy's labour market, vocational and banking systems, and the cleavage which discriminates large and small sized enterprises sets the basis for this dualism. In light of these findings we fall back onto Berger and Piore's discussion on how societies are divided segmentally and not continuously, meaning that segments within societies are organised around different rules, processes, and institutions that produce different systems of incentives and disincentives to which individuals respond (Berger and Piore 1980 : 2). They argue that discontinuities result from a pressure towards economic efficiency and attempts of producers to separate out a relatively stable component of demand from the fluctuating component of it (*ibidem*: 7). The recognition that this segmentation is a feature of mechanisms of production that lead to high quality production invites a discussion on the validity of VOC informed theories which treat societies as coherent wholes, where the logic of behaviour leading to the support of CME-type institutions are considered equally shared by all market actors.

The paper sets the basis for this discussion by analysing the mechanisms through which Italy's most successful textile sector firms have constructed their competitive advantage over time, based on the production of high quality goods characterised by incremental innovation.

The evidence of Italy's manufacturing sector's continuous decline, experienced since the wide-ranging macro-institutional reforms of the late nineties, is taken amidst by the sustained and dramatic revealed comparative advantage enjoyed by a number of Italian-produced export-oriented goods. The findings that a number of Italian-manufactured goods maintain a competitive edge in international markets and that firms competing in such markets have achieved global leadership status calls for serious investigation of the mechanisms and conditions which deliver such

performance, in the face of a (now) historical (and worsened) aggregate economic decline¹. Further empirical examination shows that these internationally competitive goods are characterised by high and positive relative unit values, a rough indicator which captures the quality and type of vertical heterogeneity of a product within its relevant class. This data therefore suggests that the Italian-manufactured goods retaining a revealed comparative advantage are the outcome of manufacturing methods which result in high quality production and incremental innovation². The body of literature which discusses the conditions which enable such production highlights the necessity of two input factors produced by national institutional frameworks: specific skills and patient capital (Sorge and Streeck 1988; Hall and Soskice 2001). Italy's institutional framework does not comply with the criteria which classify economies as producers of high quality goods, i.e. *coordinated market economies*, nor benefits from the institutional synergies and comparative advantages which produce the abovementioned input factors by solving the collective action problems which lie at their foundation. Italy is instead characterised by the spatial overlapping of multiple sub-national institutional frameworks, defined by size-based cleavages. Large firms and the workers within them will abide to a number of financial and labour market regulations,

¹ The data used for the empirical analysis of trade flows covers the 1988-2006 period. The current credit crisis, 2008 and beyond is not included in this research. Its repercussions on the real economy are hitting the textile sector very hard. The direct impacts are twofold and act on the very small, 2nd/3rd tiers of suppliers, and the very large leader firms. The former are the first hit as they bear the consequences of reduced consumer demand, and the subsequent decline in production commissioned by customers: the unemployment rate in the Florence province has recently skyrocketed. The former instead face high risks of defaulting on their debts, previously granted and undertaken on the basis of more buoyant times – the recent bust of *Itierre* (the head of a very big pyramidal structure which controlled both lead firms and first tier suppliers) speaks to this very real problem. Tsunamis, in fact, bring away with them both good and bad swimmers.

² The unit value (UV) of an exported commodity is the quotient of its value divided into a quantity measure and can be used to distinguish a market where price competition is more important than non-price competition. We claim that a good is characterised by high quality when the following relation holds: if $UV_{exp} > UV_{imp} \rightarrow Q_{exp} > Q_{imp}$ then the products which exhibit such relation are identified as belonging to 'quality-dominated markets'; if instead $UV_{exp} < UV_{imp} \rightarrow Q_{exp} > Q_{imp}$ holds, they are said to belong to 'price-elastic markets' -- where 'exp' stands for exports, 'imp' for imports, and 'Q' for quantities [Aiginger, K. (1997). "The use of unit values to discriminate between price and quality competition." *Cambridge Journal of Economics* 21: 571 - 592.]. The idea behind this solution is that if an economy is able to sell its products at higher unit values and, nevertheless, enjoys an export surplus, it must follow that such good is supplied at a higher quality compared to its market peers – and vice-versa.

employment protection legislations, unemployment benefit eligibility criteria, and state support which differ substantially from those abided by small firms and their labour force. Yet we have found evidence that high quality production takes place in Italy, therefore raising the question of how. This research is therefore geared towards understanding what functional substitutes are in place in Italy which enable some firms to successfully compete in high quality niche markets, against all odds.

By looking at the textile sector at large (and Tuscan firms in particular), which includes the production of textile fibres and threads, of cotton-, woollen-, and worsted-type; the tanning, dressing and cutting of leather; the design, manufacture, marketing and distribution of wearing apparel and footwear, and the manufacture of luggage and handbags, the paper argues that key to the production of high quality goods belonging to labour intensive, light manufacturing industries is indeed the availability of a skilled labour force and capital, as suggested by the VOC literature, though it is not necessary for one firm to possess both at the same time. In the presence of a vacuum of national level institutions, providing both assets to all firms indiscriminately, inter-firm networks become the locus where missing input factors are produced. Small (atomistic, price-taking) firms tie themselves to leader firms, original equipment manufacturers (Herrigel and Wittke 2005), or *case madri* in order to access sources of financial capital alternative (and in parallel) to those provided by the national banking system. In return, leader firms, OEM, or *case madri* delegate to them the actual manufacture of final goods. These small and medium sized enterprises are organised in clusters of supplier chains, where constituent firms simultaneously maintain hierarchical, cooperative and competitive relational ties with each other. Supplier-customer relations observed can be classified in two categories: hierarchical contract and collaborative manufacturers. Whilst the latter benefit from sustained collaborations and linkages with one (or more) *case madri*, the former suffer from relational and contractual uncertainty, time constraints, and continuous down-ward cost pressures. We therefore show that the production of HQ goods relies indeed on a combination of skills and capital which a limited number of successful firms find produced by different players in inter-firm networks. Moreover, the micro-foundations characterising the socio-economic behaviour of each supplier group differ: very flexible wages and prices on the one hand, rigid wages and prices on the other. As a consequence of this we metaphorically suggest that leader firms built their competitive success on their ability to take advantage of the skills and synergies of the smaller firms, as well as their ability to force upon them increasing downward price and time pressure, as if hyenas feeding on the carcasses of others.

