



ISTITUTO DI STUDI E ANALISI ECONOMICA

**HOW INTENSE IS COMPETITION IN INTERNATIONAL
MARKETS OF TRADITIONAL GOODS?
THE CASE OF ITALIAN EXPORTERS**

by

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ABSTRACT(*)

Italian industry continues to specialise in traditional industries. This is a source of concern for some observers who argue that this kind of specialisation overexpose Italian manufacturing to the competition of low cost producers, especially those located in emerging economies. We verify how intense is the competitive pressure on Italian exporters of traditional goods through a synthetic measure of their market power. We make use of the coincidence of the concept of relative mark up (or Lerner index), as an indicator of market power, with that of elasticity of the residual demand curve. Our findings indicate that assertions as to the excessive exposure of the Italian specialised sectors (textile, apparel, footwear, leather, ceramics, wooden furniture) to the pricing policies of competitors are questionable. Over the period considered (the 80s' and the 90s') Italian exporters were able to practice mark ups over marginal cost in most of the products/markets we analysed. Only in a minority of cases Italian exporters showed no market power.

JEL classification: F14; L13; L60.

Keywords: market power, specialisation, international competition, export markets.

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NON TECHNICAL SUMMARY

Italian industry continues to present a strong specialisation in traditional sectors. This is a source of concern for some observers. The reasons for the perplexity are in two questions: *a)* why does Italy remain specialised in productions that generally pertain to backward stages of development?; *b)* Does not this specialisation in traditional sectors overexpose Italian industry to the pricing policies of competitors of emerging countries whose labour costs are a fraction of the Italian ones? On closer inspection, the two questions refer to distinct phenomena. The issue of specialisation concerns long run structural factors (technology, relative factor endowments, institutions, and so forth) affecting the comparative advantages of the country. The worry about excessive exposure to the competitive pressure of low cost competitors instead concerns short run factors influencing the market power of Italian exporters. Nevertheless short and long run considerations may be related. The picture of unchanged Italian specialisation is not completely accurate, for Italy's industrial output composition has evolved over time. The structural change involved a shift, within sectors, to more advanced segments of production characterised by better quality. This vertical movement helps explain why, contrary to the predictions of trade theory, traditional Italian products have not been displaced by the same goods exported by less developed countries specialised in qualitatively different segments of production. This consideration has implications also for the issue of market power. In general, traditional sectors, given their technological characteristics have highly competitive market structures. Furthermore the intensity of competition in these sectors may be heightened by the confrontation with industries able to practice more aggressive pricing policies because of their lower labour costs. However, since quality differentiation of products plays a role in shielding traditional Italian industry against displacement by low cost competitors in the long run, by the same token such differentiation may work in the short run by softening the intensity of competition by foreign industries and providing Italian firms with market power even in potentially highly competitive sectors. In the paper we seek to assess this latter issue by focusing on the main traditional industries in which Italian manufacturing is specialised (textiles, apparel, footwear, leather goods, ceramics, wooden furniture). The aim is to evaluate whether Italian exporting firms in these sectors have market power in the major destination countries. We use a methodology which determines the degree of market power by estimating the mark ups practised by Italian firms. Some studies in the industrial organisation literature (Baker and Bresnahan, 1988; Bresnahan, 1989) have proposed an indirect method for computing the mark up which circumvents the problems arising when direct estimation is attempted. This approach exploits the coincidence between the concept of relative mark up (or the Lerner index given by the difference between price and

marginal cost, relative to price) and that of the elasticity of the residual demand faced by the firm. This methodology has been latterly extended to international competition by Goldberg and Knetter (1999). We adapt this approach to our specific aims. Our findings indicate that assertions as to the excessive exposure of the specialised sectors of Italian industry (textiles, apparel, footwear, leather goods, ceramics, wooden furniture) to the pricing policies of competitors are questionable. Over the globalisation period we considered (the eighties and the nineties), Italian exporters of traditional products were not generally at the “mercy” of foreign competitors, not even those located in low cost economies. Quite the reverse: they were able to practice (geographically differentiated) mark ups over marginal costs in most destination markets.

QUANTO E' INTENSA LA COMPETIZIONE NEI MERCATI INTERNAZIONALI DI BENI TRADIZIONALI? IL CASO DEGLI ESPORTATORI ITALIANI

SINTESI

L'Italia mantiene un'intensa specializzazione nei cosiddetti settori tradizionali. Ciò è fonte di preoccupazione per alcuni osservatori in quanto questo tipo di specializzazione esporrebbe in misura eccessiva l'industria manifatturiera alla competizione dei produttori a basso costo, soprattutto quelli dei paesi emergenti. In questo lavoro si cerca di misurare l'intensità della pressione competitiva che fronteggiano gli esportatori italiani di beni tradizionali, attraverso una misura sintetica del loro potere di mercato. Si fa uso, in particolare, della coincidenza tra il concetto di mark up relativo (o indice di Lerner), in quanto indicatore di potere di mercato, e quello di elasticità della domanda residua. L'evidenza empirica mostra che l'asserzione circa una esposizione eccessiva dei settori di specializzazione dell'Italia (tessile, abbigliamento, calzature, prodotti in cuoio, ceramica, mobili in legno) alle politiche di prezzo dei competitori è, come minimo, discutibile. Nel periodo considerato (gli anni 80 e 90), gli esportatori italiani sono stati in grado di praticare mark up significativi rispetto ai costi marginali, in gran parte dei prodotti/mercati analizzati. Solo in una minoranza di casi gli esportatori italiani hanno evidenziato un potere di mercato nullo.

Classificazione JEL: F14; L13; L60.

Parole Chiave: Potere di mercato, specializzazione, concorrenza internazionale, mercati di esportazione.

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1. INTRODUCTION

Italian industry continues to specialise intensely in traditional sectors. This is a puzzle as well as a source of concern for some observers. The reasons for the perplexity can be summed up in two questions: *a)* why does a highly industrialised economy, like Italy, remain specialised in productions that generally pertain to more backward stages of development?; *b)* Does not this persistent specialisation in traditional sectors overexpose Italian industry to the pricing policies of competitors located in the emerging countries whose labour costs are a tiny fraction of the Italian ones?

On closer inspection, the two questions refer to distinct phenomena. The issue of specialisation concerns long run structural factors (technology, relative factor endowments, institutions, and so forth) affecting the comparative advantages of the country and its position in the international labour division. The worry about excessive exposure to the competitive pressure of low cost competitors instead concerns short run factors influencing the market power of Italian exporters. Nevertheless short and long run considerations may be related: international pressures for industry displacement, due to a loss of comparative advantage, should be accompanied by the zeroing of the market power of that industry; although the converse is not necessarily true (low market power is not invariably a symptom of comparative disadvantage), investigating the intensity of competition may shed light on the intensity of pressures for structural change as well.

