

14. MEASURING THE INTANGIBLE CONTENT OF GOODS TRADED ON INTERNATIONAL MARKETS. AN EXERCISE ON "MADE IN ITALY" VERSUS "MADE IN CHINA" CASE

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Abstract

This article aims at proposing a simple, easily applicable, but still reliable methodology, based upon the analysis of price differentials, designed for quantifying the intangible versus tangible attributes embedded in commodities traded on the contemporary international markets. The proposed methodology is based upon the analysis of price differentials, considered as important indicators of consumer-perceived quality differentiation between similar goods having diverse suppliers. In the analysis exercise presented, we compared different products of Italy and China through disaggregating the available statistical data and highlighting the qualitative differences between "Made in Italy" and "Made in China" goods. The relationship between intangible assets, at firm and territory level, and the intangible contents of goods is also discussed, and implications for firms' strategies and industrial policy are drawn.

Keywords: goods, tangible content, intangible content, price differential, industrial policy

JEL Classification: F14, L5, L6, O2, O5

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1. Introduction

The question as to "What is new about the New Economy?" (Webber, 1993) has got, over the last 15 years, a variety of responses, the range of which continues to expand. To date, however, it appears that one of the most widely accepted such response is pointing out to the rise of intangibles - a broad category represented by knowledge-based/knowledge-intensive entities and processes.

The main trends that foster the respective evolution are:

- the service orientation of the new economy, as "*services - not goods - make up the major part of advanced economies today*" (Baida, Ackerman's, and Gordian, 2005), while intangibility is recognised as one of the main attributes of services;
- the digitisation of goods, resulting from the crucial role of the new Information and Communications Technologies and associated infrastructures, including Internet and other digital networks.

Intangible attributes become bolder in both inputs and outputs of contemporary businesses of all kind.

On the inputs side, the intangible production factors are taking over the key role at the expense of the classical ones, hence the competitive performance of enterprises is critically dependant upon intangibles.

On the end-products side, intangible goods, in digital or other symbolic form, outweigh the corporeal ones in production, transactions and consumption, most of these being bundled with services (Hill, 1999). Thus, the trend of increasing the service content of bundled products got more intense lately, so that many items perceived by consumers as products are, in fact, services bundled with goods (Polito and Watson, 2004); this is consistent with the observation that "*very few products, if any, are pure tangible products (goods) or pure service offerings with respect to marketing*" (Langford and Cosenza, 1998). The advance of a service-dominant mindset (Lusch and Vargo, 2006) therefore appears as an alternative to the traditional goods-dominant logic.

The increasing de-materialization of economic life brings about new concepts, such as digital economy, cyber-economy, or weightless economy, and also new metaphors aiming at an extended and sounder understanding of the issue at hand: bits vs. atoms, bricks-and-mortar vs. clicks-and-portals, to quote just the most popular of them.

Economic science tackled the respective trend in a top-down manner, starting from the macro-scale, through devising the endogenous growth concept and its corresponding models. At the micro-scale, however, the concern for intangibles management prevailed instead, from pragmatic reasons; as Adler (1989) put it, "*when knowledge is the critical resource, knowledge management is the critical task*". Over

the last few years, a significant attention was also devoted to meso-economic structures (regions, industrial agglomerations etc.) as sites of innovation and production, deeply involved with intangibles creation, trading and use (Di Tommaso, Paci, and Schweitzer, 2005; p.175).

The article focuses on visualising and measuring the intangible contents of goods, through using relevant examples of household and consumer goods.

Its purpose is to examine the nature and role of tangible and intangible attributes in the manufacturing of end products, and also in the formation of differentiated consumers' perceptions regarding them.

The article consists of an introduction, three core sections, and concludes with a set of final remarks. In the first section, the relevant literature is reviewed, aiming at identifying and assessing various contributions on both conceptual and operational nature. In the second section, there is suggested a new methodology able to quantify the tangible and intangible characteristics embedded in certain selected goods exchanged in the contemporary international markets. This methodology is based upon the use of price differentials between similar goods, as key indicators of quality differentiation. The third section aims at showing how the proposed methodology can be applied, based upon statistical data pertaining to an established economy versus an emerging one, namely Italy and China. In the fourth section, some conceptual issues are discussed, focusing on the relation between intangible assets (at firm and territory level) and the intangible contents of goods, including the essential role of the design, with its easiness to be copied vs. its difficulty to be protected; the role of highly intangible-intensive public goods as production inputs, (such as the reputation of the producer's country of origin) is also accounted for. The final remarks refer to the implications of the proposed analysis upon industrial policy formulation at national level, and also upon decision-making on production internationalisation according to criteria related to the tangible-intangible continuum.