The paper proceeds as such: section one looks at the literature on inter-firm network, and confronts VOC with *de facto* evidence on heterogeneous vertical disintegration trends and questions which typology best apply to CME-type economies; section two criticises such theories through the evidence collected on the predominant model of inter-firm relations uncovered in the Tuscan textile industry as well as the cooperative/consortium model; section three discusses the implications for the theory of skill and capital provision deriving from the evidence collected; the concluding section sums up the paper.

I. High quality production in the face of the vertical disintegration of firms and inter-firm networks of heterogeneous types.

The literature on industrial orders, national competitiveness and models of capitalisms spells out a number of supporting mechanisms which endow firms with the assets necessary for the production of high quality goods: specific skills and long term patient capital. HQP is conditional on the presence of an *industrial order* or a *social structure* which allows for the institutional conditions for HQP to materialise. These conditions are labelled *redundant capacities* and have significant collective goods properties; they are operationalised as: (a) broad and high skills, (b) a polyvalent organisational structure, (c) decentralised competences, and (d) social peace (Streeck 1991: 31). Soskice (1999) provided for a more fine grained definition of these input factors and argued that HQP required (i) that companies maintained long standing cooperative relations with their workforce, (ii) that technology travelled fluidly from the company to employees and suppliers, (iii) that workers possessed both industry and company- specific skills, (iv) that a consensus-based approach to decision making prevailed, (v) that the industrial relations system in place guaranteed cooperative behaviour of workers and owners/managers, (vi) that relational contracts would develop across companies in the pursuit of the joint development and customisation of production components, and finally (vii) that long term finance was available (Soskice 1999: 115). Decentralised competences, long standing inter-company cooperative relations and technology transfers describe the ideal type inter-firm network which contributes to the institutional complementarities which allow for the production of high quality goods.

Yet the constraints imposed by internationally competitive goods market have transformed the structural organisation of export oriented firms. The threat of hold-up problems, which in the past triggered the concentration of economic activities within firms in the form of vertically integrated

manufacturers (Chandler 1977), has gradually become a secondary concern and as internationally competitive firms face increasingly instable and volatile markets they respond to these pressures via the disintegration of once vertically integrated manufacturing organisations (Gilson 2008). This pressure has resulted in a variety of heterogeneous supplier-customer relations and multiple inter-firm behavioural ties, potentially altering the ideal type inter-firm network which is required for high quality production. In what follows, I discuss the literature which observes and classifies these decentralising trends and will relate it to a VOC discussion on the afore-mentioned inter-firm types.

Chandler described vertically integrated firms as ones where *the manufacturer of final good was likely to own upstream producers of key inputs, or downstream distributors, or both* (Chandler 1977). The ownership of all assets of production was understood to be the only solution to the problem of hold-up inherent in the practise of co-specialised and specific investments (Gilson 2008); thus the predominance throughout the second half of the twentieth century of concentrated traditional firms organised along principles of vertical control and direct ownership of all the steps of the production process, where *the visible hand* of management ruled out the risk of hold-up. With intensified global competition, rapidly changing technology, shorter product life-cycles, and volatile customer taste the boundaries of the market within which firms were placed started to become overstretched from both spatial, financial and organisational perspectives (Herrigel and Wittke 2005 : 313). Thus we witness an uncontroversial trend towards vertical disintegration and an associated mushrooming of formal and informal inter-firm collaborations (Lamoreaux 2004; Langlois 2004; Herrigel and Wittke 2005; Gilson 2008). Vertical disintegration is associated with the reduction of economic activity coordinated within a firm, and the corresponding increase in the proportion of activity conducted through the contract market (Gilson et al. 2008: 1). An extensive literature has looked at this historical stretching of the boundaries of the firm, at times concerned with the understanding developing supplier-customer inter-firm relations, at times with the problem of innovation resulting from collaborative information-sharing (Kogut 1993; Borrus and Zysman 1998; Sturgeon 2002; Lamoreaux 2003; Langlois 2003; Lamoreaux 2004; Langlois 2004; Herrigel and Wittke 2005; Gilson 2008).

Herrigel and Wittke suggest a typology of five ideal typical supplier-customer relations developing in the manufacturing sector: (i) arm's length / spot market relations, (ii) autocratic or captive supplier relation, (iii) contract manufacturing, (iv) collaborative manufacturing, (v) sustained contingent collaboration (Herrigel and Wittke 2005 : 316-317). In the event of the first type of supplier relations, arm's length, price

