

**Competitive Pressure and Its Social Consequences in EU Member States
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**Workpackage 1: Competitive pressure in the corporate sector, its
institutional aspects and policy framework**

Deliverable 8

“COMPETITIVE PRESSURE AND MARKET STRUCTURE”

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Contributing partners:

**Institute of Economics, Hungarian Academy of Sciences, Budapest (IEHAS)
Centre for Economic and Strategic Research, Sofia (CESR)^{*)}
Institute for Economic Research, Slovenia, Ljubljana (IERS)
Romanian Centre for Economic Modelling, Bucharest (RCEM)**

^{*)} Partner responsible for this deliverable

1. Introduction

The notion of competition is central in economics as it forms the fundament of the market place. It is a basic underlying concept in economic theory as the role of competition in shaping the behaviour of economic agents is recognized, and reflected in (either explicitly, or implicitly), numerous theoretical models and derivations. It is also a key notion in economic policy as the understanding of the nature of competitive pressure and its impact on firms' behaviour and performance is a key factor behind piles of legislation and regulatory norms.

Traditionally competitive pressure was a notion that used to be de-limited into national boundaries. National borders served as effective barriers that safeguarded – to a different extent – domestic firms from international competition and cushioned the effect of competitive pressure coming from abroad. The evolution of the process of European economic integration within the EU has radically changed the understanding of the notion of competitive pressure and of its impact. Competitive pressure thus plays a multifaceted role in the increasingly integrated European economy. The creation of the single market and the abolition of cross-border barriers to market competition has created a qualitatively different market situation in which corporate entities located in the EU now feel directly the competitive pressure generated not only by their domestic rivals but also by those located within the whole single market. On the one hand, the ongoing abolition of cross-border barriers to market competition (especially in the form of the envisaged EU enlargement) is a pre-requisite for the efficiency of resource allocation in a Europe-wide dimension which, in turn, is the fundament for sustained economic growth in Europe and rising welfare of the European population. On the other hand, the growing rigor or competitive pressure directly affects the lifestyle and well being of each and every individual and thus presents a major challenge to the existing social models in the current and prospective EU members.

Competitive pressure is an agent of structural and societal change, and especially so in an economic union characterized by a deepening of economic integration. Competition within such an economic union is embodied and manifests itself in a wide-range of economic and societal phenomena; however most of them are basically of a micro-level nature. Thus we try to capture some of the key implications of competitive pressure on micro-level phenomena such as the behaviour and adjustment of firms in response to the growing competitive pressure. Notably, competitive pressure on the product markets arises not only from firms

operating on the domestic market (both domestically and foreign owned) but also from imports. Hence, another factor that affects the level of competition on the product markets is the degree of openness of the economy in terms of the freedom of access by foreign firms to sell their products domestically. The efficient operation of the market mechanisms also affects the degree of competition on the product markets. For example, the existence of various market imperfections (such as information asymmetry, state intervention on the market or administrative controls over the operation of the market) may also affect the level of effective competitive pressure. The latter can be also substantially reduced due to various entry or exit barriers.

This project and, in particular, Workpackage 1 “Competitive pressure in the corporate sector, its institutional aspects and policy framework”, aims at highlighting some of the implications of the growing competitive pressure within an enlarged EU, especially in the countries that are due to join it either in 2004 (such as Hungary, Poland and Slovenia) or that have set for themselves the target to do so in 2007 (Bulgaria and Romania). The deepening and widening of international economic integration within the enlarging EU reduces the cross-border barriers to market competition and has a profound impact on firm behaviour. Workpackage 1 seeks to provide a better understanding of the effect of the growing competitive pressure associated with economic integration on the performance of the enterprise sector in some of the new and prospective EU member states. The main research objective in Workpackage 1 is to analyze the effects of competitive pressure on the corporate sector in the context of the institutional and policy environment (the effect of the growing competitive pressure in these countries and the variety of firm-level responses), including the identification of different models and common patterns of enterprise adjustment, and the assessment of the impact of competition policy and its institutional framework on enterprise behaviour and performances.

The main focus of research in the first phase of the project was on the actual measurement of competitive pressure in the corporate sectors of the acceding countries. The main emphasis was on the definition of relevant and adequate quantifiable indicators which would reflect the level of competitive pressure that firms in these countries are subject to and on the actual quantification of these indicators for the participating countries which would allow not only to gauge the level of competitive pressure in the corporate sector of each country but also to make cross-country comparisons. The indicators selected for this purpose are based on the use of detailed enterprise data sets which contain individual firm level data for the corporate entities in the acceding countries that are covered in the project. The actual

indicators are carefully selected in order to allow for the application of a uniform methodology across all countries (which in turn enables consistent cross-country comparisons). This report presents some of the main results of this research effort.

2. Competition and market structure

2.1. The Theory

The literature is not unanimous about the definition of competition and there do not exist coherent and robust measures of competition or competitive pressure. In addition there is often a gap between notions and concepts used to define or reflect in the theoretical literature and the attempts to actually measure competition and competitive pressure in the empirical literature.

As to theoretical approaches of measuring competitive pressure, there are what came to be known as “structural” and “non-parametric” approaches (Bresnahan, 1989). The structural approach seeks to relate competitive pressure to the supply response of a representative firm to a given demand (function), given its cost structure/function. In turn, the non-parametric approach seeks to relate competitive pressure to revealed preferences in the market, regardless of the actual demand and cost curves.

Boone (2000) raises the issue of the monotonicity of the measures of competitive pressure, claiming that a true measure of competition should be monotone in their parametrization (while many of the measures suggested in the literature do not satisfy this property). While no ultimate solution still exists, a common ground could be found by linking competition to the efficiency and profitability of firms: competition raises the profits of more efficient firms relative to less efficient ones and reduces the profits of the least efficient firms; as a result rising competition may induce re-location of resources by forcing inefficient firms to exit while allowing more efficient firms to increase their output (the “selection effect”) of competition.

In the empirical literature, preference is usually given to more pragmatic ways of approaching the measurement issue: the choice of measures is generally confined to indicators that can be quantified on the basis of measurable and observable source data.

Whatever the differences in the approaches advanced in the literature, there seem to be a general accord in the literature on some basic premises regarding competition such as:

- Competitive pressure arises from the interaction of firms with their competitors on the marketplace.
- There is no unique way to quantify directly competition; what is quantifiable is at best a partial or indirect reflection of true competitive pressure; accordingly, there can be various possible approaches to the partial or indirect measurement of competition and competitive pressure.
- Both theory and empirical work suggest a link between competitive pressure and market structure, i.e. the way the market place is organized and structured.

In the remaining part of this section we review some of the main conclusions in the literature on market structure, focusing on indicators that are usually considered to reflect competitive pressure that stems from market structure.

There are several theories on the formation and evolution of market structure. The so called “technological theories” have their roots in the works of early evolutionary economists. Thus Schumpeter (1934) deduces that firms’ size and their distribution in the market is determined by economies of scale and scope, specialization, coordination. Large firms operating in a concentrated market are the main engine of innovation and hence they are the main engines driving the evolution of market structures.

Later Demsetz (1973) suggested another paradigm of the evolution of technological structures, that of “efficient market strictures”. In that line of thinking the “revealed” market structure reflects the growth of more efficient firms and this would then shape the evolution of the market structure. In other words, more efficient firms would tend to expand their market share at the expense of less efficient firms which would eventually be forced to exit.

Within the same strand of the literature, the works of Sutton’s (1991, 1998) emphasized the importance of the return to innovation and endogenous sunk costs in shaping market structures and their evolution.

The so called “organizational theories” of market structure (see Carroll and Teece, 1999) underline the importance of the firms’ internal organization and structure for their evolution and growth. Thus the “contracting cost” theories focus on the role of external and internal contracts as well as of contracting and transaction costs. By contrast, other organizational theories have advanced the idea that firms’ growth and evolution depends on who controls the “critical resource” in the firm (the so called “critical resource” theories suggested by Grossman and Hart (1986)).

Other theoretical approaches to the explanation of market structure stress the importance of the institutional environment and institutional factors in general. Among the factors that have been put forward as determinants and driving forces of firms' dynamics are the regulatory environment (and in particular the regulation of entry and exit), the judicial system and the efficiency of law enforcement, the financial system and the accessibility of external finance (financing constraints in imperfect capital markets) as well as the institutional framework of corporate governance systems (Kumar, Rajan and Zingales, 2001).

One of the influential theories of market structure was that put forward by R. Gibrat (1993) (and which came to be known as "Gibrat's Law") which argues that firms growth follows a random path and is independent of initial size, i.e. the growth path of individual firms during a given period of time does not depend on their size at the beginning of this period. The resulting distribution of firms' size (which shapes the market structure) is log-normal. A number of empirical works, starting from Simon and Bonini (1958), provided evidence which was consistent with Gibrat's Law. However, evidence from more recent empirical work based on more complete data sets is not always in agreement with Gibrat's Law; in particular, it has been found that newly established firms in general tend to grow faster than older firms (Geroski, 1995; Lotti and Santarelli, 2001).

Recent work by Sutton (1991, 1998, 2001a) develops further the theoretical understanding of market structure. He combines various theoretical notions (including those of the organizational and institutional theories) to develop his basic concept of the firm as an organized set of capabilities. One of the arguments laid down by Sutton (2001b) is that the observed firm size depends also on the internal structure of firms and the ways they structure their business.

2.2. Empirical measures of firms' size and their distribution

As noted, due to data and measurement constraints, there is often a mismatch between theoretical concepts of competitive pressure stemming from market structure and the actual indicators used in empirical work. Based on what is most common used in the empirical literature and the availability of data for the countries covered in this project we have selected the following indicators for the quantitative measurement of competitive pressure related to market structure:

a) Firms' size.

The most commonly used indicator of size is market share which also captures the market power of firms. (While size can also be measured by other indicators such as number of employees or firms' assets, these fail to capture the very important characteristic of market power.) Market share is most often defined as:

m_{ij} - firms' market share, within the firm's own market (the actual and potential competitors, which for practical purposes can be approximated by NACE sectors (from NACE 1-digit to NACE 3-digit sectors):

$$(1) \quad m_{ij} = Q_j / \sum_j Q_{ij}, \text{ where } Q_{ij} \text{ denotes the firms' sales.}$$

There are also other indicators of size suggested in the literature, for example measures related to capital or labor intensity (Kumar, Rajan and Zingales, 2001) which have both a theoretical justification and specific importance; however, for the purposes of our analysis we stay with

b) Size distribution and concentration.

There is a growing literature on the actual definition and measurement of size distribution and its impact on competition which offer increasingly sophisticated measures for this purpose. Still the mostly widely used indicators of competitive pressure related to size distribution are at the same time the simplest ones that have been in application for many years. The most popular amongst them are the measures of concentration. The degree of concentration of the firms' access to the market can be measured in different ways such as:

- the cumulative share of the k largest firms in a specific market (which for practical purposes can be approximated by NACE sectors (from NACE 1-digit to NACE 3-digit sectors))

- the Lorenz curve of distribution of firm size which in this case is a measure of the degree of inequality of market shares. The slope of the Lorenz curve reflects the degree of inequality (e.g. the Lorenz curve degenerates into a straight line when all firms are of equal size). Similarly, the degree of inequality can be reflected with the Gini coefficients computed on the distribution of market shares (it takes the value of 0 for equal size distribution).

- The Herfindahl index is probably the most widely used measure of industrial market concentration.

$$(2) \quad h_i = \sum_j m_{ij}^2 = \sum_j a_j(\mathbf{Q}) Q_j, \text{ where } a_j(\mathbf{Q}) = Q_j / \{\sum_j Q_{ij}\}^2$$

where for the practical purposes of this study the index can be computed for NACE sectors (from NACE 1-digit to NACE 3-digit sectors).

The Herfindahl index takes into account both the number of the firms in the specific market and their size differences (e.g. it takes the value 1 when there is only one firm in the market and is close to 1 when the number of firms is small and or when the degree of inequality in market shares is greater). In contrast to the Lorenz curve/Gini coefficient, the Herfindahl measure of concentration is non-zero for equal size distribution of firms in the market.

c) "Endogenous" measures of market structure.

The recent literature on the measurement of market structure has come up with quantifiable measures that try to capture the joint effect of structure and performance. They reflect the view that market structure and firm performance are jointly linked and market structure reflects the growth potential of all existing and newly entering firms which in turn is endogenously linked to the market structure.

- Sutton's (1991, 1998) indicators of market structure represent a family of distributions, which reflect the arguments of the existence and importance of submarkets (which in turn is related to the view that firm size depends on the internal structuring of the firms' business). Consequently, it is theoretically possible to define bounds on the form of these distributions. In this framework the decline in market concentration, due to the growth of firms' size is conditional on R&D and advertising expenditure.

- Following this general approach Kattuman (2000) has suggested a two stage approach to modelling concentration and market structure which includes the following two steps: 1) defining a model (models) that explain market share of individual firms in the market; 2) use these models to explain the distribution of market share.

- Again (Sutton, 2001a) suggests that the market structure and concentration patterns of different industries are largely technologically determined and innovation driven, depending on the returns to innovation and the endogenous sunk costs. He defines three types of market structure: 1) low-tech type (where the low setup costs result in low concentration); 2) high-tech, with high return to R&D but low setup costs due to product differentiation and easy entry (these result in low concentration, e.g. medical, optical instruments branches); 3) high-tech, with high setup costs and difficult entry (these produce high concentration, e.g. the aircraft industry).

Regretfully, most of the “endogenous” measures of market structure are rather demanding with respect to the source data necessary for their computation and so far have had rather limited application in practice, especially in wide ranging in their coverage studies.

2.3. Other quantitative characteristics of competitive pressure stemming from market structure used in empirical studies

Empirical studies often employ some easy to compute indicators which highlight important aspects of competitive pressure related to market structure. Below are several such indicators, formulated specifically for use in the current study and reflecting the available firm level data for the participating countries.

The first two measures seek to reflect competitive pressure related to the participation of an economy in the international division of labor and, in particular, trade. Such competitive pressure arises from two different sources: from the import activity of foreign firms in the local markets and from the export activity of local firms in foreign markets. Indicators (3) and (4) are aimed at capturing these two different aspects, respectively.

It is also widely acknowledged that foreign owned (FDI) firms may make a notable difference on local firm's behaviour, especially when the host is an economy which still has not reached a level of maturity. The impact of the presence of FDI firms on local competitive pressure may be reflected by the degree of their penetration in local markets (5).