2. Literature review

The debate on the relationship between the tangible and the intangible dimension of goods is particularly intense and rich in the early 21st century's economic science (Laroche, Bergeron, and Goutaland, 2001), becoming a major issue on the new economy's research agenda; several economics and business-oriented disciplines are directly involved, such as micro-economics, international trade, marketing, quality management, corporate strategy and industrial policy.

Traditional approaches of the 'tangibility vs. intangibility' issue, originating in the industrial society, were dominated by the claim of a dichotomy existing between the two aspects (Lashley and Taylor, 1998), that were subject to contrasting as antagonists. The distinction between what is tangible and what is intangible was thought to be sharp, leading to neatly separating intangible resources from tangible ones, as well as intangible goods from tangible ones; as opposed to tangible entities, that could be stored and inventoried, intangibles could be difficultly measured and were quasi-impossible to be inventoried. The privileged framework of reference for

such analyses was the firm, thus a supply-side bias occurring in the representation of the issue at hand.

Visible, material and, therefore, tangible goods, that can be touched, inspected and even tested, where intuitively considered to be the "normal" products (Baida, Akkermans, and Gordijn, 2005), they usually falling into the category of search goods. In turn, the subtle nature of intangible entities/attributes raised serious conceptual and methodological problems, rendering difficult to define intangibles based upon their own essence; hence, they used to be rather considered as a residual category, intelligible only implicitly, through making reference to its counterpart (Di Tommaso, Paci, and Schweitzer, 2005; p.174).

Mainstream marketing literature used, until recently, to limit the presence of intangibility only in the realm of services, thus resulting that tangibility should be found in goods exclusively. In this understanding, the most significant distinction between goods and services would reside in the contrast between the tangibility of the former category and the intangibility of the latter (Laroche, Bergeron, and Goutaland, 2001); thus, it could be assumed that a high intangible content of products means a high service content (Polito and Watson, 2004). This assertion no longer holds in the information age, as proven by the respective authors through quoting examples of goods, such as software products, that are considerably less tangible than many services, such as restaurant meals.

Levitt (1981) made one of the earliest, though authoritative statements, as to the fact that "intangible factors are present in all products". "Everybody – he underlines – sells intangibles in the marketplace, no matter what is produced in the factory".

Over the last two decades, with the advent of the new economy, innovative approaches were proposed in the scholarly literature with regard to conceptual aspects under scrutiny, as well as to operationalising the new insights acquired.

The main developments occurred in this line of research can be systematised as follows:

- recognizing the obsolescence of the dichotomy between tangibles and intangibles, that was replaced by a continuum-type approach, with pure tangibility and pure intangibility at its two poles and a range of intermediary states in-between;
- designing and applying scales of intangibility, meant at allowing its quantification along several axes, its multi-dimensional approach coming up to replace the old, uni-dimensional one;
- approaching the intangibility issue in a new perspective, integrating the demand side, so that the consumer orientation comes up to compensate the previous supply-side bias;
- elaborating updated classifications of goods and services, according to the new conceptual premises adopted.

In an attempt to render the above points more explicit, a range of noteworthy contributions identified in the recent literature are briefly reviewed.

Shostack's (1997) scale of market entities was an early attempt to introduce the idea of a continuum between goods and services; although marked by the limitation of its uni-dimensionality and critically analysed in the recent scholarly literature, it is still

widely referred to in marketing textbooks. For example, Winsor, Sheth, and Manolis (2004) criticised the idea of a goods - services continuum due to its operational weaknesses; as an alternative, they proposed a scheme based upon the utilities provided to consumers by retail businesses, claimed to be useful for theoretical purposes, as well as for strategy elaboration in retail and service firms.