mechanisms regulate relations between the two players, suppliers construct standardised or complex parts contracted by customers and there is no cooperation of suppliers in the development of products. Autocratic supplier relations apply according to the authors to particular culturally embedded settings, such as the Japanese *keiretsu* or Korean *chaebol*, where suppliers are tied to one customer only and follow his lead in production and innovation. Learning and problem solving takes place amongst dependent producers and lead firms, somehow constraining the group's knowledge to its direct borders as the standardisation and modularisation of production allows this clear-cut separation of phases. Contract manufacturing establishes a clear division between product design and manufacture; original equipment manufacturers invest in the design, marketing and distribution phases, while "sophisticated" suppliers engage in the production and assembly of parts: this relation is rather stable but limited (319), as unpredictability and instability results from OEM willingness to reduce any risk of capture – hold-up – on behalf of trusted suppliers thereby inducing them to prefer keeping suppliers at a distance; and thus resulting in suppliers' continuous search for alternative customers. Langlois too argues that the possibility to decompose products into distinct and technically standardised modules allows for the isolated production of each; yet he did present *modular collaborations* as the one resulting shape inter-firm relations would take following the disintegration of firms (Langlois 2003). Collaborative manufacturing instead is characterised by near power parity between firms, there is mutual dependence between customers and suppliers deriving from respective know-how. Customers rely on their suppliers not only for the production phases of a good but also for the design and product development activities it pursues. This is because of the shared and complementary competences which both players possess; final goods are the outcome of joint collaborations (320). The downside to these relations is the risk borne by suppliers when committing to exclusive and specialised relations with one customer only, at the mercy of the customer's orders and production demands. Finally, sustained contingent collaboration accounts for collaborative manufacturing relations sustained over time, where suppliers become both the locus where production is outsourced but also – and more importantly – external providers of know-how. Gilson et al. suggest a different name which captures the relational features of the latter two typologies, *iterative collaboration* (Gilson 2008); where the unavoidable mutual vulnerabilities among collaborators motivate practical innovations in contractual governance in order to support newly developing transactional structures (7). Cooperation among firms takes place through platform settings, modern supply chains and collaborative research and development; and responds to the name of *iterated co-design* (20).

Given the multiplicity of inter-firm relational grounds and the variety of roles played by suppliers, it becomes important to spell out which typology of behaviour best fits the characteristics of “decentralised competences, long standing inter-company cooperative relations and employees and supplier fluid technology transfer”, and thus are compatible with the production of high quality goods. Collaborative manufacturing, sustained contingent (or iterative) collaborations best fit the account of supplier-customer relations recognised by Sorge, Streeck and Soskice – and later incorporated in the VOC framework - as best promoting and sustaining high quality production. Yet the evidence collected in the field suggests that the prevalence of one type of relations vis-a-vis others does not develop; we actually witness, within the same industrial order, the development of multiple types of typologies; we also find evidence of firm's behaviour towards a customer best described by one typology, but the same firm's behaviour towards another customer best described by another. Why then does one supplier become an iterated collaborator, and another one does not? Why can the same firm be at the same time supplier, customer and joint-problem solver? The overlapping and joint being of these typologies, both those supporting HQP and those that don't, suggests that we may be in the face of a heterogeneous mechanism which delivers high quality production and successful business and export performance. In the following section I describe how inter-firm networks have developed in the Tuscan textile region. Furthermore I will show that this particular structure becomes one alternative mechanism through which the production of high quality goods takes place.

II. Hierarchical control and competitive cooperation: successful textile firms in Tuscany

The Italian textile industry has historically been identified as one of the main pillars of the Italian economy. With regards to export shares, measured against the OECD23 basket of countries, Italy consistently outperformed its competitors by a significant degree (OECD Stan 2005). The data shows that Italy exhibits a comparative advantage vis-à-vis most competitors at each point of observation, 1980, 1990 and 2000³. And whilst its competitors' advantage recedes, that of Italy's textile sector improves.

³ Export specialisation is a proxy for the revealed comparative advantage of a country vis-à-vis a selected basket of competitors (which in the data provided is represented by the OECD23).

Graph 1 and 2, about here

Yet this data may very well remain meaningless if a deeper break-up of the sector is not performed. Such an exercise reveals that whilst “Textiles et al.” is one of Italy’s manufacturing industry’s assets, the composition of the sector has exhibited heterogeneous performance during the time period observed. A more detailed four-digit level analysis of trade flows and revealed comparative advantages, based on the OECD’s ITCS dataset, for the period 1988-2006, shows that the goods listed below (Table 1) not only have experienced a revealed comparative advantage over time but also high and sustained relative unit values. These results reveal that the performance of firms producing textile fibres and threads, of cotton-, woollen-, and worsted-type; the tanning, dressing and cutting of leather; the design, manufacture, marketing and distribution of wearing apparel and footwear, and the manufacture of luggage and handbags has been superior to that of Italy’s main competitors (Table 1). The remaining production categories have suffered.

In fact this performance is even more surprising given the application of the Multifibre Agreement in 1994 and the final enactment of GATT took place: starting on January the 1st, 2005, the textile and clothing sectors have become subject to the general rules of the General Agreement on Tariffs and Trade, agreed in 1995⁴.

Table 1, about here

How have these successful firms which responded to the heightened competition that policy and the reduction of trade barriers have delivered? An analysis of the relative unit values pertaining to each produced good shows that the quality component of these goods has increased or remained high and stable over time, thus suggesting that the comparative trade advantage is induced by the successful production of high quality goods: firms are basing their product market strategy on high quality competition. Yet, markets change quickly, and adapt to altered consumer preferences and demands, and so do textile firms. It also appears that as demand has increased for branded, mid-range quality goods, the same firms that compete in the production of very high quality items are also

⁴ The delay in the removal of barriers to free trade has both a technical and political face. From a technical perspective, because the agreement was scheduled in four stages, countries were able to postpone addressing (and removing) the most politically salient barriers. Symptomatic of developed economies’ reluctance to remove barriers is the five-time extension of the Multifibre Agreement, during the 1974-1994 period (preceding the Uruguay Round). The Agreement on Textile and Clothing regulates the process of GATT rules application.

engaging in the production of a mid-range accessible luxury niche selection of goods.

Two questions follow from this evidence: how does the production of high quality products take place given Italy's macro-institutional infrastructure? How is the production of mid-range accessible luxury (mid-quality) goods possible and compatible with the former product market strategy? In what follows we provide an answer for both questions which builds on the identification of local industrial orders combined and augmented with trans-national supply chains.