The link between specialisation and degree of market power can be viewed from another perspective. The picture of unchanged Italian specialisation is not completely accurate, for Italy's industrial output composition has evolved over time. However, the change has not consisted solely in moving resources from declining to expanding sectors;¹ it has also involved a shift, within sectors, to more advanced segments of production characterised by better quality and higher unit values. This vertical movement helps explain why, contrary to the predictions of trade theory, traditional Italian products have not been displaced by the same goods exported by less developed countries specialised in qualitatively different segments of production.²

¹ Though the change in output composition was not in the direction predicted by specialisation theories: in the period of increasing globalisation – second half of the seventies, the eighties and the nineties – the expanding industries in Italy were mainly the traditional ones and the sectors producing investment goods for them, while the high-scale-economies and high-technology industries which used to account for an important share of output in the fifties and sixties generally contracted (see, Traù 2004).

² On the issue of quality differentiation of Italian traditional productions, see de Nardis and Traù (1999).

This consideration concerning the forces responsible for the “crystallisation” of specialisation in traditional productions has implications for the issue of market power. In general, traditional sectors, given their technological characteristics (low fixed costs and scarce relevance of scale economies and, hence, the smaller size of firms), have highly competitive market structures. Furthermore the intensity of competition in these sectors may be heightened by the confrontation with industries (e.g. those of the emerging economies) able to practice “more aggressive” pricing policies because of their lower labour costs. However, as quality differentiation of products plays a role in shielding traditional Italian industry against displacement by low cost competitors in the long run, by the same token it may work in the short run as well by softening the intensity of competition by foreign industries and providing Italian firms with market power even in potentially highly competitive sectors.

In what follows we seek to assess this latter issue by focusing on the main traditional industries in which Italian manufacturing is specialised (textiles, apparel, footwear, leather goods, ceramics, wooden furniture). The aim is to evaluate whether Italian exporting firms in these sectors have market power in the major destination countries, and if so, how substantial it is and how it varies in the different markets. We use a methodology which determines the degree of market power by estimating the mark ups practised by Italian firms in the destination countries of their foreign sales. As known, the mark up measures the capacity of a firm to set prices higher than marginal costs without running the risk of losing the market. Some studies in the industrial organisation literature (Baker and Bresnahan, 1988; Bresnahan, 1989) have proposed an indirect method for computing the mark up which circumvents the problems that arise when direct estimation is made of the difference between price and marginal cost (the difficulty of estimating the latter and of taking all the interactions between competing firms into account). This approach exploits the coincidence between the concept of relative mark up (or the Lerner index given by the difference between price and marginal cost, relative to price) and that of the elasticity of the residual demand faced by the firm. This methodology has been latterly extended to international competition by Goldberg and Knetter (1999), who study the market power of exporting firms in various destination countries, allowing for the possibility of mark-up geographical differentiation due to pricing-to-market policies.

We adapt this approach to our specific aims in this paper because it appears potentially fruitful in addressing aspects of the Italian case that have been long debated, but on the grounds of scant evidence.³ The paper is organised as

³ For other applications of this methodology to the Italian case see de Nardis and Pensa (2000) and Cucculelli (2002).

follows. Section 2 derives the relationship between relative mark up and residual demand elasticity in the case of two different groups of exporting firms (differentiated by nation) competing in third markets. Section 3 examines the cases in which there is perfect coincidence between the two concepts and when there is a close approximation. Section 4 illustrates the characteristics of the equation estimated, while section 5 singles out Italian exports of the main types of products manufactured in traditional sectors, their most important destination markets and the main competitors in those markets. On the basis of this information section 6 estimates the residual demand elasticities and tests the intensity of competition faced by Italian exporters for each product in each foreign market. Concluding remarks are in section 7.

2. THE MODEL IN THE CASE OF TWO GROUPS OF EXPORTERS

For the sake of simplicity, the relationship between mark up and residual demand elasticity is derived in the special case of two groups of exporters, one from country i and the other from country c , competing in a third market. Generalisation from two to many groups of competitors is straightforward.⁴ Firms in the same country exporting the same good are considered to be a single firm competing in world markets with foreign firms. This is possible if one assumes, along with Armington (1969) and Goldberg and Knetter (1999), that products are differentiated in consumer tastes only on the grounds of their country of origin: in other words, goods exported by firms in country i are considered perfect substitutes with each other (like goods exported by firms in country c); instead, they can be either perfect or imperfect substitutes (it is the task of empirical analysis to verify which is the case) with respect to the products exported by the group of firms in country c (the same obviously holds for firms in country c). Leaving the latter possibility open weakens the strict Armington assumption of imperfect substitution between products from different countries.

Given these characteristics, the demand faced by the two groups of exporters in countries i and c in a particular destination market can be expressed in inverse form (prices as function of quantities) as follows:

$$(1) \quad P^i = D^i(Q^i, P^c, Z)$$

⁴ The general case, referred to n exporters, is illustrated by Goldberg and Knetter (1999); in the present exposition, focused on the simplified case of only two groups of exporters, we partly depart from that presentation to highlight more explicitly the way the model is derived and the mechanisms leading to the identification/approximation of the relative mark up with the residual demand elasticity.

$$(2) \quad P^c = D^c(Q^c, P^i, Z)$$

Note that (1) and (2) are *ex-ante* equations, in the sense that they represent conjectured – not actual – demand functions supposed by each group of firms: in other words, they describe the demand curves which the two groups of exporters act as if they were facing. The distinction between actual and conjectured (or perceived) variables is crucial, as will become clear in the discussion. As to the arguments of (1) and (2), P^i and P^c are the prices denominated in the currency of the country of destination of the good exported respectively by countries i and c ; Q^i and Q^c are the quantities sold by the two source countries in the destination market; Z is a vector of the destination country's demand shifters (including growth and size of the market, the prices and costs of national producers in that market, etc).

Both groups of exporters maximise their profits in the destination market. For the group of firms in country i , profit (Π^i) is given by the difference between total revenue and costs expressed in the destination market currency:

$$\Pi^i = P^i Q^i - e^i C^i$$

where e^i represents the exchange rate of the currency of the destination market vis-à-vis the currency of the source country i (that is, units of currency of the destination market for one unit of currency of country i); C^i is the total cost of exporters in country i . Profit maximisation is given by the equality between marginal costs and perceived marginal revenue.⁵ Setting $\partial \Pi^i / \partial Q^i = 0$ and taking account of the demand functions (1) and (2), we obtain the first order condition⁶:

$$P^i = e^i MC^i - Q^i (\partial P^i / \partial Q^i + \partial D^i / \partial P^c \partial P^c / \partial P^i \partial P^i / \partial Q^i)$$

where $e^i MC^i$ is the marginal cost in the destination market currency of the exporters in country i : it describes the supply curve of firms of country i in the destination market. This expression can be written as:

⁵ Marginal revenue is not the actual amount but that perceived (or conjectured) by exporters, since it depends on the conduct (reaction to the “quantity” firms i choose to sell) of the competitor (exporters in country c); this conduct is unknown to the exporters of country i , which can only make conjectures about it.