The attempt to overcome the dichotomy between goods and services is based upon recognizing the presence of intangibility in goods, but also that of the tangibility in services. For instance, Corrêa and Corrêa (2005) remarked that, although "*intangibility imposes on operations and clients the difficulty to objectively assess quality*", many tangible goods are preferred by users particularly due to their intangible attributes; consumers' willingness to pay expresses their subjective valuation of the respective features, under the condition of asymmetry of information between producer and consumer, which increases the level of uncertainty and risk perceived by consumers.

Klenoski, Gengler and Mulvey (1993) examined consumer's behavior in terms of goods choice, through taking into account the tangible attributes of the latter, as well as the intangible benefits, needs, or personal values of the former; based upon the example of ski destination choice, they proposed a framework and a methodology for linking together the tangible and intangible attributes of goods.

Schroiff and Arnold (2003) identified and studied the brand - product continuum, proposing a framework of disaggregation of the branded product offer into a hierarchy of attributes pertaining to the tangible product (fragrance color, form, application form, chemical formula), as well as to the intangible brand (corporate endorser, brand name, sub-brand name).

In the context of using Internet as an e-commerce platform, Poon (1999) analyzed the relationship between search goods and experience goods on the one hand, and product tangibility, on the other hand, distinguishing between high and low tangibility, respectively.

With a view to further operationalising the intangibility concept in marketing practices, Laroche, Bergeron, and Goutaland (2001) devised a three-dimensional scale of intangibility, that includes mental intangibility, physical intangibility, and generality, thus a progress being claimed to have been made as compared to the traditional uni- or bi-dimensional approaches; one of their findings consists in the identification of certain goods that appeared to be less tangible than many services. Their approach was critically analyzed by Bielen and Semples (2002), who contested the relevance of generality as a characteristic of intangibility, and stated the bi-dimensionality (physical and mental) of the respective concept instead, also proposing a scale for measuring the degree of intangibility of service offerings.

Taking stock of the idea that the items perceived by consumers as products are, in fact, services bundled with goods (Hill, 1999), Polito and Watson (2004) devised a content continuum that combines, in a single framework, the diagonals of the process - product matrix, devised by Hayes and Wheelwright (1979), and of the service - process matrix, proposed by Schmenner (1986) respectively.

It appears that the current research agenda pertaining to the tangibility/intangibility issue illustrates the importance of the latter in both conceptual and operational terms.

It also calls for continued attempts to systematise diverse contributions exposed in the scholarly literature, as well as for generating new, innovative insights, with a view to incorporating them in a new generation of business models and practices of the knowledge-based economy.

3. Visualizing the intangible content of goods: An exercise on "Made in Italy" and "Made in China"

What follows would like to contribute to the above general debate focusing on the intangible contents of goods. We offer a study regarding the Chinese and Italian exports of certain selected goods, testing the hypothesis of *apparent homogeneity*, or – in other words - *hidden diversification*. The main idea is that, while Chinese and Italian goods may appear similar, they are, in fact, different in many cases, because of their different quality and, presumably, because of their different *intensity in intangibles*. In this line of inquiry, we hereby offer a new methodology, based on the use of price differentials, in order to highlight the differences in the quality of goods. Building on previous research led by the first author (Di Tommaso, 2008 a, b; Di Tommaso and Baradel, 2008; Rubini and Di Tommaso, 2008), we hereby go further by hypothesising that these goods are different in quality and, therefore, non-substitutable, especially because of their different respective intensities in intangible content.

3.1. Background

According to statistics, Italy and China seem to compete on the contemporary international markets in similar sectors. This observed overlapping confirms the view of Italy as a country with a peculiar specialization, different to the one of established industrialised nations, and more similar to the one of new emerging economies. In particular, Tables 1 and 2 highlight that China and Italy appear to be specialised in sectors that international classifications (i.e. OECD, UNComtrade, etc.) would define as low-tech (textile, clothing, furniture etc.).