More specifically, the indicators we use for the purpose of this study, are defined as:

- Exposure to export markets by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) defined as the share of exports in the total firms' sales in the respective sector EM_i :

(3) $EM_i = \sum_j E_{ij} / \sum_j Q_{ij}$, where E_{ij} is the value of the individual firms' exports and Q_{ij} , as before, denotes the firms' sales.

- Import penetration by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) defined as the share of imports in the total domestic sales in the respective sector IP_i :

(4) $IP_i = M_i / (M_i + \sum_j Q_{ij} - \sum_j E_{ij})$ where M_i is total imports in sector i and $(\sum_j Q_{ij} - \sum_j E_{ij})$ is the value of total domestic sales by domestic firms in sector i .

- foreign presence in domestic markets as measured by the market share of foreign owned firms by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) F_i :

(5) $F_i = \sum_j QF_{ij} / \sum_j Q_{ij}$, where $QF_{ij} = Q_{ij}$ if the firm is foreign owned and is 0 otherwise.

The above can be evaluated for two categories of foreign firms:

- share of sales by foreign controlled firms (majority stake)
- share of sales of firms with foreign participation (minority stake)

3. Other measures of competitive pressure

3.1. Measures of price competition

It is a well-established result in production theory that under perfect competition in an efficient market, firms set their prices at their marginal costs. Perfect competition in efficient markets implies that firms would only compete for market share, or output quantity (Cournot competition). However, if the above conditions are not met – which is equivalent to the assumption of the existence of market imperfections or efficiencies – creates conditions for price competition among firms. Hence deviation from perfect competition and/or perfect markets can be identified by the discrepancy between prices and marginal costs. Hence, relaxing the assumption of perfect market competition allows analysing different pricing behavior and policies of the firms. One of the theoretical models of price formation under the assumption of the existence of monopolistic or oligopolistic market structure is that of mark-up pricing (Eichner, 1973; Lavoie, 1996). The presence of a monopolist endowed with market power may shift the equilibrium point from the position of perfect competition. If the

demand curve slopes downward, this shift results in the formation of a price markup, i.e., a situation when the equilibrium price exceeds marginal cost. In other words, if the market structure is characterized by the incidence of monopolistic/oligopolistic firms, these may use their market power to set prices above their marginal costs, that is to establish a mark-up over the marginal costs.

Price mark-ups are important indicators of both competitive pressure that firms are facing from other firms and of their own market power (competitive pressure they are exerting on other firms). As virtually all markets are featured by various imperfections and inefficiencies (this is especially the case of economies in transition, such as the acceding countries), the quantitative measurement of price mark-ups thus provides valuable information of the incidence and intensity of competition in their corporate sectors.

The implications of monopolistic pricing in imperfect markets has given rise to numerous works both in the theoretical but especially in the empirical literature. One strand of the literature follows the seminal work of Nickell (1996) who argues that monopolistic rents (mark-ups) can be equalized with the level of competition in an industry (or a market); if an industry is more competitive, there will be fewer monopoly rents. He then argues that there should be a direct link between the level of competition and firm level efficiency and suggests an approach for the empirical testing of this hypothesis. Similar ideas have been developed and analyzed in a number of subsequent empirical studies; this conceptual framework will also be elaborated within this project, in its later phase.

Another strand in the literature – starting with Hall (1988) and Roeger (1995) is directly concerned with the actual measurement of firms' mark-up ratios as indicators of competitive pressure. The main feature of this methodological approach (which has also been applied in our study) are the following:

Price mark-ups (θ) are usually defined in proportion to the firms' marginal costs:

$$(6) \quad p = \theta \mu$$

where p is product price, μ is marginal cost and θ is the mark-up ratio ($\theta > 1$).

The mark-up ratio of a profit-maximizing monopolistic firm facing a downward sloping demand curve, is derived in the following form:

$$(7) \quad \theta = p/\mu = 1/(1 + 1/\eta)$$

where η is the price elasticity of demand.

Mark-up pricing can also be described by the so-called Lerner index:

$$(8) \quad B = (p - \mu) / p$$

By virtue of the above definitions:

$$(9) \quad B = 1 - 1 / \theta ; \quad \theta = 1 / (1 - B)$$

The mark-up ratio can also be regarded as a forward-looking measure of the degree of competition that firms are facing on the market. Thus Hall (1988), assuming that price markups emerge as a result of market power, analyses the implications of market power on productive efficiency, factor demand and pricing behavior. For this purpose he derives the Solow residual in the case of imperfect competition and/or markets, when product price does not necessarily equal marginal cost. Hall shows that in this case the difference between the rate of growth of nominal output and the weighted average of factor inputs is not solely attributed to autonomous technical change, but may partly reflect monopolistic pricing behavior.

This approach is illustrated in the following framework. Assume that output is defined by a homogeneous production function with constant returns to scale:

$$(10) \quad Y_j = T_j F(L_j K_j),$$

where K_j and L_j stand for capital and labor inputs, accordingly, and T_j is a measure of productive efficiency. Profit maximization yields:

$$(11) \quad \alpha = (MF / ML) (L / Y) = s_{wj} ;$$

i.e., the elasticity of output with respect to labor equals s_{wj} , the share of labor costs in the total firm's revenue. The Solow residual, derived from (10) and (11), reflects the rate of change of total factor productivity (s_j) in the case of perfect competition, and takes the well known form of:

$$(12) \quad s_j = d y_j - \alpha (d l_j) - (1 - \alpha) (d k_j),$$

where lower case indicates logarithms and “d” denotes the (logarithmic) differences approximating growth rates.

If the firm operates under imperfect competition and prices deviate from marginal costs, the Solow residual of equation (14) can also be decomposed into:

$$(13) \quad s_j = B (d y_j - d k_j) + (1 - B) dt_j ,$$

where B is the above mentioned Lerner index.

Roeger (1995), using the dual cost function, derived a similar expression for the dual, or price based Solow residual s^*_j :

$$(14) \quad s^*_j = - d p_j + \alpha (d w_j) + (1 - \alpha) (d r_j) = - B (d p_j - d r_j) + (1 - B) dt_j$$

where P_j , W_j and R_j denote firm’s price, labor and capital costs, lower case stands for logarithms and “d” for the logarithmic differences.

Subtracting (14) from (13), the last terms of the two right hand expressions, containing the efficiency term, cancel out, and after some manipulation and adding an error term, a simple expression is obtained, which is at the same time very convenient for estimation:

$$(15) \quad s_j - s^*_j = (d y_j + d p_j) - \alpha (d l_j + d w_j) - (1 - \alpha) (d k_j + d r_j) = \\ = B [(d y_j + d p_j) - (d k_j + d r_j)] + \varepsilon_j$$

The sums in parentheses are the logarithmic differences of the corresponding nominal values: $d y^*_j = d y_j + d p_j$; $d l^*_j = d l_j + d w_j$; $d k^*_j = d k_j + d r_j$, where y^*_j , l^*_j and k^*_j denote the logarithms of nominal values of value added, labor and capital costs, accordingly.

Denoting:

$$(16) \quad v^*_j = d y^*_j - \alpha (d l^*_j) - (1 - \alpha) (d k^*_j)$$

$$(17) \quad q^*_j = d y^*_j - d k^*_j,$$

the final expression for the estimable equation becomes:

$$(18) \quad v^*_j = B q^*_j + \varepsilon_j .$$

Roeger's transformation overcomes the identification problems indicated by Hall (1988), arising from the correlation between the explanatory variable and the error term. Another appealing feature is that it eliminates both prices and real variables, and thus allows estimating the mark-up ratios directly from the nominal enterprise data.

Oliveira Martins, Scarpetta and Pilat (1996) developed further Roeger's model to apply for a production function defined over sales and incorporating material inputs as well. For example, assuming a homogeneous production function with constant returns to scale:

$$(19) \quad Z_j = T_j F(L_j, MC_j, K_j),$$

where Z_j , K_j , MC_j and L_j stand for real sales, capital, material inputs and labor inputs, accordingly and T_j is the measure of productive efficiency, they show that the corresponding expressions for v^*_j and q^*_j will take the form:

$$(20) \quad v^*_j = d z^*_j - \alpha (d l^*_j) - \beta (d mc^*_j) - (1 - \alpha - \beta) (d k^*_j) ,$$

$$(21) \quad q^*_j = d z^*_j - d k^*_j,$$

where z^*_j stands for the logarithm of nominal sales, and $\alpha = s_{wj}$; $\beta = s_{mj}$ are the output elasticities with respect to labor and material costs of a profit maximizing firm which, in turn, are equal to the shares of labor costs and of material costs in total revenue. In this case the derived equation retains its original form.

Roeger's (1995) seminal work inspired a series of empirical studies. Most of these have been conducted on the basis of longitudinal sectoral data (time series of aggregated sectoral data). Oliveira Martins, Scarpetta and Pilat (1996) and Oliveira Martins and Scarpetta (1999) estimated sectoral mark-up ratios on the basis of longitudinal data for the OECD economies. Kee (2002) uses his approach to compute markups for Singapore's manufacturing industries, again on the basis of longitudinal sectoral data for 1974-90. Various other papers tried to measure markups at sectoral (e.g., Linnemann, 1999) or at firm level (e.g., Klette, 1999; Konings, Van Cayseele and Warzynski, 2001; Angelucci, Estrin,

Konings and Zólkiewski, 2001). Several studies related variations in mark-up ratios to the business cycle (e.g., Bloch and Olive, 2001, and Weiss, 2000). Wu and Zhang (2000) attempt to relate the markup to various macro-economic issues. In estimation, the methods applied often give rise to endogeneity problems; these have been discussed by several articles (e.g., Paquet and Robidoux 2001). Dobrinsky, Markov and Nikolov (2001) and Halpern and Kőrösi (2001) were among the first to compute mark-up ratios for east European countries (Bulgaria and Hungary) on the basis of firm level data.

3.2. Indirect measures of non-price competition

Although the existence of non-price competition is widely acknowledged both in theory and in empirical applications, it is much more difficult to measure and quantify than price competition. In the absence of directly observable quantitative indicators, applied research usually resorts to indirect measures. One possible approach of devising theoretically justifiable indirect measures of non-price competition is to follow Sutton's (2001a) conceptual framework which emphasizes the importance of innovation and endogenous sunk costs in shaping the firms' dynamics and hence market structure. If firms grow in a competitive environment, they both face competitive pressure from other firms and exert such pressure on other firms. According to Sutton's model, the growth of firms (and hence competitive pressure generated and faced by them) is closely associated with innovation (and hence R&D activity) and endogenous sunk costs (among which setup costs including entry costs play a key role). The importance of the latter can be indirectly measured by some of the observable firm-level indicators (which in turn can be interpreted as indicative of non-price competition):

- *Market share competition* by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) as defined by the *level of advertising expenditure* in the sector A_i :

(22) $A_i = \sum_j AE_{ij} / \sum_j OE_{ij}$, where AE_{ij} is the firm's advertising expenditure and OE_{ij} is the firm's total operating expenditure.

- *Future market share competition* by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) as defined by the *level of investment activity* in the sector I_i :

(23) $I_i = \sum_j FI_{ij} / \sum_j FA_{ij}$, where FI_{ij} is the firm's fixed investment and FA_{ij} is the firm's total fixed assets.

- *Future product competition* by NACE sectors (from NACE 1-digit to NACE 3-digit sectors) as defined by the *level of R&D expenditure* in the sector R_i :

(22) $R_i = \sum_j RDE_{ij} / \sum_j OE_{ij}$, where RDE_{ij} is the firm's advertising expenditure and OE_{ij} is the firm's total operating expenditure.

3.3. Perception of competitive pressure

Apart from all these “objective” measures of competitive pressure which (be them direct or indirect) are derived on the basis of actual reported firm-level data, there can also be “subjective” measures of competitive pressure reflecting the perception of firms' managers (and/or employees) of the level of competitive pressure their firm is facing in the market. Such measure can be obtained on the basis of specifically designed enterprise surveys.

4. Measuring competitive pressure in the corporate sector of the EU acceding countries: Bulgaria, Hungary, Romania, Slovenia

The Annex reports the results of the quantitative measurement of market structures and competitive pressure in the four acceding countries (Bulgaria, Hungary, Romania, Slovenia) undertaken within WP1 during the first phase of this project. We have attempted to follow – to the extent possible – a uniform methodology, in line with the theoretical and conceptual background outlined above. On the one hand such an approach enables direct cross-country comparisons of competitive pressure among the participating countries. On the other hand, within the whole COMPPRESS project, these methodologically consistent and comparable across countries measures of competitive pressure are only intermediate outputs: they are mostly intended for further use as inputs in the analysis of the impact of competitive pressure on enterprise behaviour and performance; in the analysis of the interrelations of competition-related behaviour and performance with the institutional framework of competition policy; and in the analysis of the social impact of competitive pressure.

The indicators reported in the Annex are computed in accordance with the definitions specified in sections 2 and 3 of this report. The actual quantitative measures reported in the

Annex are self-explanatory; in what follows we supply in addition some country-specific methodological issues.

Some country-specific notes:

Bulgaria

The indicators for competitive pressure in the Bulgarian corporate sector have been computed on the basis of a comprehensive enterprise data base that has been compiled at the Centre for Economic and Strategic Research for more than 10 years. It consists of annual balance sheet data for individual enterprises and covers all Bulgarian enterprises that report to the National Statistical Institute in accordance with the “double entry” accounting method. The time period covered is from 1994/95 to 2001 (and 2002 data are in the process of being incorporated). While consisting of un-identified entities (in accordance with the Law on Statistics) the enterprise data set contains identifiers that allow to categorize the firms by different parameters such as:

- *ownership*. In the tables in the Annex have identified four major ownership categories: SOEs, firms privatized to domestic investors, other domestically owned private firms and firms with foreign participation.

- *sector/branch* of economic activity (at different level of aggregation). For the purposes of this study we have used mostly the NACE classification (from NACE 1-digit to NACE 3-digit levels).

- *location*, etc.

The full data set is an unbalanced panel as different number of enterprises have reported in different years. The actual number of enterprises increases from some 20000 in 1995 to more than 75000 in 2001.

The main components of the individual enterprise records are the annual “Balance sheet” and “Income statement” of the enterprise. In addition to that the individual enterprise records contain are some supplementary documents with additional annual data. The most important of these are:

- Information about of income and expenditure (contains a more detailed breakdown of individual income and expenditure items);

- Information about fixed assets (describe changes in the course of the year);

- Information about receivables and payables (a more detailed breakdown);

- Information about paid interest (a more detailed breakdown);
- Information about cash flows (describes all incoming and outgoing payments in the course of the year);
- Information about personnel (by categories) and labour costs (a more detailed breakdown);
- Information about investment expenditures;
- Information about paid taxes (a more detailed breakdown, including tax arrears);
- Information about export earnings (by major currencies);
- Information about bank loans (by categories).