⁶ Setting the first derivative of total profit (Π^i) with respect to quantity (Q^i) equal to zero, it follows that $P^i + Q^i (\partial P^i / \partial Q^i + \partial D^i / \partial P^c \partial P^c / \partial P^i \partial P^i / \partial Q^i) - e^i MC^i = 0$, from which we obtain the expression in the text.

$$(3) \quad P^i = e^i MC^i - Q^i [\partial P^i / \partial Q^i (1 + \partial D^i / \partial P^c \partial P^c / \partial P^i)]$$

from which we obtain the (perceived) relative mark up, or the (perceived) Lerner index L^i (Lerner, 1934) of exporters of country i expressed in terms of a conduct parameter and of the (reciprocal) elasticity of market demand:

$$(4) \quad L^i = (P^i - e^i MC^i) / P^i = -\varepsilon \theta^i$$

With non negative marginal costs, L^i is less than or equal to unity. As to the two terms in the right hand side of the expression (4):

$\varepsilon = Q^i / P^i \partial P^i / \partial Q^i$ is the market (inverse) demand elasticity coinciding with the reciprocal of the *own-price elasticity* (computed with quantity as function of price); since $\partial P^i / \partial Q^i \leq 0$, we have $0 \leq -\varepsilon$;

$\theta^i = 1 + \partial D^i / \partial P^c \partial P^c / \partial P^i$ is a conduct parameter given by unity plus a term $(\partial D^i / \partial P^c \partial P^c / \partial P^i)$ which measures the so called i -firms' conjectural variations, that is, the expectations of i -firms concerning the reaction of c -firms to decisions of changing price (through a change of its own quantity Q^i ; see Bresnahan, 1989). The term in brackets is composed of two parts: $\partial P^c / \partial P^i$, which measures what i -firms believe will be the competitors' behaviour when they change price (through quantity); $\partial D^i / \partial P^c$, which measures what i -firms do as result of those expectations. From this it follows that θ^i is a subjective parameter. In the absence of collusion between groups i and c , $-1 \leq (\partial D^i / \partial P^c \partial P^c / \partial P^i) \leq 0$ such that $0 \leq \theta^i \leq 1$.⁷

⁷ Intuitively, the negative sign of the term measuring conjectural variations, $\partial D^i / \partial P^c \partial P^c / \partial P^i$, reflects the correction a firm must make, when there is no collusion, to its price behaviour (indicated by the derivative $\partial D^i / \partial P^c \leq 0$) when it takes account of the supposed reaction of competitors (indicated by $0 \leq \partial P^c / \partial P^i$). Two limiting cases are those of the monopolistic and the price taking firm. The monopolistic firm has no competitors, so that the derivative $\partial P^c / \partial P^i = 0$, and the term measuring conjectural variations is zero as well ($\partial D^i / \partial P^c \partial P^c / \partial P^i = 0$). The price taking firm cannot autonomously decide to alter its price without exiting market or incurring a permanent profit loss; hence any decision envisaged by the firm must be completely reversed when it takes in account the (conjectured) consequences ($\partial P^c / \partial P^i = -\partial D^i / \partial P^c$); the term measuring conjectural variations in this case is equal to -1 (since $\partial D^i / \partial P^c \partial P^c / \partial P^i = -1$). Correspondingly, for monopolistic firm the conduct parameter $\theta^i = 1$; for price taking firms, $\theta^i = 0$.

The L^i index of relative mark-up can thus assume theoretical values in the range $0 \leq L^i \leq 1$.⁸ In general, three main cases can be distinguished.

- 1) *Perfect competition or price taking firm.* $L^i = 0$, i.e. price is equal to marginal cost, since either the inverse demand function elasticity $\varepsilon = 0$ (perfectly competitive market) or the conjectured conduct parameter $\theta^i = 0$ (i -firms are price taker).
- 2) *Monopoly.* $L^i = \varepsilon$; there are no competitors and $\theta^i = 1$. Since the monopolistic firm chooses to operate where the inverse demand curve is inelastic, we have $|\varepsilon| \leq 1$. From this it follows that in monopoly the maximum value that the mark up can take is 1, when the elasticity of market demand is unitary ($\varepsilon = -1$).⁹
- 3) *Imperfect competition.* $L^i = \varepsilon \theta^i$, where $0 < L^i < 1$; the relative mark-up lies between the extreme values of perfect competition and monopoly (with unitary demand elasticity) and depends both on the elasticity of the market (inverse) demand, ε , and on the (conjectured) strategic interaction with the c -firms (θ^i).

Existence of market power hence requires that both the conduct parameter and the market (inverse) demand elasticity be different from zero (so that $L^i > 0$).

It is apparent from the Lerner index formula that, for market structures more complex than the specific duopoly case considered for the sake of exposition, it is practically impossible to compute the relative mark up: marginal costs are not directly observable (left hand side of (4)) and estimation of the conduct parameters (right hand side of (4)) requires knowledge of an extremely large amount of data if the cross reactions of all competitors to the pricing decisions of firms i are to be inferred.

The alternative way to deal with these difficulties is to estimate (indirectly) the relative mark up through an appropriate summary statistics. The drawback to this approach is that it cannot be used to disentangle the market demand elasticity and the cross reactions of competitors. However, the possibility of obtaining a reliable measure of market power compensates for this loss of information. The summary statistics that approximate (and in several cases, identify with) the relative mark up is the elasticity of the inverse residual

⁸ Generalisation to the case of n competitors is straightforward; in the general case, expression (3) becomes $P^i = e^i MC^i - Q^i [\partial P^i / \partial Q^i (1 + \sum_c \partial D^i / \partial P^c \partial P^c / \partial P^i)]$ with $c=1 \dots n$ and $c \neq i$; the expression of the mark up remains formally the same, with $\theta^i = 1 + \sum_c \partial D^i / \partial P^c \partial P^c / \partial P^i$.

⁹ We are analysing the inverse demand function. Therefore, saying that the monopolist operates on the inelastic part of the inverse demand is equivalent to saying that it operates in the elastic part of the demand normally expressed (quantity function of price and $1/|\varepsilon| \geq 1$).

demand function faced by a firm or a group of firms (see Baker and Bresnahan, 1988, Bresnahan, 1989, Goldberg and Knetter, 1999).

The residual demand faced by the group of firms of country i is obtained by solving the profit maximisation problem of the c -country group of competing firms. From profit maximisation of these exporters – with profit given by $\Pi^c = P^c Q^c - e^c C^c$ – we obtain:

$$(5) \quad P^c = e^c MC^c - Q^c \left[\frac{\partial P^c}{\partial Q^c} \left(1 + \frac{\partial D^c}{\partial P^i} \frac{\partial P^i}{\partial P^c} \right) \right]$$

where $e^c MC^c$ is the marginal cost of c -firms expressed in the currency of the destination country and describing the competitors' supply curve in the destination market. In general, the marginal cost of competing exporters (MC^c) depends on the quantity produced/exported (Q^c) and on input costs (W^c). Moreover, from (2) it follows that the derivative $\frac{\partial P^c}{\partial Q^c}$ is a function of the quantity exported (Q^c), of the price made by i -firms (P^i) and of the demand shifters of the destination market (Z). The former expression is hence written as:

$$(6) \quad P^c = e^c MC^c(Q^c, W^c) - Q^c \frac{\partial P^c}{\partial Q^c}(Q^c, P^i, Z) \theta^c$$

$$\text{with } \theta^c = 1 + \frac{\partial D^c}{\partial P^i} \frac{\partial P^i}{\partial P^c}.$$