Table 1
Relative Comparative Advantages (RCA) of Italy and G8 countries

	Italy	China	Japan	USA	France	UK	Germany	Canada
Low Tech	1.53	1.67	0.21	0.74	1.09	0.91	0.72	0.53
Medium-low Tech	1.27	0.87	0.76	0.92	1.05	0.99	1.01	1.62
Medium-high Tech	1.19	0.52	1.62	1.02	1.38	1.06	1.42	0.53
High Tech	0.45	0.77	1.10	1.19	0.79	1.10	0.77	1.84

Source: Elaboration of the authors based upon ITCS data, SourceOECD 2008.

Table 2

Relative Comparative Advantages (RCA) of Italy and some selected emerging countries

	Italy	China	South Korea	Malaysia	Thailand	India	Brazil	Mexico
Low Tech	1.53	1.67	0.45	0.82	1.44	2.33	1.86	0.69
Medium-low Tech	1.27	0.87	1.53	0.95	0.92	1.45	1.17	0.78
Medium-high Tech	1.19	0.52	0.91	0.33	0.81	0.41	0.72	1.02
High Tech	0.45	0.77	1.34	1.80	1.06	0.23	0.27	1.00

Source: Elaboration of the authors based upon ITCS data, SourceOECD 2008.

However, in our view, through looking more in depth at this supposed overlapping, two main criticisms could be raised:

1. Too often, the current literature studies the degree of trade overlapping between Italy and China referring to sectors that, because of their high internal heterogeneity (low-tech, medium-tech, but also clothing, furniture etc.) , are too wide to offer accurate indications: within each such sector it is possible to identify substantial differences among products, due to qualitative characteristics, both tangible and intangible (a clear intuitive example is the comparison between shoes: sport shoes and leather shoes). Summarising, using sectors not sufficiently disaggregated could induce the risk of identifying some trade and international specialisation overlapping that are actually not accurate (Di Tommaso *et al.*, 2004; Di Tommaso and Paci, 2005a and 2005b).
2. Even if we reach a satisfactory level of disaggregation (4 or 5 digits), apt to identify goods apparently very similar, the hypothesis of homogeneity needs to be further tested (again, to offer an intuitive example, the category "woman upper-leather shoes" could include radically different goods in terms of design, comfort etc.). In sum, belonging to the same much disaggregated category is not a guarantee of product homogeneity and substitutability.

Based upon these premises, we suggest that the study of revealed price differentials between goods belonging to the same disaggregated sector could offer interesting information on their degree of real homogeneity. As it will be further underlined in this article, our crucial assumption is that if, in the medium and long run, consumers continue to pay different prices for apparently similar goods, this is because they perceive different quality features embedded in such goods. Going back to the reasons why we undertake this exercise (i.e., to highlight the intangible contents of goods), we suggest that the differences in perceived quality, highlighted by price differentials, could be explained also in terms of a different intensity of intangibles.

3.2. Price differentials

Price differentials are henceforth considered as important indicators of consumer-perceived quality differentiation between similar goods having diverse suppliers.

To study price differentials between similar goods produced in different countries, we will use the Relative Unit Price Differential (RUPD) index (Di Tommaso and Baradel, 2008; Di Tommaso and Rubini, 2008). In short,

$$RUPD = (pu_{i,t} - pu_{j,t}) / \text{Max}(pu_{i,t}; pu_{j,t}) \quad (1)$$

where $pu_{i,t}$ and $pu_{j,t}$ are the unit prices of product i and j , respectively, at time t .

We propose that this index can be used for verifying whether two products in the same category (even disaggregated to the 4 or 5 digit level) are homogeneous.

Positive values of the index would suggest *horizontal* qualitative differences, while higher values of the index would suggest the presence of *vertical* qualitative differences. Goods which are apparently similar because of the need they satisfy (to dress up, to travel, to make light, to make coffee, etc.) could exhibit high price differentials because, in reality, they are far from being homogeneous. These price differentials would reflect substantial differences among the products, due to a variety of tangible qualitative features, but that could also be differentiated (both vertically and horizontally) because of intangible contents. This is the case when the purchase meets not only the primary need (to dress up if it is cold, to move from a city to another one, to illuminate a dark room, to drink a coffee), but it can also offer to the consumer the satisfaction of other needs (status, prestige, social acceptance, etc.), which make the respective good "qualitatively" different and much more complex than originally thought.