The tables containing the measures of competitive pressure for Bulgaria reported in the Annex are broken down into two main parts: A) indicators of market structure and competitive pressure in the corporate sector as a whole (reported at the NACE 1-digit level); B) indicators of market structure and competitive pressure in the manufacturing industry (reported at the NACE 2-digit level). Indicators of market structure and competitive pressure at the NACE 3-digit level have also been computed (and are available upon request); these however, are not presented in this report for space considerations (as the corresponding tables are rather voluminous).

The most striking feature of the changes in the Bulgarian corporate sector in this period is the rapid and radical transformation in ownership which is reflected in dramatic changes in the ownership structure: between 1995 and 2001 the share of SOEs in the total output of the corporate sector fell from 73% to just over 20 %. The fastest growing ownership segment is that of the FDI firms which have registered an increasing participation in many sectors and industries. It should be noted, however, that compared to other acceding countries, the presence of FDI firms in the Bulgarian corporate sector is still relatively low. The second fastest growing ownership segment is that of de novo private firms which keep on increasing both in terms of numbers and in terms of aggregate market share. There are no uniform trends in market concentration: while in some sectors it decreases, in others it increased in this period. On average, market concentration in Bulgaria remains fairly high. Notably, the dynamics of trade related competitive pressure has been more pronounced with respect to imports: during this period import penetration has increased considerably in many manufacturing sectors. By contrast, a decline in the export market exposure was recorded in many Bulgarian manufacturing sectors. This to a large extent can be attributed to the negative implications of the major financial crisis of 1996-1997 which had a considerable negative impact on economic activity in the country. In the last years of the reported period some

manufacturing sectors have seen a renewed growth in export exposure which suggests a successful adjustment of the firms to the changing market conditions. Expectations are that this trend of increased participation in foreign markets will strengthen in the future.

Hungary

The Hungarian corporate dataset covers mostly large corporate entities and this prevents the computation of some of the indices directly from firm-level data. Due to this, some of the indices are computed from reported sectoral aggregates, based on all incorporated firms which, in turn, limits to some extent the coverage of the measurement effort.

The most important tendency which can be observed from the Hungarian indices is the gradual privatisation of state-owned enterprises, very frequently to foreign owners. Even though the number of firms increased more or less steadily in almost all sectors, sectoral concentration, measured by the Hirshman-Herfindahl index of output, or by the share of the largest firms in output or exports, did not substantially diminish in most sectors. There are sectors where concentration actually increased, as major multinational firms moved production to Hungary, and immediately became dominant players in their sectors. (For example, NACE 32 - Electronic products and components.)

Import penetration increased substantially in several sectors; however, that may also be related to the increasing market share of multinationals: they may import large amount of components for their assembly lines. That will not increase competitive pressure, as that basically represents within firm allocation of resources.

Thus the Hungarian picture on competitive pressure is ambiguous. On the one hand, as new enterprises were founded, former state-owned conglomerates were broken up and privatised, which clearly increased competitive pressure. On the other hand, many sectors remained highly concentrated, mostly dominated by the multinational companies moving production into Hungary. That clearly indicates that the Hungarian competition office can only regulate the market effectively in an international framework.

Romania

The aggregated data (number of enterprises and turnover) on sections, subsections and divisions are comprehensive and include all the active companies in Romania.

For calculating the Herfindahl indices, the structure on ownership and the share of net exports in total sales, we rely on a subsample of companies that cover 80% of the total turnover in the corporate sector. This has the following consequences:

- *the data are not equally representative on sections, subsections and divisions.* However, for most sectors, available data cover between 70% and 90% of the sectoral turnover. In no case, the coverage is below 50%. The lowest coverage rates are in services sectors;
- *there is a bias of Herfindahl index,* since it does not include companies responsible for 20% of the total turnover. This impact is negligible and have been estimated at no more than 0.04% of the reported index.
- *the same conclusion apply to the share of exports* in the total volume of sales.

The exports reported in the companies balance-sheets are only the direct exports. The share of direct exports in total exports also vary from one branch to an other. Data on direct exports are not requested in the balance sheet after 2000.

The foreign trade statistics of Romania follow the international methodology and, starting with 1994, the exported and imported goods have been classified by The Combined Nomenclature (CN), which is also the base for the customs tariffs. The sections of the International Standard Industrial Classification of all Economic Activities (ISIC), the Main Economic Activities and the Classification of Economic Activities in the European Community (NACE) keep their compatibility with the Combined Nomenclature through a set of correspondence tables.

The foreign trade statistics refers to all the material goods traded between Romania and other countries, including: the direct imports for consumption, imported goods exiting of the bounded warehouse or the free zones and destined for consumption, the exports of domestic products or of the imported ones destined for domestic consumption. Also included are: temporary imports of foreign goods with the purpose of being processed in the country (active processing), the exports of goods resulted from the processing activity, temporary exports of goods for being processed in other countries (passive processing), the imports of compensating goods resulted after the processing activity outside the country. and the goods imported or exported through the financial leasing system.

The import and export do not include transit goods, the goods temporary admitted in (drawn out of) the country (with the exception of those destined for being processed), the goods bought by the international organizations for their own activities in Romania and the goods destined for being repaired. Although statistics on total imports and exports are

available, due to the very high share of active processing in some branches, import penetration would have been heavily distorted

Slovenia

The data used in the estimations are collected from balance sheets and income statements for Slovenian firms. 1,093 firms have been selected out of total 6,400 manufacturing firms according to following criteria:

- firms with more than 10 employees and more than €1 million of net sales
- data for the firm are available for the whole 1994-99 period (a balanced panel is maintained)

In addition, a selection is applied in order to preserve the adequate quality of the data and consistency of results.

The dynamics of the sectoral composition of output in Slovenia suggests a notable decline of traditional sectors, such as food, wood, paper and rubber industry. At the same time, there is notable expansion of chemicals (pharmaceuticals), metal processing, machinery, electric appliances and transport equipment. Despite the notable shifts between sectors, there are only minor changes in the concentration within sectors. The Herfindahl indices, calculated at the sectoral level, reveal only minor changes within sectors. Some increased concentration can be observed in the food, textiles, rubber and transport equipment industries, while concentration has significantly decreased in the metal processing industry.

In the period 1994-99, one can observe increased pressures from foreign firms in the domestic market in almost all industries. Increased foreign competition is particularly evident in chemicals, rubber, non-metal, metal and machinery, where market shares of foreign affiliates reach some 20%.

There is evidence that Slovenian firms are heavily exposed to competition in export markets. This is particularly true for firms in most of the sectors, with the exception of the food, paper, oil and non-metal industry. However, the most dramatic changes occurred in the beginning of the 1990s: after 1994 exposure to competition in export markets increased significantly only in some sectors only, such as chemicals, metal, machinery and electric appliance. There is a decreased export orientation of firms in the textiles and leather industry indicating their declining competitive advantage in export markets due to increased labour costs.

Most of the sectors in Slovenia are heavily exposed to competition via imported goods from EU, the only exceptions being food and oil industries. Again, the most significant changes took place in the beginning of the 1990s; on average, at the aggregate manufacturing level, this exposure to imports from the EU has not changed over the period 1995-99. Increased exposure to foreign competition via imports can be observed in few sectors only (electric appliances, furniture and transport equipment), in the textiles and non-metal sector exposure to imports has even decreased over the period.

5. Discussion and concluding remarks

The results presented in the previous section highlight some specific features of market structure and competitive pressure in the corporate sectors of the four acceding countries. Being methodologically consistent across countries they also allow direct cross-country comparisons of this aspect of corporate performance in these countries.

One of the important general finding about the evolution of the corporate sectors in the acceding countries is that the ownership transformation in these countries is nearly complete: at present the overwhelming share of output in their corporate sectors is produced in firms which are not controlled by the state. This is indeed a revolutionary change which has been accomplished in a historically very short period of time and which has dramatic consequences for the functioning of all markets and, in particular, for the rising competitive pressure in the corporate sectors. The withdrawal of the state from the running of business entities is a basic and necessary (though not sufficient) condition for the establishment of a genuine market environment.

Another the important and interesting result at this stage of research is the finding about the high levels of market concentration of the corporate sectors of these countries. The causes for this, however, may differ from country to country: while in Bulgaria and Romania, this high level of concentration is mostly a legacy of the past (when industries were dominated by industrial giants specialized in production for the Soviet and other east European markets), in Hungary it also reflects the entry into the local markets of some large multinationals which managed to seize considerable market shares.

It is also interesting to point out that the high level of concentration has been preserved despite the ongoing entry into the markets of large numbers of de novo firms. This can be traced clearly in the case of Bulgaria where the enterprise data set is most

comprehensive in terms of the coverage of small de novo firms (in the rest of the countries the available data sets do not have the same level of completeness).

The entry to the local markets of foreign capital and firms (most pronounced in Hungary, but recently accelerating in the other countries as well) has had important implications for competitive pressure in the corporate markets. Notably, this the direction of the impact has been ambiguous: in the cases when FDI firms have been able to seize considerable share of local markets (often facilitated by various incentives offered by national policies), they have in fact sought to establish strong market positions, even monopolistic ones (Hungary is probably the most conspicuous example). As a result they have often driven local firms out of their traditional markets; while in most cases this was likely related to efficiency superiority, the strengthening of the market positions of FDI firms can be at least partly attributed to unfair incentives granted by domestic policy (in disfavour of local firms). In these circumstances the impact of FDI firms on market competition may be dubious, and in fact negative. In other countries (e.g. Bulgaria), the inflow of FDI has been scattered in numerous small investments and did not lead to the establishment of new, foreign monopolies. In this case, FDI firms have likely contributed to the increase of market competition in local markets. These aspects of competitive pressure will be analysed in more detail in WP2.

Measuring competitive pressure arising from trade is mostly relevant for the tradables sector; due to this the corporate performance in the manufacturing sector is analysed in more detail in the whole project and, in particular, in WP1. As noted in the methodological sections 2 and 3, such competitive pressure can arise from two sources: from the import activity of foreign firms in the local markers and from the export activity of local firms in foreign markets. Both of these factors have been assessed for the countries participating in the project (to the extent that the data allow to do this). The quantification of these indicators for the acceding countries confirms that openness to trade plays an increasingly important role in shaping the competitive environment of their corporate sectors, both in terms of import penetration and in terms of exposure to foreign markets. These economies have thus been already exposed to strong competitive pressure coming from trade. In fact, during the past more than a decade of economic transformation, there has been a continuous adjustment by their corporate sector to the competitive pressure stemming from trade.

The estimated mark-up ratios for some of the acceding countries confirm the growing competitive pressure in their domestic markets. The absolute level of the mark-up ratios is relatively small and compares well to mark-up ratios for developed market economies

reported in other studies (Oliveira Martins, Scarpetta and Pilat (1996); Oliveira Martins and Scarpetta (1999)). As argued by Nickell (1996) monopolistic rents (mark-ups) can be equalized with the level of competition in an industry (or a market); hence lower levels of mark-ups are an indication of more competitive markets (industries). According to our research plan, in the next phases of the project there will be further and more elaborate analysis of this form of price competition in the acceding countries.

Finally we would like to emphasize once again, that, in accordance with the overall research agenda of the project, we consider the results reported at this stage only as intermediate outputs, which will subsequently be used as inputs in other parts of the project.

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A N N E X

**QUANTITATIVE MEASURES OF MARKET STRUCTURE AND
COMPETITIVE PRESSURE IN THE ACCEDING
COUNTRIES**

B U L G A R I A

A. Market Structure and Competitive Pressure in the Corporate Sector as a Whole

Table B-A1. Number of firms by NACE sections and ownership categories

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| I. Number of firms by NACE sections | | | | | | | |
| A. Agriculture, hunting and forestry | 3345 | 3462 | 3643 | 3771 | 3917 | 3803 | 3937 |
| B. Fishing | 21 | 29 | 27 | 35 | 38 | 38 | 48 |
| C. Mining and quarrying | 89 | 109 | 120 | 125 | 145 | 165 | 165 |
| D. Manufacturing | 4420 | 7463 | 8297 | 8999 | 10163 | 10917 | 11775 |
| E. Electricity, gas and water supply | 79 | 103 | 106 | 95 | 116 | 145 | 165 |
| F. Construction | 1597 | 3108 | 3299 | 3814 | 4498 | 4818 | 5222 |
| G. Wholesale and retail trade; repair | 6240 | 15956 | 19394 | 23086 | 28011 | 30309 | 32760 |
| H. Hotels and restaurants | 391 | 793 | 890 | 1269 | 1882 | 2363 | 2658 |
| I. Transport, storage and communication | 703 | 1797 | 2129 | 2472 | 3137 | 3677 | 4333 |
| J. Financial intermediation | 109 | 230 | 210 | 236 | 843 | 1103 | 915 |
| K. Real estate, renting and business activity | 1676 | 3442 | 4306 | 5751 | 7529 | 9241 | 10436 |
| L. Public administration, defence, social security | 4 | 1 | | | 1 | | 1 |
| M. Education | 82 | 119 | 127 | 165 | 268 | 351 | 393 |
| N. Health and social work | 50 | 69 | 89 | 143 | 261 | 1268 | 1515 |
| O. Other community, social and personal service | 560 | 779 | 868 | 801 | 1158 | 1303 | 1496 |
| P. Private households with employed persons | | | | | | | |
| Q. Extra-territorial organizations | 1 | | | | | | |
| II. Number of firms by ownership categories | | | | | | | |
| SOEs | 5363 | 5322 | 3890 | 3242 | 2714 | 2810 | 2408 |
| Firms privatized to domestic investors | 550 | 156 | 1016 | 305 | 518 | 300 | 364 |
| Domestically controlled de novo private firms with 20 or more employees | 2658 | 3453 | 4379 | 5952 | 6351 | 6988 | 7614 |
| Foreign controlled firms with 20 or more employees | 61 | 147 | 319 | 452 | 590 | 710 | 818 |
| Domestically controlled de novo private firms with less than 20 employees | 10478 | 26418 | 31410 | 37731 | 48148 | 54748 | 60584 |
| Foreign controlled private firms with less than 20 employees | 257 | 1964 | 2491 | 3080 | 3646 | 3945 | 4031 |
| All firms | 19367 | 37460 | 43505 | 50762 | 61967 | 69501 | 75819 |