II.1 Production chains in Tuscany's textile sector: wearing apparel, footwear and leather manufacturing

A significant number of Italian successful wearing apparel, footwear and leather manufacturing firms are concentrated in the Tuscan area; most leading fashion brands like Gucci, Ferragamo, Prada and Pucci, many small and medium sized successful suppliers like Dadorosa and Andrea Alfaioli, as well as textile fibre producers such as Inwool and Tessilfibre. A study was therefore commenced on how top leading firms per sub-sector organise their manufacturing processes: design and development, production, marketing and distribution. This exercise led to the finding that the high quality production of wearing apparel, footwear, textile fibres and leather goods relied on the interaction of both large (leader firms, original equipment manufacturers, *case madri*) and small firms (first and lower tier suppliers - *fornitori fidealizzati* and *conto terzi*), and the distribution of activities across the customer-supplier production chain.

The figure below captures the links characterising the relations between a leader firm and its suppliers; it must be pointed out that this provides a description of one segment of the local industrial order, which would be more accurately represented by the parallel representation of the same pattern of interactions.

Figure 1, about here

A leader firm concentrates its resources on the design, development, distribution and marketing phases of a product. The latter two activities - not an explicit part of this research agenda - are organised around internally nurtured expertise often augmented with external one as well. The actual production of a good is delegated to a chain of suppliers, mostly locally distributed. Grouping suppliers in one coherent cohort is a serious mistake, as what emerges from the evidence collected is that

suppliers can be distinguished in two separate ones: collaborative suppliers and hierarchical sub-contractors, located in the first and second-cum-subsequent tiers of suppliers (as shown in Figure 1).

Within this organisational structure, leader firms eliminate the problem of solving the collective action problem inherent in the process of organising a skill provision system as they “obtain” a skilled labour force by outsourcing the actual production phase and by selecting suppliers on the basis of their skills – implying that they have to be skilled *ex ante* the commencement of the relationship. Small, financially and structurally undercapitalised, supplier firms no longer face the problem of accessing long term patient capital to be deployed towards the research required for incremental innovation (textile fibre printing technique innovation for example), as they either receive explicit machinery updating from leader firms on an ad-hoc basis, or specialise in the production of less sophisticated components: these constitute the group of hierarchical sub-contractors. The remaining suppliers instead cooperate with leader firms in the product development phase via expertise exchange and thus rely on them for (financial and physical) capital provision, when necessary: thus, collaborative suppliers. On the other hand, having eliminated one problem does not automatically provide for the solution to the other. In this sector we have found evidence of separate production assets provided by each sub-national institutional framework⁵: leader firms who are traditionally part of a larger holding group (national, *Mariella Burani Fashion Group*, and international, *LVMH*) or pyramidal structures recapitalise themselves via the internal capital markets that these ownership structures provide, and have better access to funding provided by the banking system as the introduction of sophisticated accounting methods and financial disclosure regulations – which apply to firms bigger than a certain size – has reduced the problem of *asymmetric information*. Small firms instead solve the collective action problem which characterises setting up skill provision systems, by resorting to on-the-job training via *learning-by-doing* of apprentices.

I will present a brief historical timeline description of how this inter-firm model developed, by tracking how the leather-cutting and manufacturing

⁵ In separate work I have discussed at length how labour market institutions and banking sector regulations apply to Italian firms with a size-based discrimination in mind, thus the argument that sub-national institutional frameworks exist in Italy identifiable via this size cleavage. Thus for example, employment protection legislation and particular unemployment benefits (i.e. *cassa integrazione guadagni*) only apply to firms employing more than eighteen workers. Ownership structures characterised by pyramidal groups and the increasing frequency of direct control of firms via indirect ownership become an internal source of finance when financial markets are less prone to distributing long term patient capital to firms.

industry developed since the mid-eighties until today. As captured by Chandler (1977), most industrial organisations used to be vertically integrated in the past. In the early eighties a vast number of Italian light manufacturing firms entered a phase of disintegration and restructuring; large firms were broken up and a number of workers – previously employed within them – would spin-off and open up shops and small firms which specialised in the skill that the worker could carry away with him – portable firm-specific skills. There is evidence that this development gave origin to industrial districts as well (Lazerson and Lorenzoni 1999). The interaction between what remained of the *casa madre* and these small specialised firms was characterised by arm's length / spot market relations; the *casa madre* would decompose the production of a final good into separate and independent parts which would be externally outsourced, these separate components would then make their way back to mother firms and be recomposed into a final item, through a process which added value to each individual part. So was the case in the leather industry (which encompasses both some footwear, luggage and handbag production) where lead firms provided suppliers with pre-cut pieces of leather, maintained the ownership of the raw material, and paid for the sewing and stitching labour-intensive phases of production. Semi-final goods would then make their way back to the *casa madre* where finishing touches were applied to the goods. Thus, *casa madre* would retain under their direct, internal, control the most value added phases of production: modelling, cutting of leather, product development, and the finishing – *finissaggio* – of the product. The remaining, labour intensive and low value added phases would be outsourced to a chain of suppliers, who *de facto* was once its own workforce.

Today, suppliers have become more heterogeneous, as some have endowed themselves with more specialised know-how and have thus received further responsibilities – as well as physical capital support – from the *casa madre*. Gradually, the first tier of suppliers has moved from being single component manufacturers to final assembler (thus responsible for the actual product sold), or specialised product co-developers, or customers themselves by outsourcing to third party suppliers the production of single components: the former would provide the latter with cut pieces of leather for them to reassemble, etc. Thus, we observe a *fidealizzazione* / stabilisation of the first tier of suppliers, shifting from an arm's length / spot market relational type to a collaborative and iterated one (Herrigel and Wittke 2005; Gilson 2008). This transition is further institutionalised by the recurrent practise of know-how exchange between leaders and suppliers via the exchange of expert personnel and specialised workforce; also by the control that leader firms exercise on their collaborative suppliers through the so-called *ispettori* – *de facto* process overseers, which set a floor for the minimum skill level and quality of the