In this framework, the RUPD reveals *ex post* how much more a consumer has shown to be willing to pay for a specific good in comparison to another good supplied on the market, belonging to the same category, but produced in another country. If the RUPD are calculated using sufficiently disaggregated data (at least at the 4 or 5 digit level), we hypothesise that such an index can actually reflect how different consumers perceive a product in comparison with another one, implicitly considering it non homogeneous and not substitutable.

Price differentials are function of several variables, many of which are not related to the product quality (input cost, taxes and tariffs, exchange rates, firm strategy, local market structure, to cite some). First of all, there are differences in the input costs. Secondly, it is reasonable to assume that prices of goods coming from different countries are influenced by different tax and tariff regimes. Thirdly, also the currency exchange rates have an impact on the prices of goods exported from different countries. Finally, high price differentials could also be the result of specific firm strategies aimed at maximising returns instead of volumes (Lissovolik, 2008; Bennett *et al.*, 2008; Bugamelli and Tedeschi, 2005; Quintieri and Lanza, 2007).

However, these considerations do not weaken the hypothesis according to which the RUPD could represent an interesting proxy for the quality perceived (and paid for) by the purchaser of a good: we read such differentials as an indicator of how "differently" a consumer or a firm perceive and evaluate two goods apparently similar (and normally included in the same category), both being available on the international markets, while being produced in two different countries.

Moreover, it is important to study the trend of RUPD over time: if revealed price differentials remain high over time, it is probably because consumers are consciously demanding goods that they consider different in quality. In fact, it is reasonable to

assume that factors such as incomplete information or temporary distortions in competition, while being possible important explanations for high RUPD at a certain time, bear a minor relevance in explaining the persistence of high revealed price differentials over time.

3.3. An exercise of Relative Unit Price Differential (RUPD) analysis of Italian and Chinese products

In this section we present (Table 3) the RUPD for Italy and China with reference to some selected "critical sectors" (i.e., where the competition between Italy and China seems to be more intense¹) for the years 1995, 2000, 2004 and 2007, focussing on the 22 "Made in Italy" products commonly identified in the literature as household and personal goods):

$$RUPD_{ItaChi} = (p_{i,Ita,t} - p_{i,Chi,t}) / \text{Max} (p_{i,Ita,t}; p_{i,Chi,t}) * 100$$

Table 3

Italy-China: Relative Unit Price Differential (RUPD) in the 25 "Made in Italy" critical sectors

SITC-3 Code	Commodity Description	RUPD		
		2000	2003	2007
7478	Taps, cocks, valves and similar appliances, n.e.s.	-25.51	-16.91	-24.26
8213	Metal furniture, n.e.s.	64.95	73.90	21.05
8211	Convertible seats, parts	28.86	24.71	35.97
6523	Other 85% +cotton fabric <200g	10.02	14.19	36.09
6524	Other 85%+cotton fabric 200g+	20.96	37.56	45.76
6531	Fabric, synthetic filament, yarn	35.97	57.45	53.51
6552	Other knitted or crocheted fabrics	77.69	79.40	55.56
6974	Tables, kitchen, household articles, n.e.s.	52.70	61.14	57.83
8215	Furniture, nes, of wood	25.52	40.73	61.88
8458	Other garments, not knitted	57.04	56.13	71.76
8481	Leather apparel, accessories	50.31	68.07	72.11
8454	T-shirts, singlets and other vests, knitted or crocheted	75.80	83.87	81.85
8453	Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted	77.45	83.69	83.13
8131	Lamps, light fittings, n.e.s.	77.19	82.72	83.80

¹ By the term "critical sectors" we designate sectors that have a relevant weight on the national exports in both Italy and China (in other words where there is a significant world export overlapping). To identify the "critical sectors", we have selected all 4 digits products from the database SourceOECD (SITC Revision 3). We have then calculated the product export shares (product export value / national export value) for both countries. We have ranked the shares for China and Italy and calculated the cumulated shares. Finally, we have selected the sectors representing 80% of total national exports in the two above-calculated ranking lists, and identified the sectors of the ranking lists that are common to the two countries (Di Tommaso and Rubini, 2008).