Table B-A3. Indicators of competitive pressure: Herfindahl index by NACE sections

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| A. Agriculture, hunting and forestry | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| B. Fishing | 0.307 | 0.781 | 0.159 | 0.211 | 0.212 | 0.154 | 0.099 |
| C. Mining and quarrying | 0.103 | 0.098 | 0.093 | 0.134 | 0.099 | 0.095 | 0.093 |
| D. Manufacturing | 0.023 | 0.033 | 0.034 | 0.003 | 0.020 | 0.032 | 0.006 |
| E. Electricity, gas and water supply | 0.484 | 0.260 | 0.274 | 0.119 | 0.218 | 0.198 | 0.142 |
| F. Construction | 0.010 | 0.009 | 0.032 | 0.017 | 0.007 | 0.006 | 0.004 |
| G. Wholesale and retail trade; repair | 0.021 | 0.021 | 0.017 | 0.007 | 0.005 | 0.008 | 0.011 |
| H. Hotels and restaurants | 0.049 | 0.050 | 0.053 | 0.035 | 0.019 | 0.016 | 0.014 |
| I. Transport, storage and communication | 0.097 | 0.073 | 0.074 | 0.089 | 0.065 | 0.065 | 0.055 |
| J. Financial intermediation | 0.136 | 0.048 | 0.075 | 0.066 | 0.037 | 0.156 | 0.082 |
| K. Real estate, renting and business activity | 0.007 | 0.006 | 0.005 | 0.009 | 0.008 | 0.252 | 0.004 |
| L. Public administration, defence, social security | 0.954 | .. | .. | .. | 1.000 | .. | .. |
| M. Education | 0.080 | 0.151 | 0.261 | 0.051 | 0.066 | 0.062 | 0.051 |
| N. Health and social work | 0.058 | 0.055 | 0.142 | 0.028 | 0.020 | 0.010 | 0.016 |
| O. Other community, social and personal service | 0.034 | 0.027 | 0.033 | 0.036 | 0.017 | 0.015 | 0.017 |
| P. Private households with employed persons | .. | .. | .. | .. | .. | .. | .. |
| Q. Extra-territorial organizations | 1.000 | .. | .. | .. | .. | .. | .. |

Table B-A4. Indicators of competitive pressure: market share of the 5 largest firms by NACE sections

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| A. Agriculture, hunting and forestry | 0.058 | 0.048 | 0.056 | 0.060 | 0.048 | 0.062 | 0.071 |
| B. Fishing | 0.926 | 0.970 | 0.718 | 0.659 | 0.679 | 0.748 | 0.634 |
| C. Mining and quarrying | 0.617 | 0.606 | 0.597 | 0.687 | 0.602 | 0.603 | 0.590 |
| D. Manufacturing | 0.236 | 0.269 | 0.287 | 0.083 | 0.214 | 0.266 | 0.128 |
| E. Electricity, gas and water supply | 0.839 | 0.688 | 0.695 | 0.545 | 0.695 | 0.639 | 0.586 |
| F. Construction | 0.175 | 0.167 | 0.261 | 0.212 | 0.159 | 0.111 | 0.098 |
| G. Wholesale and retail trade; repair | 0.244 | 0.285 | 0.264 | 0.158 | 0.141 | 0.174 | 0.179 |
| H. Hotels and restaurants | 0.424 | 0.431 | 0.444 | 0.354 | 0.255 | 0.215 | 0.182 |
| I. Transport, storage and communication | 0.649 | 0.555 | 0.558 | 0.483 | 0.505 | 0.510 | 0.473 |
| J. Financial intermediation | 0.727 | 0.389 | 0.513 | 0.522 | 0.356 | 0.641 | 0.484 |
| K. Real estate, renting and business activity | 0.133 | 0.106 | 0.110 | 0.154 | 0.158 | 0.543 | 0.091 |
| L. Public administration, defence, social security | 1.000 | .. | .. | .. | 1.000 | .. | .. |
| M. Education | 0.457 | 0.653 | 0.693 | 0.363 | 0.475 | 0.479 | 0.382 |
| N. Health and social work | 0.443 | 0.410 | 0.564 | 0.293 | 0.225 | 0.158 | 0.235 |
| O. Other community, social and personal service | 0.294 | 0.295 | 0.335 | 0.308 | 0.228 | 0.218 | 0.233 |
| P. Private households with employed persons | .. | .. | .. | .. | .. | .. | .. |
| Q. Extra-territorial organizations | 1.000 | .. | .. | .. | .. | .. | .. |

Table B-A5. Indicators of competitive pressure: market share of the foreign controlled firms by NACE sections

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| A. Agriculture, hunting and forestry | 0.000 | 0.000 | 0.006 | 0.012 | 0.008 | 0.009 | 0.009 |
| B. Fishing | 0.005 | 0.009 | | 0.002 | 0.003 | 0.011 | 0.067 |
| C. Mining and quarrying | 0.028 | 0.023 | 0.027 | 0.030 | 0.029 | 0.052 | 0.061 |
| D. Manufacturing | 0.018 | 0.033 | 0.065 | 0.135 | 0.283 | 0.365 | 0.229 |
| E. Electricity, gas and water supply | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.023 |
| F. Construction | 0.002 | 0.012 | 0.015 | 0.020 | 0.024 | 0.036 | 0.064 |
| G. Wholesale and retail trade; repair | 0.024 | 0.097 | 0.133 | 0.127 | 0.169 | 0.193 | 0.241 |
| H. Hotels and restaurants | 0.001 | 0.025 | 0.112 | 0.109 | 0.223 | 0.156 | 0.139 |
| I. Transport, storage and communication | 0.003 | 0.011 | 0.018 | 0.034 | 0.136 | 0.135 | 0.074 |
| J. Financial intermediation | 0.000 | 0.103 | 0.006 | 0.128 | 0.038 | 0.038 | 0.173 |
| K. Real estate, renting and business activity | 0.015 | 0.087 | 0.150 | 0.121 | 0.129 | 0.080 | 0.180 |
| L. Public administration, defence, social security | | | | | | | |
| M. Education | | 0.063 | 0.038 | 0.064 | 0.043 | 0.036 | 0.038 |
| N. Health and social work | 0.000 | 0.001 | 0.000 | 0.021 | 0.044 | 0.005 | 0.006 |
| O. Other community, social and personal service | 0.013 | 0.044 | 0.032 | 0.044 | 0.067 | 0.089 | 0.084 |
| P. Private households with employed persons | | | | | | | |
| Q. Extra-territorial organizations | | | | | | | |

Table B-A6. Indicators of competitive pressure: share of advertising in operating expenditure by NACE sections

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|------|-------|-------|-------|-------|-------|-------|
| A. Agriculture, hunting and forestry | | 0.001 | 0.000 | 0.001 | 0.001 | 0.001 | 0.001 |
| B. Fishing | | 0.000 | 0.002 | 0.000 | 0.002 | 0.014 | 0.046 |
| C. Mining and quarrying | | 0.002 | 0.001 | 0.003 | 0.002 | 0.004 | 0.005 |
| D. Manufacturing | | 0.003 | 0.003 | 0.006 | 0.005 | 0.007 | 0.009 |
| E. Electricity, gas and water supply | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| F. Construction | | 0.002 | 0.002 | 0.003 | 0.004 | 0.006 | 0.007 |
| G. Wholesale and retail trade; repair | | 0.026 | 0.026 | 0.030 | 0.042 | 0.042 | 0.030 |
| H. Hotels and restaurants | | 0.016 | 0.030 | 0.016 | 0.015 | 0.015 | 0.020 |
| I. Transport, storage and communication | | 0.004 | 0.004 | 0.010 | 0.009 | 0.015 | 0.013 |
| J. Financial intermediation | | 0.132 | 0.058 | 0.052 | 0.000 | 0.105 | 0.083 |
| K. Real estate, renting and business activity | | 0.088 | 0.073 | 0.097 | 0.097 | 0.066 | 0.135 |
| L. Public administration, defence, social security | | | | | | | |
| M. Education | | 0.019 | 0.019 | 0.030 | 0.022 | 0.033 | 0.030 |
| N. Health and social work | | 0.079 | 0.005 | 0.018 | 0.015 | 0.002 | 0.003 |
| O. Other community, social and personal service | | 0.020 | 0.016 | 0.026 | 0.055 | 0.036 | 0.050 |
| P. Private households with employed persons | | | | | | | |
| Q. Extra-territorial organizations | | | | | | | |

Table B-A10. Indicators of competitive pressure: average mark-up ratios by NACE sectors, single year OLS estimations (based on $Y=sales=f(K,L,M)$)

| NACE sectors | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | |
|--------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² |
| A | 1.054*** | 0.072 | 1.071*** | 0.127 | 1.060*** | 0.085 | 1.060*** | 0.100 | 1.096*** | 0.115 | 1.089*** | 0.096 | 1.113*** | 0.144 |
| B | 1.450*** | 0.652 | 1.373** | 0.382 | 0.978 | 0.003 | 1.061 | 0.014 | 1.167 | 0.161 | 1.117 | 0.094 | 1.095 | 0.150 |
| C | 1.141*** | 0.194 | 1.162*** | 0.354 | 1.179*** | 0.379 | 1.134*** | 0.376 | 1.192*** | 0.494 | 1.215*** | 0.306 | 1.301*** | 0.436 |
| D | 1.129*** | 0.173 | 1.126*** | 0.198 | 1.148*** | 0.322 | 1.140*** | 0.297 | 1.189*** | 0.307 | 1.192*** | 0.238 | 1.208*** | 0.242 |
| E | 1.583*** | 0.282 | 1.033 | 0.021 | 0.991 | 0.002 | 1.149*** | 0.392 | 1.074* | 0.044 | 1.117*** | 0.186 | 1.021 | 0.002 |
| F | 1.049*** | 0.046 | 1.064*** | 0.084 | 1.055*** | 0.058 | 1.048*** | 0.047 | 1.070*** | 0.120 | 1.093*** | 0.160 | 1.075*** | 0.085 |
| G | 1.011** | 0.003 | 1.012*** | 0.003 | 1.040*** | 0.041 | 1.048*** | 0.100 | 1.056*** | 0.075 | 1.058*** | 0.063 | 1.052*** | 0.052 |
| H | 1.175*** | 0.374 | 1.218*** | 0.508 | 1.211*** | 0.456 | 1.251*** | 0.581 | 1.282*** | 0.406 | 1.270*** | 0.373 | 1.285*** | 0.410 |
| I | 1.183*** | 0.289 | 1.288*** | 0.471 | 1.308*** | 0.607 | 1.275*** | 0.561 | 1.358*** | 0.573 | 1.325*** | 0.467 | 1.332*** | 0.543 |
| J | 1.502*** | 0.998 | 2.238*** | 0.795 | 1.738*** | 0.720 | 1.991*** | 0.838 | 1.974*** | 0.758 | 2.183*** | 0.756 | 1.993*** | 0.789 |
| K | 1.179*** | 0.330 | 1.232*** | 0.304 | 1.209*** | 0.208 | 1.207*** | 0.185 | 1.261*** | 0.321 | 1.299*** | 0.279 | 1.280*** | 0.267 |
| L | 1.029 | 0.679 | | | | | | | | | | | | |
| M | 0.998 | 0.000 | 1.033 | 0.017 | 1.117*** | 0.116 | 1.051 | 0.019 | 1.115*** | 0.176 | 1.012 | 0.001 | 1.120*** | 0.128 |
| N | 1.184*** | 0.645 | 0.951 | 0.045 | 1.170*** | 0.300 | 1.074 | 0.026 | 1.103** | 0.098 | 1.050 | 0.028 | 1.169*** | 0.129 |
| O | 0.989 | 0.002 | 1.046*** | 0.037 | 1.054*** | 0.041 | 1.083*** | 0.077 | 1.057*** | 0.024 | 1.121*** | 0.115 | 1.132*** | 0.095 |
| P | | | | | | | | | | | | | | |
| Q | | | | | | | | | | | | | | |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

**Table B-A11. Indicators of competitive pressure: average mark-up ratios by NACE sectors, panel estimations
(based on $Y=\text{sales}=f(K,L,M)$)**