goods produced by suppliers. Moreover it should be mentioned, that whilst a firm pertaining to this group benefits from close ties with one leader firm, it will – because of this reputational asset – attract the attention, and work, of other leader firms interested in taking advantage and building on its expertise. This is possible as the practise of exclusive customer-supplier relations is not widespread and because lead firms compete fiercely against each other – in particular for the best work-force, and do not engage in cooperative know-how exchange or joint-innovation ventures. This development comes hand in hand with the drastic intensification of spot market and hierarchically informed relations between first and subsequent tiers of suppliers. Work is outsourced to sub-suppliers according to two factors: who bids the lowest price and who produces the same quality product in the shortest time. Thus competition among firms pertaining to this supplier sub-group is fierce, not only competition for work but also competition for skilled labour – which is trained in-house at the cost of a substantial time and financial investment; furthermore all small firms compete against lead firms who from time to time poach their best specialised employee to nurture its product development department, often compromising the survival of the sub-supplier itself. Often, these firms are extremely specialised in the production of a single component and so small that they concentrate their whole activity on one customer-order only, thus being extremely un-diversified in their strategy management, and highly exposed to the risks associated with demand fluctuations. Finally this trend towards downward bidding of production time and prices is increasingly accentuated when demand flexes, thus forcing sub-suppliers to even tougher market flexibility. Thus we observe vertical cooperation (between lead and first tier suppliers), competitive interactions between first and subsequent tiers of suppliers, competition within second and third tier suppliers on top of (at a system level) strong horizontal competition at every level – between lead firms in particular.

Successful textile-at-large companies – of which the leather producer example above - have pursued a product market strategy of high quality and mid-quality goods. They are at the helm of a pyramidal and decentralised structure to which they delegate the actual production of the goods designed and developed in-house. This inter-firm structure is in itself compartmentalised in two building blocks: on the one hand we find trusted and long-term independent collaborative suppliers, on the other very specialised, *ad-hoc* and dependent sub-suppliers. Is this the only functional substitute to CME-style inter-firm organisations resorted to by Italian firms, or do the mechanisms that underpinning the success of consortium-style organisations strongly differ?

This paper suggests this is not the case by showing that consortia have adapted and become integrated into the hierarchical supply chains described above.

Consortia describe the phenomenon by which a multitude of small and micro entrepreneurs reunite under a joint banner and access pooled resources; in particular financial ones as these organisations were dovetailed by cooperative banks. The privatisation of the banking system privatisation resulted in the gradual elimination of these credit institutes. Significantly severing the close link between the banks and the territory so important to the consortium's survival. Nonetheless, many remain, yet it is surprising to witness the creation of a new consortium in the textile (leather-manufacturing) industry in Tuscany. In what follows I show that the behavioural-interactions of consortia firms does not provide a clear cut from the hierarchical-collaborative inter-firm model discussed previously.

The roughly seventy firms that make up the *Consorzio 100%*, born in 1997 in the vicinities of Florence, abide by the same driving objectives: to pool resources in the search of technological and process innovation, certification and patenting, training, strategic marketing and access to finance. A number of measures and joint actions thus followed: the creation of the *Alta Scuola di Formazione per la Pelletteria Italiana* – a vocational training school specialised in the manufacture and processing of leather, with the joint cooperation of external actors: two *case madri* (*Gucci* and *Prada*), small-and-micro sized enterprises' employer organisations (*CNA* and *Confartigianato*), and local administrations. With respect to the strategic marketing objective, the consortium pooled resources in order to provide its members with *project managers* and marketing experts, which were largely missing. Finally, with respect to the issue of financing, the consortium negotiated with the Tuscan Region (as in Italy Regions do have budgets separate from the national one) and the artisans' employer organisation a number of guarantees given to banks which reduced small and micro enterprises' problem of un-assessable collateral, when discussing the possibility of loans. The firms which make up the *Consorzio 100%* have since 1997 proven to be internationally active in export markets, have produced items characterised by very high quality, and some are particularly successful too in terms of realised revenues and sales (*Sapaf* and *Braccialini*⁶ for example). Thus the experience of the *Consorzio 100%* may suggest that within the same industrial sub-sector, alternative mechanisms to the one presented above may.

⁶ *Braccialini*'s success was identified by MBFG (*Mariella Burani Fashion Group*) – a holding company of small-but very successful mid range companies – which purchased the brand a couple of years ago.

Figure 2, about here

A close up of the consortium taken not as independent from the hierarchical-cooperative inter-firm network, but as set within that context (Figure 2) shows how firms within it interact with all actors of the model, both with the lead firm, first and subsequent tier suppliers. This is easily explained because, though a consortium is a separate entity, it is nonetheless made up of multiple firms which retain their individuality and maintain a cooperative yet competitive relational-behaviour with each other. The heterogeneity of firms within the group, results in a pool of vertically and horizontally diversified skills, and thus the specialisation of some firms in the production of component parts – typical behaviour of second tier sub-suppliers firms – and some in the production of very sophisticated parts, assembly of parts and joint-development of goods – typical of first tier supplier firms. It therefore is the case that the main activities of the consortium as a whole are three: sub-supplier component production, customer behaviour vis-a-vis second and subsequent supplier firms, and finally the production and development of single brand goods.

Therefore the *prima facie* appearance of cooperative consortia differ from the dual structure apparent in hierarchical-cooperative inter-firm networks - between a cohort where relations are very stable and durable over time, and one where they are informed by price mechanisms – the real behaviour which characterises the member firms of consortia are the same. Consortium firms earn their biggest share of profits from acting as sub-suppliers or suppliers within networks lead by established and successful *case madri*, and only a residual part of it from the sales of their private brands, in theory facilitated and enabled by the pooling of resources which takes place in the consortium.

It once more seems clear that the production of high quality goods in Italy takes place through mechanisms which take advantage of the clear dualism and cleavage which exists between different actors: lead and first tier supplier firms on the one hand, second and third tier suppliers on the other.