Solving the system of two simultaneous equations represented by the demand for and supply of the good of c -firms (equations (2) e (6)) and substituting in (6) the value of Q^c obtained from (2) yields a single reduced-form equation where the equilibrium price (clearing the market) is a function of the demand shifters (Z), of the c -firms cost shifters denominated in the currency of the destination country ($e^c W^c$), of the price made by i -firms (P^i), of the conduct parameter conjectured by c -firms, θ^c . Moreover, since P^i depends on Q^i , P^c and Z (equation (1)), if the common variables are grouped together, (6) can be rewritten as follows:

$$(7) \quad P^{c*} = P^{c*}(Q^i, e^c W^c, Z; \theta^c)$$

which is a partial reduced form, since the right-hand-side variables are all exogenous, with the only exception of Q^i . From this expression it follows that the competitors' equilibrium price, P^{c*} , can vary as a consequence of changes in both their marginal costs (affecting P^c through the supply curve) and the quantity decisions of i -firms (Q^i).

Substituting P^{c*} in the demand function of the group of exporters in country i (equation (1)), we finally obtain the residual demand faced by the i -firms in the

relevant destination market. This is the demand actually faced by i -exporters once the competitors have reacted – taking account of their cost (and hence supply) functions – to their pricing policy. The residual demand for firms i is given by:

$$(8) \quad P^i = D_{\text{res}}^i(Q^i, P^{c*}, Z)$$

Or, considering the variables affecting P^{c*} and grouping common terms, by:

$$(9) \quad P^i = D_{\text{res}}^i(Q^i, e^c W^c, Z; \theta^c)$$

The (inverse) residual demand for the good sold by the i -exporters hence depends on three kinds of variables: the own quantity exported by i -firms (Q^i), the cost-shifter variables of competitors ($e^c W^c$) and the demand-shifter variables of the destination market (Z). The slope of the residual demand coincides with the slope actually faced by the group of i -exporters, having taken into account the interaction with competing firms in the same destination market (parameter θ^c).

The elasticity of price with respect to quantity, computed from (8), is given by:

$$(10') \quad \eta^i = Q^i/P^i \partial P^i/\partial Q^i = Q^i/P^i (\partial P^i/\partial Q^i + \partial D^i/\partial P^{c*} \partial P^{c*}/\partial Q^i)$$

and, on the grounds of (9), by:

$$(10'') \quad \eta^i = Q^i/P^i \partial P^i/\partial Q^i = Q^i/P^i (\partial D_{\text{res}}^i/\partial Q^i)$$

since $\partial P^{c*}/\partial Q^i = \partial P^{c*}/\partial P^i \partial P^i/\partial Q^i$ (10') can be also written as

$$(11) \quad \eta^i = Q^i/P^i (\partial P^i/\partial Q^i + \partial D^i/\partial P^{c*} \partial P^{c*}/\partial P^i \partial P^i/\partial Q^i)$$

and in compact form as:

$$(12) \quad \eta^i = \varepsilon \theta^{i*}$$

where ε is the same market (inverse) demand elasticity that we saw in the Lerner index (equation (4)), while $\theta^{i*} = 1 + \partial D^i/\partial Q P^{c*} \partial P^{c*}/\partial P^i$ is the reaction function of competitors: it measures the actual conduct parameter which depends on the

actual (equilibrium) reactions of the competitors to the pricing policies of the i -exporters.¹⁰

Comparing the formula of the Lerner index (equation (4)) with that of the elasticity of the residual demand (equation (12)) shows that the latter, considered in absolute value, coincides with the relative mark up, $|\eta^i| = L^i$, when $\theta^{i*} = \theta^i$, that is, when the demand curve actually faced by the i -exporters (residual demand) coincides with the (*ex-ante*) demand conjectured by them (and described by equation (1)).

3. LERNER INDEX AND RESIDUAL DEMAND ELASTICITY

In general, firms in Consistent Conjectures Equilibrium (see Bresnahan, 1981) have the relative mark up given by (12). For these firms there is no difference between the residual demand curve and the demand curve which they act as if they were facing: their conjectures are consistent in the sense that conjectural variations coincide with the actual ones so that $\theta^i = \theta^{i*}$. For these firms there holds a direct relationship (actually, an identification) between residual inverse demand elasticity (in absolute value) and relative mark up. Baker and Bresnahan (1988) show the cases in which Consistent Conjectures Equilibrium can be safely assumed. There are essentially four of these cases: 1) perfect competition; 2) oligopoly with a firm that behaves as a quantity leader (Stackelberg leadership); 3) dominant firm with a fringe of smaller price taker competitors; 4) monopolistic competition with product differentiation.

Under perfect competition (case 1), price is exogenous for the individual firm: the elasticity of the inverse residual demand is zero (flat demand) and so is the relative mark up (price equal to marginal cost). In cases 2) and 3), where the firm, either the Stackelberg leader or the one dominant on a fringe of smaller producers, knows that the competitors' supply curves affect the elasticity of the demand that it faces and behaves accordingly: the distinction between actual and conjectured demand vanishes. Finally, in case 4) of monopolistic competition the firm has, in the short run, a market power due to product differentiation, so that, in this case too, the distinction between actual and conjectured demand tends to disappear: when fixing the prices of its products (poor substitutes in the

¹⁰ Also in this case generalisation from duopoly to n competitors is straightforward; in the general case of n competitors, expression (11) becomes $\eta^i = Q^i/P^i (\partial P^i/\partial Q^i + \sum_{c^*} \partial D^i/\partial P^{c^*} \partial P^{c^*}/\partial P^i \partial P^i/\partial Q^i)$ with $c^* = 1 \dots n$ and $c^* \neq i$; expression (12) remains formally the same, except that now the reaction function, or actual conduct parameter, is $\theta^{i*} = 1 + \sum_{c^*} \partial D^i/\partial P^{c^*} \partial P^{c^*}/\partial P^i$.

short run with those of the competitors), the firm does not consider the strategic interaction with the other firms. In this case, the relationship between the Lerner index and residual demand elasticity is not one-to-one, but remains close.

It is worth adding that monopolistic competition is probably the relevant case for subsequent analysis. It is rather difficult to think that Italian exporters of textiles, clothing, furniture etc, have monopoly power in foreign markets; it is equally difficult to imagine these markets as having an oligopolistic structure (like, for example, the auto sector). It follows that if Italian exporters of traditional goods do have some market power, this is most probably due to product differentiation (through quality) and monopolistic competition. Consequently, the following empirical analysis amounts to testing the null hypothesis of price taking behaviour by Italian exporters (flat residual demand curve) against the alternative of some market power (negatively sloped residual demand curve) springing from product (qualitative) differentiation.