| NACE sectors | OLS | | | | | | Fixed effects | | | | | | Random effects | | | | | |
|-----------------|-----------|----------------|-----------|----------------|-----------|----------------|---------------|---------------------------|-----------|---------------------------|-----------|---------------------------|----------------|---------------------------|-----------|---------------------------|-----------|---------------------------|
| | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | |
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall |
| A | 1.058*** | 0.087 | 1.116*** | 0.199 | 1.087*** | 0.153 | 1.061*** | 0.087 | 1.135*** | 0.199 | 1.087*** | 0.153 | 1.059*** | 0.087 | 1.118*** | 0.199 | 1.087*** | 0.153 |
| B | 1.294*** | 0.319 | 1.116** | 0.092 | 1.249*** | 0.288 | 1.288*** | 0.319 | 1.077 | 0.092 | 1.199*** | 0.288 | 1.291*** | 0.319 | 1.116** | 0.092 | 1.240*** | 0.288 |
| C | 1.176*** | 0.386 | 1.198*** | 0.401 | 1.190*** | 0.427 | 1.182*** | 0.386 | 1.163*** | 0.401 | 1.177*** | 0.427 | 1.179*** | 0.386 | 1.198*** | 0.401 | 1.187*** | 0.427 |
| D | 1.141*** | 0.280 | 1.170*** | 0.288 | 1.164*** | 0.311 | 1.134*** | 0.280 | 1.168*** | 0.288 | 1.157*** | 0.311 | 1.141*** | 0.280 | 1.170*** | 0.288 | 1.162*** | 0.311 |
| E | 1.054*** | 0.036 | 1.093*** | 0.159 | 1.084*** | 0.126 | 1.230*** | 0.036 | 1.070*** | 0.159 | 1.119*** | 0.126 | 1.078*** | 0.036 | 1.087*** | 0.159 | 1.097*** | 0.126 |
| F | 1.064*** | 0.080 | 1.068*** | 0.092 | 1.071*** | 0.104 | 1.077*** | 0.080 | 1.070*** | 0.092 | 1.073*** | 0.104 | 1.070*** | 0.080 | 1.068*** | 0.092 | 1.072*** | 0.104 |
| G | 1.032*** | 0.026 | 1.053*** | 0.085 | 1.047*** | 0.064 | 1.030*** | 0.026 | 1.052*** | 0.085 | 1.046*** | 0.064 | 1.032*** | 0.026 | 1.053*** | 0.085 | 1.047*** | 0.064 |
| H | 1.217*** | 0.487 | 1.263*** | 0.465 | 1.248*** | 0.497 | 1.216*** | 0.487 | 1.274*** | 0.465 | 1.248*** | 0.497 | 1.218*** | 0.487 | 1.265*** | 0.465 | 1.249*** | 0.497 |
| I | 1.293*** | 0.570 | 1.318*** | 0.559 | 1.315*** | 0.586 | 1.259*** | 0.570 | 1.315*** | 0.559 | 1.304*** | 0.586 | 1.291*** | 0.570 | 1.318*** | 0.559 | 1.312*** | 0.586 |
| J | 1.925*** | 0.752 | 2.032*** | 0.781 | 2.011*** | 0.782 | 2.590*** | 0.752 | 2.054*** | 0.781 | 2.008*** | 0.782 | 1.957*** | 0.752 | 2.032*** | 0.781 | 2.011*** | 0.782 |
| K | 1.222*** | 0.254 | 1.257*** | 0.262 | 1.249*** | 0.277 | 1.228*** | 0.254 | 1.266*** | 0.262 | 1.234*** | 0.277 | 1.224*** | 0.254 | 1.258*** | 0.262 | 1.247*** | 0.277 |
| L | 1.029 | 0.679 | | | 1.029 | 0.679 | | | | | | | | | | | | |
| M | 1.068*** | 0.059 | 1.085*** | 0.065 | 1.078*** | 0.070 | 1.047** | 0.059 | 1.090*** | 0.065 | 1.071*** | 0.070 | 1.063*** | 0.059 | 1.085*** | 0.065 | 1.077*** | 0.070 |
| N | 1.094*** | 0.120 | 1.142*** | 0.104 | 1.126*** | 0.102 | 1.065 | 0.120 | 1.052 | 0.104 | 1.065*** | 0.102 | 1.093*** | 0.120 | 1.142*** | 0.104 | 1.126*** | 0.102 |
| O | 1.041*** | 0.028 | 1.090*** | 0.076 | 1.065*** | 0.055 | 1.031*** | 0.028 | 1.082*** | 0.076 | 1.061*** | 0.055 | 1.041*** | 0.028 | 1.088*** | 0.076 | 1.064*** | 0.055 |
| P | | | | | | | | | | | | | | | | | | |
| Q | | | | | | | | | | | | | | | | | | |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B-A12. Indicators of competitive pressure: average mark-up ratios by NACE sectors, panel estimations with time effects (based on $Y=\text{sales}=f(K,L,M)$)

| NACE sectors | OLS | | | | | | Fixed effects | | | | | | Random effects | | | | | |
|--------------|-----------|----------------|-----------|----------------|-----------|----------------|---------------|------------------------|-----------|------------------------|-----------|------------------------|----------------|------------------------|-----------|------------------------|-----------|------------------------|
| | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | |
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall |
| A | 1.061*** | 0.093 | 1.074*** | 0.348 | 1.065*** | 0.256 | 1.065*** | 0.093 | 1.076*** | 0.347 | 1.063*** | 0.255 | 1.062*** | 0.093 | 1.075*** | 0.348 | 1.064*** | 0.255 |
| B | 1.271*** | 0.367 | 1.104* | 0.169 | 1.173*** | 0.392 | 1.159** | 0.313 | 1.096 | 0.148 | 1.088* | 0.353 | 1.224*** | 0.353 | 1.104** | 0.169 | 1.170*** | 0.392 |
| C | 1.169*** | 0.390 | 1.195*** | 0.409 | 1.187*** | 0.433 | 1.171*** | 0.389 | 1.151*** | 0.400 | 1.170*** | 0.431 | 1.170*** | 0.390 | 1.194*** | 0.409 | 1.183*** | 0.433 |
| D | 1.140*** | 0.288 | 1.166*** | 0.291 | 1.155*** | 0.320 | 1.129*** | 0.287 | 1.162*** | 0.290 | 1.147*** | 0.319 | 1.140*** | 0.288 | 1.166*** | 0.291 | 1.153*** | 0.320 |
| E | 1.016 | 0.187 | 1.117*** | 0.174 | 1.066*** | 0.189 | 1.159*** | 0.103 | 1.106*** | 0.168 | 1.123*** | 0.172 | 1.031 | 0.185 | 1.117*** | 0.173 | 1.082*** | 0.186 |
| F | 1.057*** | 0.095 | 1.065*** | 0.096 | 1.061*** | 0.118 | 1.066*** | 0.094 | 1.067*** | 0.096 | 1.066*** | 0.115 | 1.061*** | 0.095 | 1.065*** | 0.096 | 1.063*** | 0.117 |
| G | 1.032*** | 0.026 | 1.051*** | 0.087 | 1.043*** | 0.072 | 1.028*** | 0.026 | 1.049*** | 0.087 | 1.043*** | 0.070 | 1.032*** | 0.026 | 1.051*** | 0.087 | 1.043*** | 0.072 |
| H | 1.209*** | 0.496 | 1.266*** | 0.468 | 1.244*** | 0.501 | 1.201*** | 0.496 | 1.270*** | 0.465 | 1.243*** | 0.497 | 1.208*** | 0.496 | 1.268*** | 0.468 | 1.244*** | 0.501 |
| I | 1.299*** | 0.572 | 1.309*** | 0.564 | 1.305*** | 0.592 | 1.274*** | 0.572 | 1.304*** | 0.564 | 1.298*** | 0.591 | 1.299*** | 0.572 | 1.308*** | 0.564 | 1.304*** | 0.592 |
| J | 1.916*** | 0.754 | 2.034*** | 0.782 | 2.004*** | 0.783 | 2.509*** | 0.753 | 2.051*** | 0.780 | 2.020*** | 0.774 | 1.939*** | 0.754 | 2.034*** | 0.782 | 2.004*** | 0.783 |
| K | 1.214*** | 0.258 | 1.246*** | 0.267 | 1.233*** | 0.284 | 1.219*** | 0.257 | 1.255*** | 0.267 | 1.224*** | 0.280 | 1.216*** | 0.258 | 1.248*** | 0.267 | 1.232*** | 0.284 |
| L | 1.029 | 0.679 | | | 1.029 | 0.679 | | | | | | | | | | | | |
| M | 1.071*** | 0.068 | 1.072*** | 0.086 | 1.072*** | 0.087 | 1.057** | 0.065 | 1.072*** | 0.085 | 1.058*** | 0.082 | 1.069*** | 0.067 | 1.072*** | 0.086 | 1.070*** | 0.087 |
| N | 1.106*** | 0.142 | 1.116*** | 0.141 | 1.114*** | 0.141 | 1.064 | 0.115 | 1.027 | 0.111 | 1.058** | 0.116 | 1.105*** | 0.141 | 1.116*** | 0.141 | 1.114*** | 0.141 |
| O | 1.038*** | 0.035 | 1.090*** | 0.078 | 1.060*** | 0.060 | 1.024** | 0.031 | 1.085*** | 0.076 | 1.053*** | 0.059 | 1.038*** | 0.035 | 1.089*** | 0.077 | 1.059*** | 0.060 |
| P | | | | | | | | | | | | | | | | | | |
| Q | | | | | | | | | | | | | | | | | | |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

B. Market Structure and Competitive Pressure in the Manufacturing Sector

Table B-B1. Number of firms by NACE-2 sectors and ownership categories

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| I. Number of manufacturing firms by NACE-2 sectors | | | | | | | |
| 15 : Manufacture of food products and beverages | 942 | 1530 | 1776 | 2014 | 2198 | 2331 | 2530 |
| 16 : Manufacture of tobacco products | 25 | 31 | 27 | 31 | 30 | 31 | 32 |
| 17 : Manufacture of textiles | 187 | 246 | 251 | 273 | 322 | 328 | 357 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 423 | 726 | 853 | 999 | 1153 | 1239 | 1431 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 98 | 144 | 167 | 199 | 229 | 243 | 250 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 187 | 443 | 527 | 522 | 622 | 619 | 650 |
| 21 : Manufacture of pulp, paper and paper products | 78 | 121 | 129 | 171 | 182 | 216 | 239 |
| 22 : Publishing, printing and reproduction of recorded media | 379 | 580 | 641 | 680 | 729 | 778 | 820 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 8 | 8 | 9 | 9 | 12 | 12 | 14 |
| 24 : Manufacture of chemicals and chemical products | 148 | 278 | 317 | 345 | 377 | 417 | 428 |
| 25 : Manufacture of rubber and plastic products | 129 | 335 | 389 | 381 | 439 | 454 | 488 |
| 26 : Manufacture of other non-metallic mineral products | 192 | 279 | 299 | 311 | 360 | 372 | 398 |
| 27 : Manufacture of basic metals | 85 | 114 | 111 | 119 | 134 | 150 | 168 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 351 | 698 | 723 | 759 | 872 | 914 | 967 |
| 29 : Manufacture of machinery and equipment n.e.c. | 453 | 727 | 772 | 817 | 937 | 976 | 1024 |
| 30 : Manufacture of office machinery and computers | 53 | 78 | 98 | 84 | 83 | 81 | 86 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 137 | 255 | 263 | 294 | 337 | 362 | 387 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 91 | 150 | 154 | 145 | 141 | 125 | 132 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 107 | 162 | 175 | 206 | 231 | 415 | 473 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 38 | 63 | 64 | 71 | 76 | 76 | 83 |
| 35 : Manufacture of other transport equipment | 43 | 74 | 75 | 84 | 130 | 144 | 146 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 262 | 417 | 470 | 476 | 561 | 625 | 656 |
| 37 : Recycling | 4 | 4 | 7 | 9 | 8 | 9 | 16 |
| II. Number of manufacturing firms by ownership categories | | | | | | | |
| SOEs | 2039 | 2063 | 1129 | 879 | 645 | 529 | 383 |
| Firms privatized to domestic investors | 67 | 53 | 728 | 153 | 174 | 86 | 105 |
| Domestically controlled de novo private firms with 20 or more employees | 724 | 997 | 1381 | 2375 | 2551 | 2727 | 2936 |
| Foreign controlled firms with 20 or more employees | 47 | 108 | 199 | 287 | 378 | 453 | 490 |
| Domestically controlled de novo private firms with less than 20 employees | 1510 | 4032 | 4616 | 5014 | 6034 | 6708 | 7376 |
| Foreign controlled private firms with less than 20 employees | 33 | 210 | 244 | 291 | 381 | 414 | 485 |
| All manufacturing firms | 4420 | 7463 | 8297 | 8999 | 10163 | 10917 | 11775 |

Table B-B3. Indicators of competitive pressure: Herfindahl index by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| 16 : Manufacture of tobacco products | 0.090 | 0.093 | 0.133 | 0.119 | 0.157 | 0.175 | 0.201 |
| 17 : Manufacture of textiles | 0.020 | 0.022 | 0.022 | 0.020 | 0.023 | 0.021 | 0.029 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.016 | 0.016 | 0.012 | 0.009 | 0.007 | 0.006 | 0.005 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.050 | 0.060 | 0.046 | 0.034 | 0.027 | 0.032 | 0.028 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.048 | 0.059 | 0.048 | 0.048 | 0.037 | 0.045 | 0.032 |
| 21 : Manufacture of pulp, paper and paper products | 0.067 | 0.064 | 0.071 | 0.061 | 0.054 | 0.054 | 0.053 |
| 22 : Publishing, printing and reproduction of recorded media | 0.132 | 0.120 | 0.125 | 0.056 | 0.045 | 0.046 | 0.041 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 0.804 | 0.942 | 0.949 | 0.480 | 0.908 | 0.956 | 0.812 |
| 24 : Manufacture of chemicals and chemical products | 0.062 | 0.068 | 0.061 | 0.043 | 0.041 | 0.051 | 0.051 |
| 25 : Manufacture of rubber and plastic products | 0.091 | 0.084 | 0.078 | 0.052 | 0.040 | 0.038 | 0.038 |
| 26 : Manufacture of other non-metallic mineral products | 0.035 | 0.038 | 0.045 | 0.032 | 0.035 | 0.042 | 0.044 |
| 27 : Manufacture of basic metals | 0.254 | 0.226 | 0.275 | 0.132 | 0.216 | 0.230 | 0.186 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.049 | 0.028 | 0.063 | 0.031 | 0.018 | 0.023 | 0.033 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.034 | 0.025 | 0.037 | 0.028 | 0.027 | 0.025 | 0.023 |
| 30 : Manufacture of office machinery and computers | 0.110 | 0.112 | 0.102 | 0.096 | 0.083 | 0.089 | 0.077 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.060 | 0.055 | 0.056 | 0.047 | 0.046 | 0.060 | 0.037 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.056 | 0.037 | 0.035 | 0.045 | 0.045 | 0.078 | 0.175 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.078 | 0.086 | 0.041 | 0.026 | 0.035 | 0.028 | 0.032 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.095 | 0.127 | 0.102 | 0.100 | 0.069 | 0.084 | 0.067 |
| 35 : Manufacture of other transport equipment | 0.325 | 0.232 | 0.284 | 0.395 | 0.086 | 0.114 | 0.088 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.015 | 0.016 | 0.015 | 0.015 | 0.016 | 0.016 | 0.014 |
| 37 : Recycling | 0.391 | 0.565 | 0.516 | 0.245 | 0.301 | 0.359 | 0.693 |