III. Skill formation and capital provision

Abstracting from practise to theory a number of theoretical notions follow from the above analysis of inter-firm linkages. In this section we discuss what the implications are derived for theories of skill formation and capital provision. We argue that within this leader-cum-suppliers model of industrial organisation the classical problem of upwards and downwards

hold-up, typical of CME-like and Japanese industrial organisations, disappears. We also argue that skills – under certain institutional conditions – have become a substitute to collateralised/debt financing.

III.1 Co-specific Skills and Hold-up Risks: Or not?

The problem of an underinvestment in skills is reported to be a consequence of imperfect capital and labour markets; where problems of asymmetric information constrain an individual's financial ability to invest in training, and the risk of not recovering such investment and finding an adequately matching form of employment provide strong disincentives against it (Stevens 1999). Specific skills are not immediately available on the market and are costly; a worker's investment in them is de-incentivised by the knowledge that their transferability is limited. For these reasons, a firm leans on its national institutional exoskeleton to stimulate their provision (Soskice 1993; Soskice 1994). Institutions therefore exist such that the collective action problems deriving from these economic disincentives is solved. Social policy regimes and industrial relations institutions in synergy support the production of specific skills. The combination of which provide "reassurance mechanisms" to both the employer and the employee. This implies that the investment in skills is *de-facto* a co-investment, where both employers and employees become stakeholders of this enterprise. Moreover, promoting this conjunct investment is the need for skills on behalf of producers – as one necessary input factor; workers and producers therefore share co-specific assets. This endows workers with hold-up power vis-à-vis capital (Estevez-Abe, Iversen et al. 2001).

Yet, these institutional mechanisms are not visible in Italy and amongst our lead-cum-supplier networks. We find that the generation of specific skills is not related to the institutional solutions offered above. Instead, as we already discussed, the training of workers is characterised by *on-the-job learning-by-doing* mechanisms. A timely process leads workers through a training career, where more and increasingly specialised skills are acquired with work experience. We therefore can identify two groups of workers: one, comprised of younger and less experienced individuals, where sector-specific and diversified skills are predominant, another where few workers are endowed with highly specific and specialised skills. We also suggest that the relations between employers (understood both as the lead firm – as the employer of the price-taking SME - and the owner of latter) and workers endowed with diversified sector-specific skills are characterised by the absence of hold-up problems and short term

relations. Employers do not face the risk hold up as these skills are abundantly available across the industrial order. Simultaneously, these workers do not face the hold up, monopsonistic power of employers, as their skills are in demand across the whole order. At the opposite end we witness relations between employers and highly skilled and specialised workers characterised by long term and privileged relations. We have for example found evidence of single-pay bargaining between them, often through the black market (CS 2, 200902). And in antithesis to the previously described relation, highly specialised workers do carry with them hold-up power vis-à-vis employers.

Moreover we find that the former type of employer-employee relations is common among lead and second/subsequent tiers of suppliers, as well as between first-tier and second/subsequent sub-suppliers, and sub-suppliers amongst themselves; the latter instead among lead and first tier suppliers. This finding further supports the argument that this lead-cum-suppliers inter-firm structure is in itself compartmentalised in two building blocks: on the one hand we find trusted and long-term independent collaborative suppliers, which have hold-up power, on the other atomistic and dependent sub-suppliers, endowed with sector specific skills – abundantly distributed across the industrial order. Whilst most labour force employed is subject to the national sectoral wage bargaining agreement, employees in sub-supplier firms instead are subject to the national artisan collective agreement. More so, we have found evidence of single-pay bargaining on top of the collectively agreed wages for the most specifically skilled workers, as a possible solution to any hold-up threat. Workers in the first tier of suppliers also benefit from employment protection legislation and from firm-based unemployment benefits (according to size); those in the lower tiers instead are employed under short-term precarious employment contracts (*collaborazione a progetto*, etc.) and do not benefit from any particular unemployment benefit besides those attributed to individual workers (which are very low in Italy). Moreover the difference between both collective agreements is not in the normative side, but in the wage one, as the former is negotiated every two years, and the latter should in theory as well but has been *de facto* agreed once only since the nineties wage bargaining system reform.

It therefore appears that even with respect to skill endowments and the distribution of hold-up power, there is a clear cut cleavage between workers and the level of supplier status they have achieved. Lead firms therefore resort to the heterogeneous skill endowments acquired via *on-the-job* training, belonging to heterogeneous groups of workers, and exercise their monopsonistic power vis-à-vis less specialised and highly skilled workers; this power is substituted by dependent relations when engaging with highly specialised workers instead.

III.2 Skills as a Functional Substitute to Financing Constraints

→ the discussion this section engages with concerns the finding that under severe problems of under-capitalisation of SME firms, the higher the skill level the more likely it is for suppliers to obtain commissions as well as direct financing from lead firms. Skills therefore become a substitute and a mechanism through which finance is obtained; both vis-à-vis banks (discussion with CariFirenze bank manager) and vis-à-vis higher level firms both lead and suppliers).

Conclusion

This paper suggests that within a trend towards vertical disintegration of firms and the development of highly heterogeneous varieties of inter-firm networks, set in the context of a dysfunctional national institutional framework, Italian high quality producers in light manufacturing industries – such as textiles, but also furniture, eyewear, and vehicle parts – resort to the heterogeneous assets belonging to heterogeneous groups of firms to solve the missing input problem that Italy's institutional context produces. This paper has shown that the majority of high end, high value added production is performed within a spatially distributed industrial order, through a selection of better skilled suppliers – which the leader firm, or first tier suppliers selects over time.