SITC-3 Code	Commodity Description	RUPD		
		2000	2003	2007
8414	Trousers, bib and brace overalls, breeches and shorts, men's	75.56	83.65	85.51
8514	Other footwear, leather uppers	77.13	84.76	86.12
8512	Sports footwear	76.42	83.09	86.92
8415	Shirts	80.62	87.46	87.25
8426	Trousers, bib and brace overalls, breeches and shorts, women's	82.23	85.04	87.87
8421	Overcoats, other coats etc.	78.59	85.84	89.45
7434	Fans, cooker hoods with fan	76.72	88.07	90.95
8973	Gold, silver jewellery, ware	88.34	77.72	91.68
8423	Jackets and blazers, women's or girls', of textile materials, not knitted	90.84	94.11	92.60
8311	Handbags, n.e.s.	66.28	96.92	98.47
8462	Hosiery, etc. knitted	-2.55	16.68	n.a.

Source: Authors' elaboration based upon UNComtrade data (n.e.s.: not elsewhere specified).

In sum, the results shown in Table 3 allow highlighting what follows:

- 1a) In 2007, in 23 out of 25 sectors, price differentials are positive (Italian prices higher than Chinese ones).
- 1b) In most cases (19 sectors out of 25 in the same year), price differentials are high, i.e. above 50%. In 15 sectors, price differentials for 2007 are remarkably high, i.e. above 70%.
- 2) As regards the trend of RUPD over time, in 17 cases, RUPD remains high (more than 50%) across years. In 13 out of these 17, it remains always above 70%. In 13 cases, the RUPD shows a clear growing trend over time. In the remaining sectors, 9 show rather constant values, while only two exhibit a decrease.

Positive and remarkably high price differentials (above 70%) that remain so over time suggest that Italy and China are producing very "different" goods, vertically differentiated and, therefore, related to two different market segments. The high price differentials that characterise "Made in Italy" sectors highlight that consumers perceive substantial differences between Italian and Chinese products.

This could mean that the entrance of Chinese products on the global markets, that has characterised the beginning of the 21st century, does not seem to have had such a strong impact on "Made in Italy" products for two possible reasons: (1) Chinese products have immediately entered market segments that are qualitatively different from those in which Italy was already specialised since late 1990s; (2) the arrival of Chinese goods has coincided with (or has pushed to) the intra-industrial orientation of the Italian products towards market segments of different (and presumably higher) quality. The analysis of unit price differentials between products of the two respective countries highlighted the presence of discrepancies - very high, in some cases - between prices of the "Made in Italy" and "Made in China" goods.

The persistence of high price differentials between goods belonging to the very same disaggregated product category provides *ex post* important information on customers

perceived quality; in other words, they are markers of how "differently" a consumer has evaluated two apparently similar goods.

In several of the considered sectors, our results showed that price differentials are high over time and seem, therefore, to confirm that there is a quality differentiation between "Made in Italy" and "Made in China" goods. This happens in sectors (such as handbags, metal furniture, lamps, jewels, etc.), where the difference in quality is due to intangible features, such as design, fashion trends, brand, country of origin, etc. Persistently higher RUPD can therefore be considered a proxy - or even a signal - of higher intangible content of goods.

4. Implications for firm strategies and industrial policy

With respect to the "Made in Italy" case, three are the relevant concerns that both firms and regions should implement: innovation, intellectual property rights protection, and communication.

1. *Innovation.* The different quality of Italian productions, even if rooted within the old history of a firm and of a locality, depends on a continuous attention towards research, training and innovation. In this context, it is worth underlining the following two aspects.

(a) The first one is that the Italian industry, in particular the sectors typically included in the "Made in Italy" products, bases its innovative capacity also on the territorial systems. Product innovation, understood as the capacity to offer qualitatively different goods, even in mature sectors, still has a collective dimension in Italy. Consequently, the possibility to continue to offer "different" goods on markets depends on firm strategies, but also on industrial policy and its local dimension. In this framework, policies have to concentrate on the local engines of production and knowledge: firms and universities. The relevance of the relationship between universities and firms is intuitive; what is more complex is the equally relevant development of relations in the field of applied research: recently, Italy has experienced some success stories in this field, which should be encouraged also in the "Made in Italy" sectors.