Table B-B4. Indicators of competitive pressure: market share of the 5 largest firms by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | 0.097 | 0.106 | 0.110 | 0.092 | 0.108 | 0.105 | 0.107 |
| 16 : Manufacture of tobacco products | 0.586 | 0.583 | 0.648 | 0.603 | 0.643 | 0.683 | 0.730 |
| 17 : Manufacture of textiles | 0.218 | 0.236 | 0.223 | 0.214 | 0.246 | 0.217 | 0.277 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.203 | 0.205 | 0.160 | 0.137 | 0.114 | 0.099 | 0.097 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.424 | 0.464 | 0.388 | 0.332 | 0.274 | 0.333 | 0.300 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.408 | 0.437 | 0.374 | 0.380 | 0.372 | 0.402 | 0.330 |
| 21 : Manufacture of pulp, paper and paper products | 0.476 | 0.474 | 0.515 | 0.485 | 0.433 | 0.432 | 0.433 |
| 22 : Publishing, printing and reproduction of recorded media | 0.577 | 0.553 | 0.581 | 0.431 | 0.399 | 0.400 | 0.389 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 1.000 | 1.000 | 1.000 | 0.984 | 0.999 | 0.999 | 0.997 |
| 24 : Manufacture of chemicals and chemical products | 0.460 | 0.512 | 0.470 | 0.341 | 0.340 | 0.414 | 0.423 |
| 25 : Manufacture of rubber and plastic products | 0.574 | 0.560 | 0.520 | 0.435 | 0.356 | 0.344 | 0.348 |
| 26 : Manufacture of other non-metallic mineral products | 0.317 | 0.325 | 0.376 | 0.308 | 0.336 | 0.379 | 0.385 |
| 27 : Manufacture of basic metals | 0.842 | 0.819 | 0.890 | 0.755 | 0.796 | 0.841 | 0.773 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.342 | 0.296 | 0.358 | 0.273 | 0.231 | 0.245 | 0.281 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.338 | 0.287 | 0.317 | 0.287 | 0.316 | 0.282 | 0.276 |
| 30 : Manufacture of office machinery and computers | 0.684 | 0.678 | 0.692 | 0.638 | 0.578 | 0.605 | 0.528 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.420 | 0.402 | 0.399 | 0.390 | 0.352 | 0.385 | 0.323 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.442 | 0.331 | 0.305 | 0.363 | 0.381 | 0.470 | 0.613 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.509 | 0.482 | 0.365 | 0.283 | 0.344 | 0.289 | 0.306 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.602 | 0.739 | 0.642 | 0.602 | 0.515 | 0.593 | 0.506 |
| 35 : Manufacture of other transport equipment | 0.897 | 0.767 | 0.744 | 0.848 | 0.567 | 0.584 | 0.528 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.166 | 0.198 | 0.216 | 0.194 | 0.211 | 0.212 | 0.198 |
| 37 : Recycling | 1.000 | 1.000 | 0.999 | 0.911 | 0.993 | 0.984 | 0.980 |

Table B-B5. Indicators of competitive pressure: market share of the foreign controlled firms by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | 0.067 | 0.106 | 0.127 | 0.200 | 0.214 | 0.236 | 0.245 |
| 16 : Manufacture of tobacco products | .. | .. | 0.001 | 0.012 | 0.015 | 0.018 | 0.024 |
| 17 : Manufacture of textiles | 0.000 | 0.000 | 0.011 | 0.019 | 0.044 | 0.153 | 0.227 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.022 | 0.090 | 0.112 | 0.185 | 0.223 | 0.275 | 0.287 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.002 | 0.019 | 0.056 | 0.045 | 0.138 | 0.176 | 0.230 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.014 | 0.030 | 0.274 | 0.309 | 0.386 | 0.427 | 0.305 |
| 21 : Manufacture of pulp, paper and paper products | 0.004 | 0.001 | 0.123 | 0.186 | 0.323 | 0.304 | 0.237 |
| 22 : Publishing, printing and reproduction of recorded media | 0.008 | 0.010 | 0.008 | 0.023 | 0.021 | 0.049 | 0.052 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | .. | .. | .. | .. | 0.952 | 0.978 | .. |
| 24 : Manufacture of chemicals and chemical products | 0.001 | 0.005 | 0.116 | 0.045 | 0.227 | 0.399 | 0.394 |
| 25 : Manufacture of rubber and plastic products | 0.004 | 0.022 | 0.063 | 0.065 | 0.104 | 0.157 | 0.170 |
| 26 : Manufacture of other non-metallic mineral products | 0.001 | 0.014 | 0.089 | 0.257 | 0.287 | 0.327 | 0.370 |
| 27 : Manufacture of basic metals | 0.006 | 0.007 | 0.008 | 0.221 | 0.154 | 0.211 | 0.157 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.007 | 0.043 | 0.065 | 0.086 | 0.121 | 0.145 | 0.140 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.032 | 0.052 | 0.127 | 0.126 | 0.159 | 0.198 | 0.216 |
| 30 : Manufacture of office machinery and computers | .. | 0.003 | 0.001 | 0.013 | 0.055 | 0.094 | 0.127 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.002 | 0.016 | 0.068 | 0.099 | 0.132 | 0.350 | 0.276 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.047 | 0.092 | 0.188 | 0.209 | 0.285 | 0.435 | 0.576 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.000 | 0.022 | 0.047 | 0.049 | 0.110 | 0.083 | 0.218 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.059 | 0.253 | 0.022 | 0.027 | 0.070 | 0.017 | 0.037 |
| 35 : Manufacture of other transport equipment | 0.001 | 0.007 | 0.007 | 0.006 | 0.204 | 0.374 | 0.337 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.002 | 0.050 | 0.051 | 0.098 | 0.136 | 0.121 | 0.098 |
| 37 : Recycling | .. | 0.000 | 0.002 | 0.062 | .. | 0.000 | 0.000 |

Table B-B6. Indicators of competitive pressure: share of advertising in operating expenditure by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | | 0.004 | 0.004 | 0.008 | 0.014 | 0.016 | 0.018 |
| 16 : Manufacture of tobacco products | | 0.003 | 0.004 | 0.003 | 0.005 | 0.006 | 0.009 |
| 17 : Manufacture of textiles | | 0.001 | 0.002 | 0.002 | 0.003 | 0.004 | 0.004 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | | 0.005 | 0.003 | 0.003 | 0.004 | 0.006 | 0.006 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | | 0.003 | 0.002 | 0.004 | 0.003 | 0.006 | 0.004 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | | 0.001 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 |
| 21 : Manufacture of pulp, paper and paper products | | 0.001 | 0.001 | 0.004 | 0.002 | 0.003 | 0.003 |
| 22 : Publishing, printing and reproduction of recorded media | | 0.028 | 0.008 | 0.020 | 0.019 | 0.024 | 0.025 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | | 0.000 | 0.000 | 0.007 | 0.001 | 0.001 | 0.005 |
| 24 : Manufacture of chemicals and chemical products | | 0.002 | 0.004 | 0.004 | 0.004 | 0.006 | 0.009 |
| 25 : Manufacture of rubber and plastic products | | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| 26 : Manufacture of other non-metallic mineral products | | 0.003 | 0.003 | 0.004 | 0.005 | 0.004 | 0.006 |
| 27 : Manufacture of basic metals | | 0.000 | 0.001 | 0.010 | 0.001 | 0.005 | 0.003 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | | 0.002 | 0.002 | 0.004 | 0.004 | 0.003 | 0.006 |
| 29 : Manufacture of machinery and equipment n.e.c. | | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.006 |
| 30 : Manufacture of office machinery and computers | | 0.016 | 0.007 | 0.006 | 0.012 | 0.009 | 0.007 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | | 0.002 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | | 0.005 | 0.018 | 0.008 | 0.012 | 0.009 | 0.008 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | | 0.003 | 0.002 | 0.004 | 0.005 | 0.007 | 0.009 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | | 0.003 | 0.003 | 0.003 | 0.002 | 0.008 | 0.005 |
| 35 : Manufacture of other transport equipment | | 0.003 | 0.002 | 0.001 | 0.001 | 0.003 | 0.002 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | | 0.004 | 0.006 | 0.006 | 0.005 | 0.006 | 0.009 |
| 37 : Recycling | | 0.004 | 0.000 | 0.017 | 0.000 | 0.001 | 0.003 |

Table B-B7. Indicators of competitive pressure: share of investment in net sales by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | 0.037 | 0.037 | 0.174 | 0.033 | 0.053 | 0.047 | 0.045 |
| 16 : Manufacture of tobacco products | 0.011 | 0.054 | 0.144 | 0.008 | 0.061 | 0.028 | 0.013 |
| 17 : Manufacture of textiles | 0.031 | 0.017 | 0.398 | 0.031 | 0.052 | 0.138 | 0.161 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.037 | 0.043 | 0.260 | 0.068 | 0.055 | 0.061 | 0.079 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.020 | 0.016 | 0.169 | 0.036 | 0.053 | 0.037 | 0.038 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.022 | 0.015 | 0.267 | 0.050 | 0.074 | 0.039 | 0.036 |
| 21 : Manufacture of pulp, paper and paper products | 0.019 | 0.018 | 0.343 | 0.038 | 0.065 | 0.370 | 0.060 |
| 22 : Publishing, printing and reproduction of recorded media | 0.021 | 0.028 | 0.195 | 0.064 | 0.054 | 0.076 | 0.039 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 0.067 | 0.009 | 0.209 | 0.041 | 0.008 | 0.011 | 0.088 |
| 24 : Manufacture of chemicals and chemical products | 0.028 | 0.023 | 0.310 | 0.031 | 0.024 | 0.036 | 0.052 |
| 25 : Manufacture of rubber and plastic products | 0.015 | 0.022 | 0.404 | 0.050 | 0.042 | 0.054 | 0.110 |
| 26 : Manufacture of other non-metallic mineral products | 0.019 | 0.020 | 0.270 | 0.100 | 0.093 | 0.115 | 0.120 |
| 27 : Manufacture of basic metals | 0.045 | 0.011 | 0.202 | 0.039 | 0.009 | 0.022 | 0.035 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.021 | 0.029 | 0.207 | 0.050 | 0.046 | 0.034 | 0.042 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.035 | 0.012 | 0.454 | 0.041 | 0.043 | 0.070 | 0.039 |
| 30 : Manufacture of office machinery and computers | 0.006 | 0.021 | 0.140 | 0.076 | 0.100 | 0.023 | 0.014 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.028 | 0.007 | 0.301 | 0.028 | 0.043 | 0.032 | 0.036 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.015 | 0.021 | 0.656 | 0.121 | 0.080 | 0.048 | 0.069 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.014 | 0.016 | 0.338 | 0.036 | 0.050 | 0.035 | 0.087 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.032 | 0.028 | 0.412 | 0.060 | 0.016 | 0.024 | 0.022 |
| 35 : Manufacture of other transport equipment | 0.007 | 0.011 | 0.218 | 0.019 | 0.128 | 0.032 | 0.027 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.014 | 0.020 | 0.238 | 0.040 | 0.075 | 0.042 | 0.040 |
| 37 : Recycling | 0.010 | 0.022 | 0.023 | 0.015 | 0.001 | 0.001 | 0.032 |

Table B-B8. Indicators of competitive pressure: share of exports in net sales by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|-------|-------|-------|-------|-------|-------|-------|
| 15 : Manufacture of food products and beverages | 0.137 | 0.162 | 0.004 | 0.126 | 0.097 | 0.096 | 0.107 |
| 16 : Manufacture of tobacco products | 0.529 | 0.582 | 0.010 | 0.280 | 0.238 | 0.234 | 0.197 |
| 17 : Manufacture of textiles | 0.265 | 0.304 | 0.025 | 0.324 | 0.343 | 0.415 | 0.448 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.433 | 0.385 | 0.210 | 0.408 | 0.479 | 0.476 | 0.516 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.323 | 0.370 | 0.110 | 0.368 | 0.411 | 0.452 | 0.443 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.231 | 0.314 | 0.009 | 0.343 | 0.375 | 0.360 | 0.296 |
| 21 : Manufacture of pulp, paper and paper products | 0.093 | 0.105 | 0.004 | 0.185 | 0.068 | 0.152 | 0.121 |
| 22 : Publishing, printing and reproduction of recorded media | 0.011 | 0.012 | 0.005 | 0.016 | 0.011 | 0.020 | 0.015 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 0.292 | 0.272 | 0.000 | 0.030 | 0.005 | 0.006 | 0.068 |
| 24 : Manufacture of chemicals and chemical products | 0.488 | 0.521 | 0.000 | 0.482 | 0.322 | 0.490 | 0.474 |
| 25 : Manufacture of rubber and plastic products | 0.163 | 0.173 | 0.045 | 0.143 | 0.134 | 0.175 | 0.154 |
| 26 : Manufacture of other non-metallic mineral products | 0.238 | 0.240 | 0.004 | 0.207 | 0.143 | 0.283 | 0.245 |
| 27 : Manufacture of basic metals | 0.497 | 0.481 | 0.014 | 0.559 | 0.233 | 0.640 | 0.658 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.150 | 0.153 | 0.018 | 0.208 | 0.162 | 0.185 | 0.199 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.378 | 0.332 | 0.012 | 0.386 | 0.221 | 0.342 | 0.405 |
| 30 : Manufacture of office machinery and computers | 0.180 | 0.262 | 0.003 | 0.342 | 0.093 | 0.264 | 0.244 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.297 | 0.350 | 0.017 | 0.293 | 0.267 | 0.237 | 0.323 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.172 | 0.145 | 0.010 | 0.181 | 0.252 | 0.341 | 0.247 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.137 | 0.190 | 0.029 | 0.115 | 0.154 | 0.239 | 0.253 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.108 | 0.085 | 0.014 | 0.124 | 0.095 | 0.088 | 0.146 |
| 35 : Manufacture of other transport equipment | 0.762 | 0.489 | 0.122 | 0.707 | 0.360 | 0.477 | 0.505 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.233 | 0.292 | 0.095 | 0.323 | 0.253 | 0.412 | 0.350 |
| 37 : Recycling | .. | 0.005 | .. | 0.062 | .. | 0.042 | 0.000 |

Table B-B9. Indicators of competitive pressure: import penetration by NACE-2 sectors