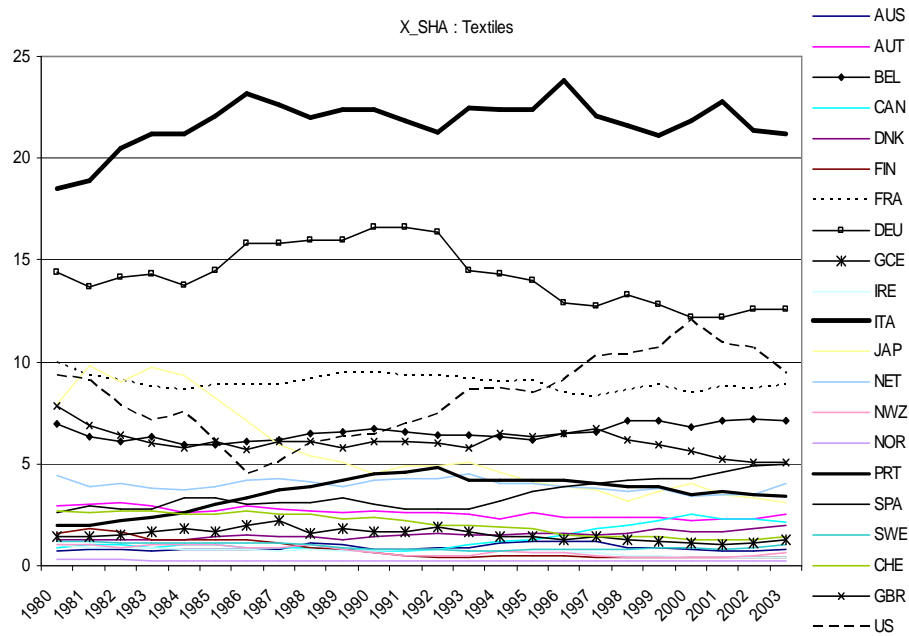
Though the production of high quality goods would be ruled out by the VOC theory when individual firms do not simultaneously possess adequate skill and capital input factors, we show that light manufacturing industries (this is the textile sector case study) in Italy base their comparative advantage on the production of high quality goods. Through case study evidence of the organisational structure adopted by the most successful firms in Italy's textile sector, we uncover the mechanisms which deliver functional substitutes to the VOC informed theoretical models. We also show that the distribution of skills across industrial orders simultaneously solves and maintains hold up problems between capital and labour; and that skills can become under certain condition a functional substitute to access credit capitalisation for small and undercapitalised firms. The surprising finding suggested by the behaviour of these firms is that high quality production results from the interaction of sub-systems governed by heterogeneous rules of behaviour, logics and incentives: one where competitive market rationality prevails, and one where relational and reputational based behaviour does. We therefore argued that the success

of these firms relies on the interface between lead and heterogeneous groups of supplier firms, where three factors contribute to a sub-supplier's selection by a lead or first tier supplier firm: downwardly flexible price, downwardly flexible delivery times, and reputational track records.

We therefore suggest that the continuous segmentation within markets, initially identified by Berger and Piore (1980), becomes instrumental to the construction of product market strategies geared towards the production of high quality goods. Leader firms, original equipment manufacturers, or *case madri* apply one logic of behaviour when building relations with their first tier of suppliers, and another when engaging with second/subsequent price-taking suppliers. Therefore Hall and Soskice's claim that national institutional frameworks are underpinned by behavioural logics characterised by either market or strategic coordination could be juxtaposed with the evidence provided. High quality production results – in Tuscan textile exporting firms - from the interaction of sub-systems where competitive market rationality prevails, or where relational and reputational based behaviour does.

Appendix 1: Figures and Graphs

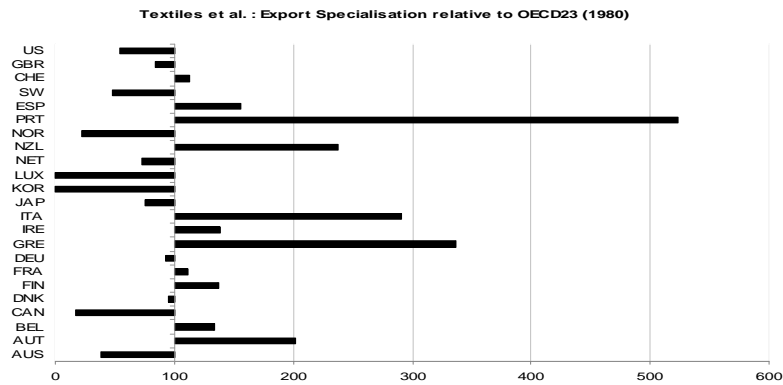
Graph 1: Export Shares, OECD23



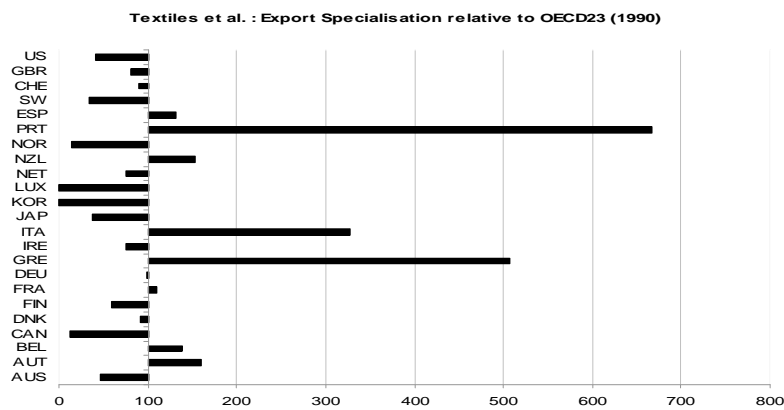
Source: OECD STAN, 2005 edition

Graph 2.a, 2.b, 2.c: Export Specialisation Rates OECD23

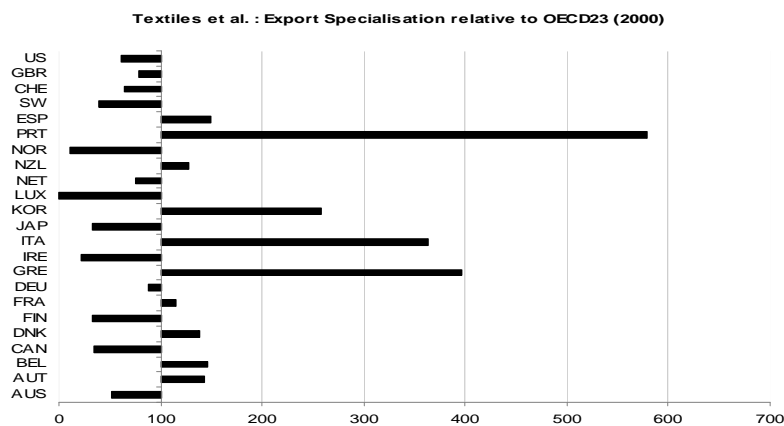
Graph 2.a: Export Specialisation Rates OECD23, 1980