Before conducting the residual demand estimation, a couple of further considerations are in order. The estimate of the mark up in each destination market implies the possibility that this varies according to the country in which exports are sold. This reflects the pricing-to-market policies made possible by the different market powers of exporters in different countries. However, the elasticity of residual demand $|\eta^i|$ provides only a summary estimate of the mark up and does not enable one to check whether geographical differences are due to different elasticities of demand in the various markets (ε) or to different interactions with competitors in those markets (θ^i). Yet if preferences of consumers were homothetic across different destinations, the demand elasticity (ε) could be assumed to be uniform across countries and any mark up geographic variation would end up by depending exclusively on different exporters' market powers vis-à-vis competitors in the various countries. The assumption of homothetic preferences (same ε) can be plausibly adopted if the destination markets are similar, which is most likely to be the case when destination countries are characterised by not too distant levels of development (e.g. the European Union countries or the industrialised economies). This is precisely what occurs in our subsequent empirical analysis.

Finally, a necessary condition in order to be able to estimate the residual demand elasticity in the various destination markets is that there must exist specific shocks shifting the supply curve only and uniquely in those markets. Since the supply curves in the various markets coincide with marginal costs curves denominated in the currency of the destination country, exchange rates are typically a cause of specific shocks: variations in the exchange rate of the source country vis-à-vis a particular destination country move the supply curve of the

source country only and uniquely in that destination market; analogously, variations in the bilateral exchange rates of the competitors vis-à-vis the same destination country shift their supply curves only and uniquely in that market.

4. ESTIMATION OF THE RESIDUAL DEMAND ELASTICITY

The residual demand curve faced by Italian exporters – denoted with i – in the various destination markets is estimated in double-log form, so that the coefficients can be interpreted as elasticity. The estimating equation takes the following general form:

$$(13) \quad \ln P_{m,t}^i = \lambda_m + \eta_m \ln Q_{m,t}^i + \alpha'_m \ln Z_{m,t} + \beta'_m \ln W_{m,t}^n + u_{m,t}$$

where $P_{m,t}^i$ and $Q_{m,t}^i$ are respectively the price and the quantity of the Italian product exported to a given country (m), with price expressed in destination currency units; $Z_{m,t}$ is the vector of demand shifter for the destination market (consumer price, real consumption expenditures or real GDP of the country m); $W_{m,t}^n$ is the vector of cost shifters for the (c) competitors faced by the Italian exporters in that particular destination market (prices, wages and other input costs of competitors denominated in the currency of the destination country); η_m is the residual demand elasticity facing the Italian group of exporters in the destination country; α'_m , β'_m are the vectors of parameters to be estimated, the subscript m indexes a specific market defined as a destination-product pair; $u_{m,t}$ is an iid error term.

The cost shifters representing the supply curve for the c competitors can be further decomposed to distinguish a component expressed in the competitor's currency moving equally across all destinations, and a component represented by the competitor country's exchange rate vis-à-vis the destination market that varies according to the destination. Bilateral exchange rates come to play a role as market specific cost shifters since they diversify the costs (shift the supply curve) of competitors in the various destinations. The previous equation becomes:

$$(14) \quad \ln P_{m,t}^i = \lambda_m + \eta_m \ln Q_{m,t}^i + \alpha'_m \ln Z_{m,t} + \gamma'_m \ln E_{m,t}^c + \delta'_m C_{m,t}^c + u_{m,t}$$

$E_{m,t}^c$ is the vector of the destination country's exchange rate vis-à-vis the competitor countries; $C_{m,t}^c$ is the vector of the competitors' labour costs denominated in their own currency. The variability of exchange rates moves the relative costs of exporters in each destination, even when wages in an exporting country have not moved independently from other countries' wages. Whenever

possible in our analysis we use the labour cost of the relevant sector as a cost shifter; when no information about costs at sector level is available, we use manufacturing labour cost.

The parameter relevant for analysis is the demand elasticity η_m , which measures the intensity of the market power of Italian exporters in the various destination countries. An elasticity not significantly different from zero denotes a market structure close to perfect competition: Italian exporters face perfectly elastic residual demand curves and their prices depend not on the quantity that they decide to sell but on the pricing policies (the costs) of competitors. The higher the absolute value of η (up to the theoretic limit value $|\eta_m| = 1$), the greater the capacity of Italian exporters to set price over marginal cost without running the risk of exiting the market. When η_m is very low or not statistically different from zero, the parameters β'_m (multiplying the vector of cost shifters) are expected to be significant, signalling power by competitors over the pricing decisions of Italian exporters. When η_m is different from zero (and negative), the estimated parameters β'_m may or may not be significant. In the former case, the market power of Italian exporters is restricted by the competitors' strategy; in the latter case, the reaction of competitors does not significantly restrict the pricing policy of Italian exporters.

A final remark concerns the quantity $Q^i_{m,t}$, which is affected by the same variables that influence $P^i_{m,t}$. It is consequently not exogenous and must be treated with appropriate instruments. The latter are basically the cost shifters for the Italian exporters (domestic labour cost and bilateral exchange rates of Italy vis-à-vis the destination country); they are appropriate since they are related to the variable, show sufficient variability in time and space (particularly the exchange rate), and do not enter other parts of the equation.

5. TIME SPAN, PRODUCTS, MARKETS, COMPETITORS

To estimate the market power of Italian exporters in traditional industries we had to appropriately delimit the field of analysis as regards the time span and the selection of goods, destination markets, competitors.

As far as the period of estimation is concerned, the constraints were the availability of (annual) information on elementary products and sufficient flexibility of exchange rates, the latter being necessary to allow for the possibility of supply curve shifting of competitors in different markets and to work out the problem of instrumentation of endogenous quantities of Italian exporters. Data availability dictated the starting period, which was 1977.

Exchange rate flexibility conditioned the final year, which was 1998: many destinations of Italian products were Eurozone economies, with the main competitors being represented by other Eurozone exporters, so that 1998 was the last year in which flexibility of the Italian exchange rate and of the other European currencies could be detected.

When choosing products, destinations and competitors, we adopted the criterion of quantitative relevance: we selected the (quantitatively) most important products sold by Italian exporters in the most important destination markets while considering the main competitors against Italian firms. Specifically, we focused on six traditional industries in which Italian exporters have strong and persistent comparative advantages: textiles (sector 651 in the SITC REV 2 classification), apparel (sector 84), footwear (85), leather goods (61), ceramics (66) and wooden furniture (82). Within each of these industries we chose one or two products, at the five-digit disaggregation, of which the largest amounts were exported in the years 1985, 1990, 1995, 1998.¹¹

Considered on this basis were, in the cases of the footwear and ceramics industries, products which accounted for more than 90% of their total exports (table 1). For the footwear sector we focused on footwear with leather soles and uppers (85102) and footwear with rubber soles and uppers (85101) which accounted for 88% and 11% respectively of all footwear sector exports during the sample period. In the case of ceramics we selected glazed ceramics (66245, 81% of exports by the sector), and unglazed ceramics (66244, 13%).

Chosen as regards the wooden furniture industry were chairs and seats (82111), these being, with a weight of 34%, the sector's most important products. The apparel, textiles and leather goods sectors were much more fragmented. By far the leading product in the apparel sector was panty hose (84631), although it represented only 5% of total exports by the industry; other 5-digit products in this sector were marginal. The situation was similar in the case of the textiles sector, whose most important product was non-textured yarn (65142), which accounted for 3% of total exports. In the leather sector we selected goat and skin leather (61161), which represented 2% of the sector's foreign sales.