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 15 : Manufacture of food products and beverages | 0.178 | 0.149 | 0.171 | 0.156 | 0.132 | 0.149 | 0.165 |
| 16 : Manufacture of tobacco products | 0.095 | 0.129 | 0.078 | 0.118 | 0.120 | 0.124 | 0.027 |
| 17 : Manufacture of textiles | 0.225 | 0.256 | 0.240 | 0.337 | 0.737 | 0.791 | 0.818 |
| 18 : Manufacture of wearing apparel; dressing and dyeing of fur | 0.301 | 0.314 | 0.367 | 0.447 | 0.511 | 0.511 | 0.566 |
| 19 : Tanning and dressing of leather; manufacture of luggage and footwear | 0.289 | 0.398 | 0.412 | 0.442 | 0.665 | 0.699 | 0.707 |
| 20 : Manufacture of wood and wood products, except furniture; articles of straw | 0.190 | 0.225 | 0.214 | 0.219 | 0.188 | 0.221 | 0.236 |
| 21 : Manufacture of pulp, paper and paper products | 0.464 | 0.470 | 0.429 | 0.505 | 0.523 | 0.576 | 0.606 |
| 22 : Publishing, printing and reproduction of recorded media | 0.101 | 0.117 | 0.114 | 0.124 | 0.160 | 0.120 | 0.091 |
| 23 : Manufacture of coke, refined petroleum products and nuclear fuel | 0.135 | 0.083 | 0.096 | 0.869 | 0.086 | 0.136 | 0.504 |
| 24 : Manufacture of chemicals and chemical products | 0.535 | 0.486 | 0.341 | 0.576 | 0.540 | 0.595 | 0.617 |
| 25 : Manufacture of rubber and plastic products | 0.315 | 0.323 | 0.348 | 0.422 | 0.514 | 0.556 | 0.591 |
| 26 : Manufacture of other non-metallic mineral products | 0.166 | 0.180 | 0.152 | 0.157 | 0.172 | 0.237 | 0.260 |
| 27 : Manufacture of basic metals | 0.273 | 0.248 | 0.173 | 0.481 | 0.240 | 0.448 | 0.495 |
| 28 : Manufacture of fabricated metal products, except machinery and equipment | 0.278 | 0.316 | 0.265 | 0.269 | 0.354 | 0.396 | 0.473 |
| 29 : Manufacture of machinery and equipment n.e.c. | 0.491 | 0.450 | 0.458 | 0.530 | 0.537 | 0.606 | 0.618 |
| 30 : Manufacture of office machinery and computers | 0.595 | 0.734 | 0.586 | 0.738 | 0.772 | 0.770 | 0.821 |
| 31 : Manufacture of electrical machinery and apparatus n.e.c. | 0.369 | 0.408 | 0.328 | 0.438 | 0.466 | 0.476 | 0.565 |
| 32 : Manufacture of radio, television and communication equipment and apparatus | 0.644 | 0.703 | 0.763 | 0.821 | 0.848 | 0.823 | 0.835 |
| 33 : Manufacture of medical, precision and optical instruments, watches and clocks | 0.726 | 0.734 | 0.770 | 0.770 | 0.742 | 0.774 | 0.784 |
| 34 : Manufacture of motor vehicles, trailers and semi-trailers | 0.839 | 0.766 | 0.783 | 0.864 | 0.948 | 0.943 | 0.963 |
| 35 : Manufacture of other transport equipment | 0.399 | 0.204 | 0.172 | 0.459 | 0.426 | 0.555 | 0.590 |
| 36 : Manufacture of furniture; manufacturing n.e.c. | 0.344 | 0.352 | 0.384 | 0.439 | 0.452 | 0.516 | 0.485 |
| 37 : Recycling | - | - | - | - | - | - | - |
| Manufacturing total | 0.322 | 0.296 | 0.262 | 0.401 | 0.390 | 0.433 | 0.522 |

Table B-B10. Indicators of competitive pressure: average mark-up ratios by NACE-2 sectors, single year OLS estimations (based on $Y=\text{sales}=f(K,L,M)$)

| NACE 2-digit sectors | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | |
|----------------------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² |
| 15 | 1.128*** | 0.190 | 1.075*** | 0.116 | 1.080*** | 0.155 | 1.072*** | 0.135 | 1.108*** | 0.161 | 1.134*** | 0.173 | 1.143*** | 0.158 |
| 16 | 1.110*** | 0.477 | 1.544*** | 0.283 | 0.926 | 0.111 | 0.949 | 0.093 | 1.155*** | 0.387 | 1.162*** | 0.332 | 1.218*** | 0.383 |
| 17 | 1.133*** | 0.187 | 1.111*** | 0.154 | 1.164*** | 0.426 | 1.146*** | 0.478 | 1.158*** | 0.130 | 1.202*** | 0.219 | 1.177*** | 0.158 |
| 18 | 1.068*** | 0.050 | 1.104*** | 0.118 | 1.160*** | 0.233 | 1.141*** | 0.210 | 1.190*** | 0.225 | 1.183*** | 0.226 | 1.225*** | 0.218 |
| 19 | 1.008 | 0.003 | 1.116*** | 0.112 | 1.112*** | 0.272 | 1.107*** | 0.197 | 1.149*** | 0.183 | 1.180*** | 0.209 | 1.050 | 0.014 |
| 20 | 1.032 | 0.020 | 1.137*** | 0.209 | 1.107*** | 0.135 | 1.096*** | 0.159 | 1.125*** | 0.128 | 1.125*** | 0.172 | 1.172*** | 0.162 |
| 21 | 1.387*** | 0.515 | 1.096*** | 0.282 | 1.165*** | 0.661 | 1.111*** | 0.335 | 1.145*** | 0.340 | 1.170*** | 0.544 | 1.331*** | 0.299 |
| 22 | 1.045*** | 0.120 | 1.053*** | 0.070 | 1.077*** | 0.120 | 1.097*** | 0.234 | 1.103*** | 0.190 | 1.098*** | 0.097 | 1.060*** | 0.033 |
| 23 | 1.513 | 0.598 | 0.975 | 0.040 | 1.276** | 0.629 | 1.233*** | 0.853 | 7.616*** | 0.762 | 1.224*** | 0.813 | 1.125 | 0.210 |
| 24 | 1.110*** | 0.161 | 1.034 | 0.015 | 1.072*** | 0.062 | 1.092*** | 0.199 | 1.173*** | 0.228 | 1.156*** | 0.224 | 1.163*** | 0.173 |
| 25 | 1.057*** | 0.111 | 1.001 | 0.000 | 1.093*** | 0.183 | 1.075*** | 0.161 | 1.115*** | 0.224 | 1.137*** | 0.265 | 1.088*** | 0.112 |
| 26 | 1.099*** | 0.095 | 1.113*** | 0.133 | 1.093*** | 0.185 | 1.148*** | 0.369 | 1.138*** | 0.230 | 1.130*** | 0.236 | 1.212*** | 0.360 |
| 27 | 1.219*** | 0.261 | 1.182*** | 0.470 | 1.206*** | 0.318 | 1.243*** | 0.733 | 1.275*** | 0.654 | 1.590*** | 0.560 | 1.231*** | 0.471 |
| 28 | 1.041** | 0.026 | 1.084*** | 0.140 | 1.097*** | 0.154 | 1.099*** | 0.150 | 1.154*** | 0.220 | 1.109*** | 0.043 | 1.188*** | 0.159 |
| 29 | 1.125*** | 0.145 | 1.127*** | 0.221 | 1.156*** | 0.210 | 1.131*** | 0.214 | 1.243*** | 0.409 | 1.225*** | 0.312 | 1.241*** | 0.386 |
| 30 | 1.553*** | 0.441 | 1.423*** | 0.802 | 1.367*** | 0.903 | 1.396*** | 0.900 | 1.373*** | 0.440 | 1.426*** | 0.346 | 1.402*** | 0.768 |
| 31 | 0.882*** | 0.142 | 1.069*** | 0.159 | 1.101*** | 0.225 | 1.137*** | 0.163 | 1.141*** | 0.314 | 1.152*** | 0.253 | 1.128*** | 0.153 |
| 32 | 1.261*** | 0.250 | 1.419*** | 0.672 | 1.382*** | 0.818 | 1.345*** | 0.537 | 1.554*** | 0.706 | 1.448*** | 0.595 | 1.376*** | 0.653 |
| 33 | 1.225*** | 0.287 | 1.149*** | 0.158 | 1.132*** | 0.197 | 1.076*** | 0.064 | 1.212*** | 0.337 | 1.142*** | 0.111 | 1.309*** | 0.309 |
| 34 | 1.267*** | 0.387 | 1.204*** | 0.468 | 1.239*** | 0.324 | 1.314*** | 0.627 | 1.216*** | 0.377 | 1.332*** | 0.343 | 1.395*** | 0.202 |
| 35 | 1.544*** | 0.601 | 1.184*** | 0.464 | 1.455*** | 0.705 | 1.109 | 0.051 | 1.450*** | 0.473 | 1.208*** | 0.225 | 1.298*** | 0.319 |
| 36 | 1.094*** | 0.198 | 1.029* | 0.015 | 1.049*** | 0.047 | 1.090*** | 0.176 | 1.142*** | 0.333 | 1.191*** | 0.244 | 1.221*** | 0.274 |
| 37 | 1.977** | 0.966 | | | 1.030 | 0.000 | 1.011 | 0.068 | 0.916* | 0.748 | 1.018 | 0.005 | 1.128 | 0.369 |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

**Table B-B11. Indicators of competitive pressure: average mark-up ratios by NACE-2 sectors, panel estimations
(based on $Y=\text{sales}=f(K,L,M)$)**

| NACE 2-digit sectors | OLS | | | | | | Fixed effects | | | | | | Random effects | | | | | |
|----------------------------|-----------|----------------|-----------|----------------|-----------|----------------|---------------|---------------------------|-----------|---------------------------|-----------|---------------------------|----------------|---------------------------|-----------|---------------------------|-----------|---------------------------|
| | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | |
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall |
| 15 | 1.085*** | 0.160 | 1.101*** | 0.160 | 1.101*** | 0.187 | 1.086*** | 0.160 | 1.092*** | 0.160 | 1.096*** | 0.187 | 1.085*** | 0.160 | 1.100*** | 0.160 | 1.100*** | 0.187 |
| 16 | 1.238*** | 0.164 | 1.023 | 0.011 | 1.134*** | 0.094 | 1.087* | 0.164 | 1.028 | 0.011 | 1.057** | 0.094 | 1.149*** | 0.164 | 1.023 | 0.011 | 1.079*** | 0.094 |
| 17 | 1.147*** | 0.326 | 1.171*** | 0.277 | 1.166*** | 0.318 | 1.123*** | 0.326 | 1.175*** | 0.277 | 1.159*** | 0.318 | 1.144*** | 0.326 | 1.172*** | 0.277 | 1.164*** | 0.318 |
| 18 | 1.135*** | 0.184 | 1.172*** | 0.226 | 1.161*** | 0.225 | 1.081*** | 0.184 | 1.167*** | 0.226 | 1.145*** | 0.225 | 1.129*** | 0.184 | 1.171*** | 0.226 | 1.158*** | 0.225 |
| 19 | 1.088*** | 0.128 | 1.130*** | 0.160 | 1.116*** | 0.159 | 1.066*** | 0.128 | 1.136*** | 0.160 | 1.116*** | 0.159 | 1.088*** | 0.128 | 1.130*** | 0.160 | 1.116*** | 0.159 |
| 20 | 1.107*** | 0.140 | 1.115*** | 0.152 | 1.112*** | 0.158 | 1.107*** | 0.140 | 1.103*** | 0.152 | 1.103*** | 0.158 | 1.108*** | 0.140 | 1.111*** | 0.152 | 1.109*** | 0.158 |
| 21 | 1.166*** | 0.507 | 1.162*** | 0.354 | 1.168*** | 0.436 | 1.185*** | 0.507 | 1.181*** | 0.354 | 1.168*** | 0.436 | 1.166*** | 0.507 | 1.163*** | 0.354 | 1.168*** | 0.436 |
| 22 | 1.074*** | 0.129 | 1.098*** | 0.166 | 1.090*** | 0.164 | 1.072*** | 0.129 | 1.098*** | 0.166 | 1.086*** | 0.164 | 1.073*** | 0.129 | 1.098*** | 0.166 | 1.088*** | 0.164 |
| 23 | 1.256*** | 0.581 | 1.516*** | 0.462 | 1.449*** | 0.458 | 1.235** | 0.581 | 1.367*** | 0.462 | 1.385*** | 0.458 | 1.256*** | 0.581 | 1.463*** | 0.462 | 1.424*** | 0.458 |
| 24 | 1.067*** | 0.061 | 1.126*** | 0.204 | 1.113*** | 0.164 | 1.007 | 0.061 | 1.169*** | 0.204 | 1.104*** | 0.164 | 1.067*** | 0.061 | 1.140*** | 0.204 | 1.113*** | 0.164 |
| 25 | 1.070*** | 0.076 | 1.101*** | 0.215 | 1.096*** | 0.166 | 1.141*** | 0.076 | 1.115*** | 0.215 | 1.108*** | 0.166 | 1.081*** | 0.076 | 1.101*** | 0.215 | 1.101*** | 0.166 |
| 26 | 1.100*** | 0.160 | 1.160*** | 0.343 | 1.133*** | 0.281 | 1.110*** | 0.160 | 1.154*** | 0.343 | 1.124*** | 0.281 | 1.100*** | 0.160 | 1.160*** | 0.343 | 1.132*** | 0.281 |
| 27 | 1.194*** | 0.332 | 1.308*** | 0.556 | 1.252*** | 0.465 | 1.174*** | 0.332 | 1.336*** | 0.556 | 1.253*** | 0.465 | 1.194*** | 0.332 | 1.308*** | 0.556 | 1.252*** | 0.465 |
| 28 | 1.091*** | 0.148 | 1.125*** | 0.131 | 1.116*** | 0.153 | 1.087*** | 0.148 | 1.107*** | 0.131 | 1.102*** | 0.153 | 1.091*** | 0.148 | 1.124*** | 0.131 | 1.113*** | 0.153 |
| 29 | 1.144*** | 0.216 | 1.195*** | 0.329 | 1.183*** | 0.316 | 1.130*** | 0.216 | 1.212*** | 0.329 | 1.172*** | 0.316 | 1.137*** | 0.216 | 1.200*** | 0.329 | 1.179*** | 0.316 |
| 30 | 1.421*** | 0.763 | 1.401*** | 0.674 | 1.409*** | 0.740 | 1.426*** | 0.763 | 1.444*** | 0.674 | 1.407*** | 0.740 | 1.421*** | 0.763 | 1.401*** | 0.674 | 1.409*** | 0.740 |
| 31 | 1.080*** | 0.143 | 1.140*** | 0.206 | 1.117*** | 0.200 | 1.039*** | 0.143 | 1.121*** | 0.206 | 1.099*** | 0.200 | 1.072*** | 0.143 | 1.131*** | 0.206 | 1.106*** | 0.200 |
| 32 | 1.385*** | 0.711 | 1.400*** | 0.597 | 1.397*** | 0.668 | 1.388*** | 0.711 | 1.428*** | 0.597 | 1.385*** | 0.668 | 1.387*** | 0.711 | 1.401*** | 0.597 | 1.394*** | 0.668 |
| 33 | 1.143*** | 0.195 | 1.159*** | 0.169 | 1.154*** | 0.193 | 1.191*** | 0.195 | 1.168*** | 0.169 | 1.158*** | 0.193 | 1.143*** | 0.195 | 1.163*** | 0.169 | 1.155*** | 0.193 |
| 34 | 1.222*** | 0.354 | 1.320*** | 0.435 | 1.279*** | 0.428 | 1.298*** | 0.354 | 1.270*** | 0.435 | 1.288*** | 0.428 | 1.243*** | 0.354 | 1.316*** | 0.435 | 1.284*** | 0.428 |
| 35 | 1.362*** | 0.634 | 1.203*** | 0.164 | 1.294*** | 0.371 | 1.318*** | 0.634 | 1.169*** | 0.164 | 1.215*** | 0.371 | 1.361*** | 0.634 | 1.196*** | 0.164 | 1.288*** | 0.371 |
| 36 | 1.051*** | 0.050 | 1.137*** | 0.237 | 1.102*** | 0.161 | 1.033*** | 0.050 | 1.139*** | 0.237 | 1.092*** | 0.161 | 1.050*** | 0.050 | 1.138*** | 0.237 | 1.101*** | 0.161 |
| 37 | 0.995 | 0.000 | 1.012 | 0.014 | 1.011 | 0.010 | | | 1.003 | 0.014 | 1.007 | 0.010 | | | 1.012 | 0.014 | 1.011 | 0.010 |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B-B12. Indicators of competitive pressure: average mark-up ratios by NACE-2 sectors, panel estimations with time effects (based on $Y=\text{sales}=f(K,L,M)$)