Graph 2.b: Export Specialisation Rates OECD23, 1990



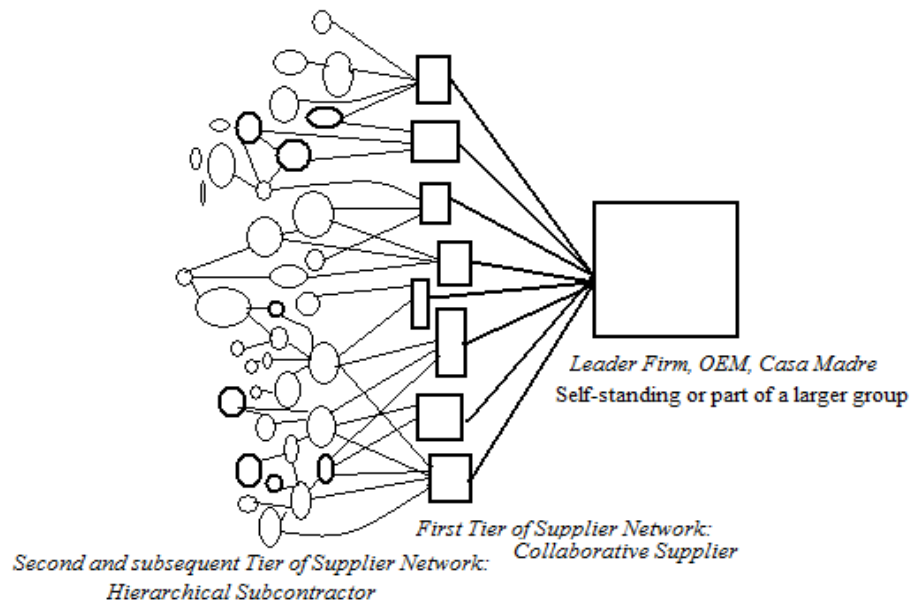
Graph 2.c: Export Specialisation Rates OECD23, 2000



Source: OECD STAN, 2005 edition

Figure 1:

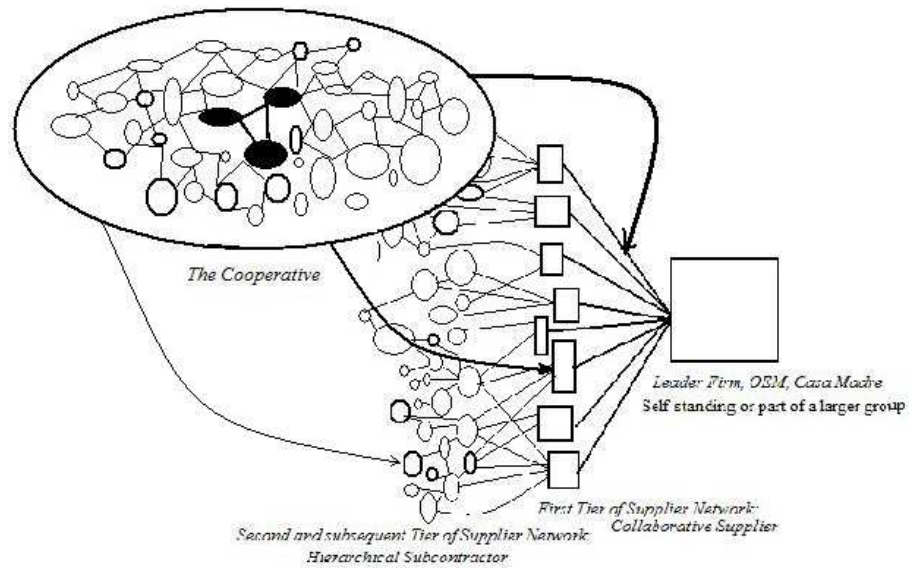
Stylised representation of the structure of production in Tuscany's Textile Sector



Source: own representation based on conversations with sectoral experts

Figure 2:

Stylised representation of the structure of production in Tuscany's Textile Sector - Cooperatives



Source: own representation based on conversations with sectoral experts

Table 1: NACE Rev. 1 Classification of Activity, derived from Product data: Italian Textile Sector**NACE Rev. 1: Italian Textile Sector**

17.14	Preparation and spinning of flax-type fibres
17.15	Throwing and preparation of silk, including from noils, and throwing and texturing of synthetic or artificial filament yarns
17.16	Manufacture of sewing threads
17.17	Preparation and spinning of other textile fibres
17.21	Cotton-type weaving
17.22	Woollen-type weaving
17.23	Worsted-type weaving
17.24	Silk-type weaving
17.25	Other textile weaving
18.10	Manufacture of leather clothes
18.21	Manufacture of work-wear
18.22	Manufacture of other outerwear
18.23	Manufacture of underwear
18.24	Manufacture of other wearing apparel and accessories n.e.c.
19.10	Tanning and dressing of leather
19.20	Manufacture of luggage, handbags and the like, saddlery and harness
19.30	Manufacture of footwear

Source: OECD ITCS SITC Rev.3, four-digit level. The conversion from SITC Rev.3 to NACE Rev.1 was performed through the European Commission's RAMON Conversion System

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