¹¹ The source of trade data at the five digit level is Comtrade Union Nations Rev 2. Export prices in each destination market are unit values denominated in the exporter's currency, net of transportation, insurance and tariffs. Values and quantities exported in each destination are used to construct unit value measures. Exchange rates, consumption, consumer price are from the IMF International Financial Statistics. Labour costs at sector level are from the Bureau Labour Statistics; likewise hourly compensation costs for production workers in manufacturing industries.

We then chose the most important destinations for each product (table 1). Considering the same years as before (1985, 1990, 1995, 1998), we focused on the first three destination markets, which generally covered about 50% of the exports of the products selected. France and Germany were invariably present among the main destinations of Italian exports. Other leading destinations were, in order of importance, the United States, Spain and the United Kingdom. The US was the only significant extra-European destination in the sample period, being an important market for glazed and unglazed ceramics, chairs and seats, and footwear.

Table 1 - MAIN EXPORTS OF ITALIAN (TRADITIONAL) PRODUCTS AND DESTINATION MARKETS

Sectors	Main products	Main destination markets	Share of exports in each destination market
Ceramics	Unglazed ceramics (11% of ceramics exports)	Germany France United States	30 15 5
	Glazed ceramics (81% of ceramics exports)	Germany France United States	24 16 11
Wooden furniture	Chairs and seats (34% of wooden furniture exports)	France Germany United States	21 18 17
	Footwear with soles and upper of rubber (11% of footwear exports)	Germany France United States	20 18 11
Footwear	Footwear with soles of leather (88% of footwear exports)	Germany United States France	23 17 12
	Goat and skin leather (2% of leather exports)	Germany Spain France	21 14 11
Leather	Yarn on textured (3% of textile exports)	France Germany United Kingdom	22 16 9
	Panty hose (5% of apparel exports)	Germany France Spain	19 14 8
Textile			
Apparel			

Source: Comtrade (United Nation)

Once products and destinations had been chosen, the final step was to identify the main competitors that could potentially restrict the Italian exporters' ability to set prices autonomously. For each product in each market we picked the exporters with the highest market shares in the four years considered, finding that, in the case of almost all the products/destinations selected, Italian exporters had larger market shares than their competitors (see tables 2a-2f). The most striking cases of very large Italian shares were 67% of unglazed ceramics in Germany, 65% of glazed ceramics in Germany and France, 79% of footwear with rubber soles and uppers in France, and 59% of footwear with leather soles and uppers in the same country, 72% of panty hose in Spain and 53% of the same product in France, 56% of wooden seats and chairs in France.

Italian market shares were lower than those of one or more competitors in the cases of unglazed ceramics in France, wooden seats and chairs in Germany, footwear with rubber soles and uppers and footwear with leather soles and uppers in the US, non-textured yarn in Germany, France and the UK, goat and skin leather in Germany, France and Spain.

Many of the competitors against Italian exporters were from industrialised countries. Specifically, they were from France (in the German market for glazed and unglazed ceramics, for wooden seats and chairs and for footwear with rubber soles and uppers, in the Spanish market for panty hose), from Germany (in the French market for glazed and unglazed ceramics, for wooden seats and chairs and for non-textured yarn, in the US for unglazed ceramics, in the UK for non-textured yarn) the Netherlands (in the German and French markets for unglazed ceramics and non-textured yarn, in the UK for non-textured yarn), Belgium (in the French market for wooden seats and chairs and for unglazed ceramics), Austria (in The German and French markets for panty hose), Switzerland (in Germany for non-textured yarn), Canada (in the US market for wooden seats and chairs) and Japan (in the US for glazed and unglazed ceramics).

Competitors from catching up European economies were important as well, as those from Spain (in the German market for glazed ceramics and for footwear with rubber soles and uppers, in the French and the US markets for glazed ceramics) and Portugal (in Germany for footwear with leather soles and for panty hose, in France for footwear with rubber soles and uppers, in Spain for panty hose).

Table 2a - CERAMICS

Market shares (on the imports of destination markets) of Italian exporters and main competitors: Unglazed ceramics			Market shares (on the imports of destination markets) of Italian exporters and main competitors: Glazed ceramics		
Destination markets	Exporters	Market shares: average (85/90/95/98)	Destination markets	Exporters	Market shares: average (85/90/95/98)
Germany	Italy	67	Germany	Italy	65
	Netherlands	8		France	12
	France	10		Spain	9
France	Italy	15	France	Italy	65
	Germany	66		Germany	21
	Spain	14		Spain	9
	Netherlands	8			
	Belgium	5			
United States	Italy	29	United States	Italy	47
	Germany	15		Japan	19
	Japan	21		Spain	9

Table 2b - WOODEN FURNITURE

Market shares (on the imports of destination markets) of Italian exporters and main competitors: Seats and chairs		
Destination markets	Exporters	Market shares: average (85/90/95/98)
Germany	Italy	25
	Poland	27.5
	France	4.5
France	Italy	56
	Germany	12
	Belgium	15
United States	Italy	21
	Canada	15
	Mexico	15

Competition from the emerging countries was detected in the US market (China and Korea for footwear with rubber soles and uppers; Korea and Brazil for footwear with leather soles and uppers; Mexico for wooden seats and chairs), in Germany (China and Vietnam for footwear with rubber soles and uppers; India and Pakistan for goat and skin leather; Poland for seats and chairs, Slovenia for panty hose), in France (Korea and China for footwear with rubber soles and uppers; Korea for footwear with leather soles and uppers; India, Bangladesh and Pakistan for goat and skin leather; Romania for panty hose), in Spain (India and Pakistan for goat and skin leather).

Interestingly, in the goat and skin leather sector the only competitors for Italian exporters were from emerging economies in all the three markets selected. Moreover, China in the US (rubber footwear), India in France, Germany and Spain (goat and skin leather), Pakistan in Germany and Spain (goat and skin leather), Korea and Brazil in the US (leather footwear) used to have larger market shares than did Italy.

Table 2c - FOOTWEAR

Market shares (on the imports of destination markets) of Italian exporters and main competitors: Footwear with soles and upper in rubber			Market shares (on the imports of destination markets) of Italian exporters and main competitors: Footwear with soles of leather		
Destination markets	Exporters	Market shares: average (85/90/95/98)	Destination markets	Exporters	Market shares: average (85/90/95/98)
Germany	Italy	27	Germany	Italy	32
	China	23		Spain	8.5
	France	5		Portugal	11.5
	Vietnam	13			
France	Italy	79	France	Italy	59
	Korea	3		Spain	7
	China	2		Portugal	7
				Korea	5
United States	Italy	6	United States	Italy	15
	Korea	7		Korea	27.5
	China	22		Brazil	17