(b) The second one deals with the qualitative features that in the previous sections we have included in the category of intangibles. The "qualitative difference" – and therefore the capacity to make price differentials sustainable over time with a country like China – also depends on the intangible content of Italian products. We refer to complex features, such as those that can differentiate qualitatively even mature products: the use of new generation materials, the design, the investment in research, training and innovation etc. In other words, the possibility to supply high quality products depends on the knowledge that is embedded in products, which is a function of the competences of firms and regions/localities. Other intangible factors are also relevant, such as firms'/regions' reputation, image or history that very often are not directly related to the production of a specific good, but are instead linked to the place where the good is produced. These are the intangible assets of a firm (*made by Armani*), but also of a region/locality (Made in Italy, Made in Tuscany, Made in Milan

etc.) the leveraging of which requires adequate public (policy) and private (firm strategy) actions.

2. *Intellectual property rights protection.* It is also worth underlining the importance of defending, on the creators' rights side, the tangible and intangible diversity and, therefore, the quality of products. In this field, there is a problem of protection of both firm innovation and the territorial knowledge and innovative capacity. This is a sensitive field of policy action that, in the case of Italy, should be tackled primarily by the government in the relevant international bodies (Di Tommaso, 2007). Within the European Union, this is not an easy endeavour, because, for example, on the issue of importation from Asian countries, Italy has a quite peculiar position as compared to other European countries (maybe except for France and part of Spain): many European governments represent the interests of producers and of consumers that, if not properly informed/educated, could optimise their purchase behaviour simply by buying poor quality goods, but noticeably less expensive. The relationship between quality and future exportation volume growth is mainly related to country's capacity to manage internationally the issue of intellectual property rights, also in the sectors that are typical to "Made in Italy". In general, we are dealing with one of the high-stake issues that are still unsolved on the contemporary markets and that explain why many high quality products should struggle to defend themselves from unfair competition. Furthermore, in the case of *knowledge-and-intangible-intensive* products, that are typical to "Made in Italy" category, the issue is even more complex, because of consumers' difficulty in realising the qualitative differences that bear on intangible attributes.

3. *Communication.* If it is true that Italian goods are "different", such a difference has to be perceived (in order to be properly evaluated) by consumers and firms. The information asymmetry between producers and consumers could, in fact, penalise those goods that are qualitatively more complex, which ends up in a competitive advantage for Chinese products. Preventing or countervailing such a situation involves, on the competitor country's side, adequate marketing strategies of firms, but also exportation promotion policies at national level; sustained communication between consumers and firms is a pre-requisite of the non-price-competitiveness that exported goods would be able to attain on international markets.

5. Final remarks

The above exercise of analysis calls for reflection upon the capacity and strategic commitment of firms and regions to supply "different" goods, investing on such tangible and intangible quality diversity in order to increase their market shares. In this context, it is important to scrutinise the relationship between price differentials trends, the products of the competing countries, and the volume of their exports. The fact of an economy being specialised, as in the case of Italy, in *knowledge-and-intangibles-intensive* goods, involves stimulating, through appropriate policies, firms' innovativeness, thus enabling them to supply high quality goods on international markets.