Table 2d - APPAREL

Table 2e - TEXTILE

Market shares (on the imports of destination markets) of Italian exporters and main competitors: Panty hose			Market shares (on the imports of destination markets) of Italian exporters and main competitors: Yarn non-textured		
Destination markets	Exporters	Market shares: average (85/90/95/98)	Destination Markets	Exporters	Market shares: average (85/90/95/98)
Germany	Italy	39	Germany	Italy	10
	Slovenia	10		Netherlands	21
	Austria	9		Switzerland	11
	Portugal	7		United Kingdom	11
France	Italy	53	France	Italia	18
	Romania	19		Netherlands	8
	Austria	6		Germany	27
Spain	Italy	72	United Kingdom	Italy	12
	France	15		Netherlands	9
	Portugal	5		Germany	20
				United States	14

Table 2f - LEATHER

Market shares (on the imports of destination markets) of Italian exporters and main competitors: Goat and skin leather		
Destination markets	Exporters	Market shares: average (85/90/95/98)
Germany	Italy	25
	India	31
	Pakistan	33
France	Italy	21
	India	32
	Bangladesh	11
	Pakistan	11
Spain	Italy	15
	India	24
	Pakistan	30

6. RESULTS OF THE ESTIMATIONS

Equation (14) was estimated in log form. The vector of demand shifters includes the consumption expenditure and consumer/wholesale prices of each destination market. The vector of cost shifters contains the exchange rate between competitor and destination country and labour costs of competitors; we used sector labour costs when available, and manufacturing labour cost otherwise. However, in many cases we found that labour cost indices had scant explanatory power, probably because the variation of these indices in the sample period was rather limited compared to that of exchange rates; to save on degrees of freedom, labour cost indices were dropped from the specification in these cases and only exchange rates were left. In some destination countries, where Italian market power is high, we found that even the exchange rate had no explanatory power, so we dropped it from the specification in these cases. The list of instruments includes, in addition to the exogenous variables in each estimating equation, the exchange rate of Italy vis-à-vis each destination market and the Italian labour cost.

A separate estimating equation was specified for each destination market using instrumental variables (IV); the single equation results were quite precise for most destination markets. However, since decisions on differently pricing the same product in different markets were likely to be taken non-independently by exporters, to increase efficiency we jointly estimated the individual equations to obtain more precise parameter estimates. Specifically, to correct the simultaneity bias we estimated the system by three stage least squares (3SLS) considering simultaneously the exports of each product in the relevant destination markets. The results were comparable, with some exceptions, to the ones obtained by separate estimation of the individual equations. This was probably due to the fact that in most cases competitors differ for the same product in different markets. This is particularly the case of goods sold in France and Germany on the one hand, and the United States on the other: we generally found that Italian exporters face different competitors in the US and European destinations. Since there are relatively few common variables in the system of equations, the joint estimate does not greatly increase the efficiency. However, in what follows we refer mainly to 3SLS estimates since these allow for full control of any simultaneity in the process of setting prices of products in different markets.

The empirical results show that the market power of Italian exporting firms, signalled by a statistically significant negative value of the parameter η measuring the residual demand elasticity, could be detected in most destination markets (tabs. 3a, 3b and 4). We analysed twenty-two products/destination markets. Italian exporting firms had significant market power (more or less

Table 3a - RESULTS OF THE SEPARATE IV ESTIMATES OF THE MARKET POWER OF ITALIAN EXPORTERS

Product	Destination market	Constant	Elasticity of demand	Consumption of the destination market	Consumer prices of the destination market	Exchange rate of the first competitor	Labour cost of the first competitor	Exchange rate of the second competitor	Labour cost of the second competitor	Exchange rate of the third competitor	Labour cost of the third competitor	R-squared	Durbin-Watson
Footwear with soles in leather	France	3.6	-0.9	-1.2	3.5	-0.4	0.8	-0.4		0.06	-0.56	0.95	1.97
	Germany	-1	0.39		1.33	0.55	-0.64	-0.3				0.86	1.6
	United States	-5.1	-0.66		5.8		-1.35					0.95	1.7
Footwear with soles and upper in rubber	France	1.5	-0.4		1.2	0.1		-0.2				0.91	1.7
	United States	9.3	-0.8									0.92	1.7
Unglazed Ceramics	France	-15.3	-0.22	1.07			2.54					0.93	1.97
	Germany	-16.5	-0.12		2.5	-0.8	1.3	4.1				0.94	1.98
	United States	-12.6	-0.3	1.8								0.6	1.7
Glazed Ceramics	France	6.2	-0.7	0.9				0.7				0.96	1.7
	Germany	-2.2	-0.3		0.7				0.65			0.67	1.7
	United States	-0.5	-0.05	0.2		0		0.1	-0.1			0.5	2.3
Seats and Chairs	France	6.2	-0.6			3.1						0.87	1.9
	Germany	-2.7	-0.1		1.4	0.4						0.96	1.6
	United States	-9.9	-0.3	1.9		1.1						0.86	1.45
Panty hose	Germany	-11.4	-1	2.1		-6.3						0.81	3.2
	Spain	-9.2	-0.6	2.1		-2.94	2.01	0.6				0.5	1.4
Goat and skin leather	France	5.3	-0.5		1	1.5		1.9		-2.5		0.76	1.9
	Germany	-0.6	0	1.2		0.8						0.9	2.3
	Spain	-12.6	-0.7	2.8		-3.5		2.1				0.6	1.5
Yarn non textured	France	2.5	-0.7	0.8		0.45		0.5				0.86	1.5
	Germany	-5.6	0	1.4		0.2						0.94	1.8
	United Kingdom	8.1	0		1.2	10.1		-9.5	-2.9			0.94	2.2

Significant estimates at 99% of probability are in bold characters. Period of estimation: 1977-98.

Table 3b - RESULTS OF THE JOINT 3SLS ESTIMATES OF THE MARKET POWER OF ITALIAN EXPORTERS

Product	Destination market	Constant	Elasticity of demand	Consumption of the destination market	Consumer prices of the destination market	Exchange rate of the first competitor	Labour cost of the first competitor	Exchange rate of the second competitor	Labour cost of the second competitor	Exchange rate of the third competitor	R-squared	Durbin-Watson
Footwear with soles in leather	France	21.8	-1	1		0.9	-1.6				0.72	1.7
	Germany	-2.5	0.6		1.4	0.1	-0.8	-0.2			0.8	2.2
	United States	8.6	-0.9	0.5							0.7	1.8
Footwear with soles and upper in rubber	France	-1.3	-0.2		1.4	0.2					0.81	1.7
	United States	9.1	-0.8								0.92	1.7
Unglazed Ceramics	France	-10.8	-0.2	1.5							0.91	1.95
	Germany	-12.7	-0.1		1.7	-1.3	1.1	-0.6			0.76	1.96
	United States	-13.7	-0.3	2							0.71	1.7
Glazed Ceramics	France	5.3	-0.6	0.9		0.7					0.96	1.8
	Germany	0.2	-0.3	0.3			0.5				0.76	1.9
	United States	-0.2	0.01			0.1					0.7	1.8
Seats and Chairs	France	6.9	-0.5			2.1					0.76	1.9
	Germany	-3.6	-0.2		2	0.5					0.97	3.3
	United States	-8.6	-0.3	1.7							0.88	1.9
Panty hose	Germany	10.6	-0.8	1.7					-2.2		0.86	2.84
	Spain	-1.3	-0.2	0.5			1.3				0.94	1.44
Goat and skin leather	France	6.4	-0.9		1.3	1.9		-2.5		1,7	0.8	2.2
	Germany	-18.1	-0.5	5.2						1,8	0.94	3.1
	Spain	-18	-0.8	3.3				3.8		-5	0.79	1.7
Yarn non textured	France	0.4	-0.6	1.1		0.7					0.52	1.7
	Germany	-1.4	-0.1	0.8		-0.05					0.93	1.6
	United Kingdom	7.4	-0.04		1	10.6		-9.9	-2.4		0.87	2.2

Significant estimates at 99% of probability in bold characters; significant estimates at 95% of probability in italic characters. Period of estimation: 1977-98.

Table 4 - MARKET POWER OF ITALIAN EXPORTERS¹

Sector	Products	Destination markets	Market power	Influencing Competitors
Footwear	Footwear with soles in laether	Germany France United States	No market power 1 0.9	Spain Spain -
	Footwear with soles and upper in rubber	United States France	0.8 No market power	- China
Ceramics	Unglazed Ceramics	Germany France United States	0.1 0.2 0.3	Netherl. France - -
	Glazed Ceramics	Germany France United States	0.3 0.6 No market power	Spain Spain Spain
Wooden furniture	Seats and chairs	Germany France United States	0.2 0.5 0.3	France Germany -
Apparel	Panty hose	Germany Spain	0.8* 0.2*	Austria France
Leather	Goat and skin leather	Germany France Spain	0.5 0.9 0.8	India India Bang. Pakist. -
Textile	Yarn non textured	Germany France United Kingdom	0.1 0.6 No market power	- United Kingdom Germany Netherl

¹Market power is given by the elasticity of the residual demand (taken with positive sign) estimated by 3SLS (see table 3b), significant at 99% of probability, except in case (*) when it is significant at 95%; the theoretical value of such elasticity varies within the range 0-1.

relevant) in eighteen of them; in six products/destinations, market power was completely unaffected by competitors' cost shifters, so that they were unable to influence Italian firms' price strategies.

In the remaining twelve cases, the capacity of Italian exporters to set prices above marginal costs was variable, sometimes being very high but limited by the competitors' influence: in five of these products/markets the residual demand elasticity was lower than or equal to 0.5; in the other seven cases it was between 0.6 and the maximum theoretical level ($|\eta| = 1$), although the statistically significant influence of cost shifters of competitors affected the Italian price decisions in some destination markets.

Only in four of the twenty two equations did it turn out that Italian producers were pure price-takers (leather footwear in Germany, footwear with rubber soles in France, glazed ceramics in the United States, non-textured yarn in the United Kingdom).¹²

¹² The results of single-equation IV estimates show few major differences from 3SLS method; the most important were the null Italian market power in leather and textile products in Germany and the emergence of a more significant (99%) market power in panty hose in the Spanish market.

The competitors from emerging economies which significantly affected Italian firms' price strategies during the sample period were China for footwear with rubber soles in the French destination market, India, Bangladesh and Pakistan for goat and skin leather products in the French and German markets. In the case of competitive pressure by Chinese footwear with rubber soles in the French market, Italian exporters behaved as price-takers (no significant market power).

The competitors from industrialized economies that limited Italian market power were those from Spain, a catching up country (leather footwear in Germany and glazed ceramics in Germany, France and the US); indeed, in two markets (leather footwear in Germany and glazed ceramics in the US) the Italian exporters' capacity to set prices was zeroed by the presence of Spanish producers. Significant conditioning on Italian price setting was also exerted by exporters from more "mature" countries, for instance Germany (which affected the Italian firms' price strategy in wooden chairs and seats exported to France and non-textured yarn sold in United Kingdom), the Netherlands (unglazed ceramics exported to Germany and textile products sold in the UK market), France (wooden chairs and seats and unglazed ceramics exported to Germany and apparel products sold in Spain), the United Kingdom (textile products sold in France) and Austria (panty hose exported to Germany). In one case (non-textured yarn exported to the UK, where the leaders were Germany and the Netherlands) competitive pressures by this latter group of countries were accompanied by the zeroing of Italian market power.

The intensity of market power of Italian exporters across destination markets appeared stronger in France than in Germany; however, in both markets Italian producers exhibited no power in the case of two goods (rubber footwear in Germany and leather footwear in France). The position of Italian exporters was more polarized in the US destination market: Italian firms had either no significant competitor limiting their price decisions (rubber footwear, leather footwear, non glazed ceramics, seats and chairs) or no market power (glazed ceramics).

7. CONCLUDING REMARKS

Our findings indicate that assertions as to the excessive exposure of the specialised sectors of Italian industry (textiles, apparel, footwear, leather goods, ceramics, wooden furniture) to the pricing policies of competitors – due to both highly competitive market structures and the presence of aggressive low cost producers – are, at the very least, questionable. Over the globalisation period (the eighties and the nineties), Italian exporters of traditional products were not generally “at the mercy” of foreign competitors, not even those located in low cost economies. Quite the reverse: they were able to practice (geographically differentiated) mark ups over marginal costs in most destination markets.

Specifically, exploiting the relationship between the concept of relative mark up (or Lerner index) and that of residual demand elasticity, we showed that Italian firms exhibited statistically significant market power (highlighted by an elasticity of the residual demand curve faced by them significantly different from zero) in more than 80% of the products/markets we analysed: that is, in eighteen out of the twenty two market-power equations we estimated. In six cases, no significant pressure from any competitor was detected. In twelve cases, Italian producers exhibited market power, but it was not independent of the behaviour of the cost shifters of foreign producers. In other words, in most cases, Italian exporters had significant margins for deciding their pricing policies, but they were obliged to take account of their competitors’ reactions; besides, in seven of these twelve conditioned-market-power cases, the elasticity of the residual demand function was quite high, ranging between 0.6 and its maximum theoretical value of 1. Italian producers had no market power only in four out of the twenty two products/markets analysed (18% of the products/markets we considered).

As to competitors, statistically significant competitive pressure on Italian exporters was exerted by producers of both mature economies (Germany, France, the Netherlands, Austria, the UK) and emerging or catching-up countries (China, India, Pakistan, Bangladesh, Spain). The latter conditioned the market power of Italian firms in the sectors of leather goods, footwear, apparel and ceramics. In three of the four cases in which no Italian market power could be detected, competitors were from an emerging economy (China) and a catching up country (Spain in two destination markets). On the other hand, Italian producers proved able to master markets in which they faced low cost competitors in the case of six products/destinations (rubber footwear in the French market, glazed

ceramics in Germany and France, leather goods in Germany, France and Spain).

So much for the evidence. As to the causes of the emergence of Italian market power, one can be only speculative at this stage. Given the typology of products considered (traditional consumption goods) one should exclude that it was due to monopoly conditions or oligopolistic market structures. A much more plausible explanation is that product differentiation through quality generated monopolistic competition market structures leading to the emergence of a sort of (qualitative) barrier which “protected” Italian products against the competitive pressure of foreign firms: a phenomenon that seems to have more than a link with the observed long-run persistency of Italian specialisation in traditional industries.

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