References

- Adler, P. S. (1989), When knowledge is the critical resource, knowledge management is the critical task, *IEEE Transactions on Engineering Management*, 36(2): 87 – 94.
- Baida, Z., Akkermans, H., and Gordijn, J. (2005), Service classification versus configuration, in *Proceedings of the Workshop on Product-Related Data in Information Systems (PRODIS 2005, in conjunction with Informatik 2005)*, Bonn, Germany, 22 September 2005 .
- Bielen, F. and Sempels, C. (2004), Proposition d'une échelle de mesure bidimensionnelle du concept d'intangibilité. *Recherche et Applications en Marketing*, 19(3): 21 - 44
- Corrêa, H. and Corrêa, C. (2005), Critical analysis of the product - service dichotomy in operations management. *Latin American Business Review*, 6(4): 1 – 22.
- Di Tommaso, M. R. (2008a) Knowledge-intensive productions in contemporary international industry: firm strategy and industrial policy perspectives, paper presented at the conference "Global issues: European Union in a global context", Bucharest University of Economics - ASE, Bucharest, 16 May, 2008.
- Di Tommaso, M. R. (2008b) Contemporary international competition in "knowledge-intensive industries": firm strategy and industrial policy perspectives. studying the case of "Made in Italy" and "Made in China", paper presented at the "Special Guests SCUT Conference", South China University of Technology, Canton, 28 April, 2008.
- Di Tommaso, M. R., and Rubini, L. (2007) Industrial Policy for "new" industries in "old" Europe: virtual cluster in genetics in Italy. *International Journal of Healthcare Technology and Management*, 1(1): 503 – 521.
- Di Tommaso, M. R., and Baradel, A. (2008) Manifattura cinese e manifattura italiana. Analisi empirica e implicazioni per la politica industriale, *L'industria - Rivista di economia e politica industriale*, 3, luglio - settembre, Bologna, Il Mulino: 405 – 432.
- Di Tommaso, M. R., Paci, D., and Schweitzer, S. O. (2005) The geography of intangibles. The case of the health industry. In: M. R. Di Tommaso and S. O. Schweitzer (eds.), "Health Policy and High-tech Industrial Development: Lessons from the Health Industry", Edward Elgar, Cheltenham, UK, Northampton, MA, pp. 173 – 205.
- Hayes, R. B., and Wheelwright, S. C. (1979), The dynamics of process - product life cycles. *Harvard Business Review*, 57(2): 127 – 136.
- Hill, P. (1999), Tangibles, intangibles and services: a new taxonomy for the classification of output. *Canadian Journal of Economics*, 32(2): 426 – 446.

- Klenoski, D. B., Gengler, C. E., and Mulvey, M. S. (1993), Understanding the factors influencing ski destination choice; a means-end analytic approach. *Journal of Leisure Research*, 25(4): 362 – 379.
- Langford, B. E., Cosenza, R. M. (1998), What is service/good analysis ? *Journal of Marketing Theory and Practice*, 6(1): 16 – 26.
- Laroche, M., Bergeron, J., and Goutaland, C. (2001), A three-dimensional scale of intangibility, *Journal of Service Research*, 4(1): 26 – 38.
- Lashley, C., and Taylor, S. (1998), Hospitality retail operations types and styles in the management of human resources, *Journal of Retailing and Consumer Services*, 5(3): 153 – 165.
- Levitt, T. (1981), Marketing intangible products and product intangibles. *Harvard Business Review*, 59(3), May - June: 94 – 102.
- Lusch, R. F., and Vargo, S. L. (2006), The service-dominant mindset, Conference on Services Sciences, Management and Engineering Conference: Education for the 21st Century, October, 2006, New York .
- Polito, T., and Watson, K. (2004), The content continuum: extending the Hayes & Wheelwright process - product diagonal to facilitate improvement of services. *Journal of American Academy of Business*, 4(1/2): 406 - 412.
- Poon, S. (1999), The nature of goods and internet commerce benefit: a preliminary study. *Proceedings of the 32nd Hawaii International Conference on System Sciences*, Volume 5: 5010 – 5017.
- Rubini, L. (with Di Tommaso, M. R., and Baradel, A.), *Export overlap between "Made in Italy" and "Made in China". Data analysis and industrial policy implications*. paper presented at the XI EUNIP (European Network on Industrial Policy) Conference, San Sebastian, September, 2008.
- Schmenner, R. W. (1986), How can service businesses survive and prosper ? *Sloan Management Review*, 27(3): 21 – 32.
- Schroiff, H.-W., and Arnold, D. (2003), Managing the brand - product continuum in global markets. *The Harvard Business School Colloquium on the Globalization of Markets* (March, 2003).
- Shostack, G. L. (1977), Breaking free from product marketing. *Journal of Marketing*, 41(2): 73 – 80.
- Vargo, S. L., and Lusch, R. F. (2008), From goods to service(s): Divergences and convergences of logics. *Industrial Marketing Management*, 37(3): 254 – 259.
- Webber, A. M. (1993), What's so new about the new economy. *Harvard Business Review*, 71(1): 24 – 42.
- Winsor, R. D., Sheth, J. N., and Manolis, C. (2004), Differentiating goods and services retailing using form and possession utilities. *Journal of Business Research*, 57(3): 249 – 25