| NACE 2-digit sectors | OLS | | | | | | Fixed effects | | | | | | Random effects | | | | | |
|----------------------------|-----------|----------------|-----------|----------------|-----------|----------------|---------------|---------------------------|-----------|---------------------------|-----------|---------------------------|----------------|---------------------------|-----------|---------------------------|-----------|---------------------------|
| | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | | 1995-1997 | | 1998-2001 | | 1995-2001 | |
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall | Markup | R ² overall |
| 15 | 1.082*** | 0.169 | 1.097*** | 0.166 | 1.091*** | 0.201 | 1.079*** | 0.169 | 1.087*** | 0.165 | 1.086*** | 0.200 | 1.082*** | 0.169 | 1.096*** | 0.166 | 1.091*** | 0.201 |
| 16 | 1.216*** | 0.222 | 1.069*** | 0.314 | 1.150*** | 0.269 | 1.040 | 0.136 | 1.095*** | 0.311 | 1.065*** | 0.238 | 1.086** | 0.180 | 1.069*** | 0.314 | 1.081*** | 0.249 |
| 17 | 1.152*** | 0.339 | 1.160*** | 0.283 | 1.157*** | 0.330 | 1.131*** | 0.338 | 1.158*** | 0.283 | 1.146*** | 0.329 | 1.150*** | 0.339 | 1.160*** | 0.283 | 1.154*** | 0.330 |
| 18 | 1.139*** | 0.191 | 1.169*** | 0.228 | 1.157*** | 0.231 | 1.086*** | 0.190 | 1.162*** | 0.227 | 1.139*** | 0.230 | 1.133*** | 0.191 | 1.168*** | 0.228 | 1.154*** | 0.231 |
| 19 | 1.099*** | 0.166 | 1.118*** | 0.173 | 1.110*** | 0.186 | 1.082*** | 0.164 | 1.117*** | 0.167 | 1.108*** | 0.179 | 1.099*** | 0.166 | 1.118*** | 0.173 | 1.110*** | 0.186 |
| 20 | 1.106*** | 0.142 | 1.116*** | 0.154 | 1.112*** | 0.160 | 1.105*** | 0.142 | 1.102*** | 0.153 | 1.104*** | 0.160 | 1.107*** | 0.142 | 1.111*** | 0.154 | 1.109*** | 0.160 |
| 21 | 1.164*** | 0.515 | 1.152*** | 0.364 | 1.157*** | 0.446 | 1.184*** | 0.514 | 1.169*** | 0.363 | 1.159*** | 0.445 | 1.164*** | 0.515 | 1.153*** | 0.364 | 1.157*** | 0.446 |
| 22 | 1.066*** | 0.152 | 1.094*** | 0.170 | 1.080*** | 0.179 | 1.060*** | 0.152 | 1.097*** | 0.167 | 1.080*** | 0.177 | 1.063*** | 0.152 | 1.094*** | 0.170 | 1.079*** | 0.179 |
| 23 | 1.230*** | 0.627 | 1.591*** | 0.476 | 1.504*** | 0.471 | 1.205* | 0.625 | 1.383*** | 0.469 | 1.408*** | 0.467 | 1.228*** | 0.627 | 1.582*** | 0.476 | 1.501*** | 0.471 |
| 24 | 1.064*** | 0.072 | 1.120*** | 0.237 | 1.099*** | 0.207 | 0.985 | 0.006 | 1.163*** | 0.232 | 1.089*** | 0.206 | 1.064*** | 0.072 | 1.133*** | 0.236 | 1.099*** | 0.207 |
| 25 | 1.066*** | 0.084 | 1.093*** | 0.226 | 1.080*** | 0.192 | 1.147*** | 0.076 | 1.107*** | 0.225 | 1.097*** | 0.187 | 1.079*** | 0.082 | 1.093*** | 0.226 | 1.086*** | 0.192 |
| 26 | 1.099*** | 0.164 | 1.156*** | 0.345 | 1.129*** | 0.286 | 1.113*** | 0.163 | 1.149*** | 0.345 | 1.120*** | 0.286 | 1.099*** | 0.164 | 1.156*** | 0.345 | 1.128*** | 0.286 |
| 27 | 1.197*** | 0.351 | 1.305*** | 0.564 | 1.254*** | 0.480 | 1.180*** | 0.349 | 1.330*** | 0.564 | 1.256*** | 0.479 | 1.197*** | 0.351 | 1.305*** | 0.564 | 1.254*** | 0.480 |
| 28 | 1.087*** | 0.158 | 1.122*** | 0.134 | 1.108*** | 0.159 | 1.073*** | 0.155 | 1.101*** | 0.131 | 1.090*** | 0.158 | 1.085*** | 0.158 | 1.121*** | 0.134 | 1.104*** | 0.159 |
| 29 | 1.145*** | 0.224 | 1.182*** | 0.344 | 1.165*** | 0.337 | 1.130*** | 0.224 | 1.195*** | 0.343 | 1.149*** | 0.337 | 1.138*** | 0.224 | 1.185*** | 0.344 | 1.159*** | 0.337 |
| 30 | 1.402*** | 0.787 | 1.398*** | 0.685 | 1.401*** | 0.759 | 1.420*** | 0.784 | 1.449*** | 0.685 | 1.403*** | 0.755 | 1.402*** | 0.787 | 1.398*** | 0.685 | 1.401*** | 0.759 |
| 31 | 1.080*** | 0.158 | 1.139*** | 0.207 | 1.111*** | 0.210 | 1.033** | 0.135 | 1.111*** | 0.198 | 1.090*** | 0.205 | 1.071*** | 0.158 | 1.125*** | 0.204 | 1.098*** | 0.209 |
| 32 | 1.388*** | 0.713 | 1.393*** | 0.600 | 1.390*** | 0.676 | 1.376*** | 0.706 | 1.423*** | 0.599 | 1.371*** | 0.673 | 1.388*** | 0.713 | 1.394*** | 0.600 | 1.386*** | 0.676 |
| 33 | 1.143*** | 0.210 | 1.152*** | 0.185 | 1.147*** | 0.210 | 1.200*** | 0.206 | 1.164*** | 0.183 | 1.159*** | 0.205 | 1.143*** | 0.210 | 1.158*** | 0.185 | 1.150*** | 0.210 |
| 34 | 1.231*** | 0.376 | 1.305*** | 0.448 | 1.277*** | 0.447 | 1.293*** | 0.374 | 1.252*** | 0.447 | 1.283*** | 0.446 | 1.248*** | 0.375 | 1.302*** | 0.448 | 1.282*** | 0.447 |
| 35 | 1.367*** | 0.638 | 1.192*** | 0.169 | 1.281*** | 0.377 | 1.318*** | 0.637 | 1.158*** | 0.160 | 1.202*** | 0.359 | 1.366*** | 0.638 | 1.187*** | 0.167 | 1.278*** | 0.377 |
| 36 | 1.049*** | 0.056 | 1.134*** | 0.242 | 1.093*** | 0.176 | 1.027** | 0.049 | 1.134*** | 0.241 | 1.084*** | 0.175 | 1.048*** | 0.056 | 1.135*** | 0.242 | 1.092*** | 0.176 |
| 37 | 1.722 | 0.317 | 0.998 | 0.101 | 1.001 | 0.089 | | | 0.979 | 0.069 | 0.969 | 0.030 | | | 0.998 | 0.101 | 1.001 | 0.089 |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

H U N G A R Y

A. Market Structure and Competitive Pressure in the Corporate Sector as a Whole ^{a)}

Table H-A1. Number of firms by NACE sections

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| A. Agriculture, hunting and forestry | 3132 | 4074 | 4479 | 5002 | 5567 | 6138 | 6438 | 6822 | 7182 | 8042 |
| B. Fishing | 46 | 56 | 62 | 66 | 73 | 86 | 97 | 105 | 122 | 137 |
| C. Mining and quarrying | 127 | 169 | 180 | 198 | 229 | 257 | 280 | 298 | 318 | 363 |
| D. Manufacturing | 11146 | 13234 | 13953 | 15089 | 16936 | 18927 | 20153 | 20830 | 21851 | 24560 |
| E. Electricity, gas and water supply | 188 | 257 | 294 | 326 | 362 | 413 | 441 | 451 | 463 | 508 |
| F. Construction | 5481 | 6402 | 6872 | 7571 | 8729 | 10104 | 10912 | 11301 | 12291 | 15836 |
| G. Wholesale and retail trade; repair | 19172 | 24264 | 27404 | 31058 | 36026 | 40103 | 42793 | 44703 | 46130 | 53529 |
| H. Hotels and restaurants | 1803 | 2268 | 2642 | 2975 | 3540 | 4141 | 4541 | 4869 | 5587 | 7313 |
| I. Transport, storage and communication | 2199 | 2632 | 2980 | 3362 | 4070 | 4690 | 5185 | 5547 | 6142 | 7384 |
| J. Financial intermediation | 553 | 651 | 742 | 846 | 968 | 1113 | 1280 | 1377 | 1568 | 1983 |
| K. Real estate, renting and business activity | 11274 | 14121 | 16380 | 19033 | 23301 | 27508 | 30724 | 33320 | 38805 | 50036 |
| L. Public administration, defence, social security | | 1 | | | | | 1 | | 1 | 1 |
| M. Education | 356 | 446 | 486 | 558 | 701 | 844 | 950 | 1080 | 1244 | 2114 |
| N. Health and social work | 353 | 486 | 561 | 745 | 1078 | 1446 | 1687 | 1880 | 2262 | 3922 |
| O. Other community, social and personal service | 2033 | 2438 | 2756 | 3393 | 4062 | 4651 | 5351 | 5732 | 6192 | 8078 |
| P. Private households with employed persons | | | | | | | | | 1 | 2 |
| Q. Extra-territorial organizations | | | | | | | | | | |
| All firms | 57863 | 71499 | 79791 | 90222 | 105642 | 120421 | 130833 | 138315 | 150159 | 183808 |

^{a)} The indices in Part A (referring to the corporate sector as a whole) are based on sectoral aggregates

Table H-A9. Average mark-up ratios by NACE sectors, single year OLS estimations (based on $Y=\text{sales}=f(K,L,M)$)

| NACE sectors | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | |
|--------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² |
| A | 1.09 ** | 0.05 | 1.15 ** | 0.17 | 1.16 ** | 0.27 | 1.14 ** | 0.13 | 1.18 ** | 0.2 | 1.07 ** | 0.06 | 1.13 ** | 0.12 | 1.16 ** | 0.17 | 1.21 ** | 0.25 |
| B | . | . | 1.09 | 0.24 | 1.1 | 0.18 | 1.07 | 0.04 | 1.43 ** | 0.59 | 1.1 | 0.1 | 1.16 | 0.09 | 0.97 | 0.01 | 1.26 | 0.19 |
| C | 1.15 ** | 0.22 | 1.20 ** | 0.33 | 1.28 ** | 0.4 | 1.11 * | 0.1 | 1.18 ** | 0.57 | 1.23 ** | 0.68 | 1.29 ** | 0.52 | 1.22 ** | 0.46 | 1.34 ** | 0.51 |
| D | 1.17 ** | 0.22 | 1.22 ** | 0.25 | 1.19 ** | 0.3 | 1.18 ** | 0.29 | 1.18 ** | 0.29 | 1.18 ** | 0.27 | 1.15 ** | 0.22 | 1.14 ** | 0.22 | 1.12 ** | 0.13 |
| E | 1.12 ** | 0.17 | 1.05 * | 0.04 | 1.07 ** | 0.14 | 1.08 ** | 0.09 | 1.21 ** | 0.5 | 1.10 ** | 0.09 | 1.17 ** | 0.41 | 1.13 ** | 0.26 | 1.20 ** | 0.41 |
| F | 1.11 ** | 0.12 | 1.10 ** | 0.15 | 1.06 ** | 0.1 | 1.08 ** | 0.11 | 1.09 ** | 0.16 | 1.09 ** | 0.2 | 1.08 ** | 0.16 | 1.09 ** | 0.16 | 1.08 ** | 0.09 |
| G | 1.06 ** | 0.07 | 1.06 ** | 0.05 | 1.06 ** | 0.08 | 1.02 ** | 0.02 | 1.04 ** | 0.07 | 1.03 ** | 0.04 | 1.03 ** | 0.05 | 1.01 | 0 | 1.04 ** | 0.03 |
| H | 1.36 ** | 0.44 | 1.39 ** | 0.56 | 1.27 ** | 0.62 | 1.28 ** | 0.51 | 1.36 ** | 0.58 | 1.29 ** | 0.62 | 1.22 ** | 0.28 | 1.20 ** | 0.4 | 1.28 ** | 0.28 |
| I | 1.24 ** | 0.53 | 1.46 ** | 0.38 | 1.23 ** | 0.38 | 1.26 ** | 0.5 | 1.28 ** | 0.49 | 1.32 ** | 0.65 | 1.39 ** | 0.57 | 1.29 ** | 0.63 | 1.31 ** | 0.51 |
| J | 4.21 ** | 0.97 | 2.73 ** | 0.94 | 2.20 ** | 0.87 | 1.79 ** | 0.66 | 3.73 ** | 0.95 | 3.53 ** | 0.95 | 4.69 ** | 0.88 | 3.69 ** | 0.88 | 2.39 ** | 0.8 |
| K | 1.08 ** | 0.05 | 1.16 ** | 0.1 | 1.09 ** | 0.07 | 1.15 ** | 0.2 | 1.13 ** | 0.14 | 1.18 ** | 0.24 | 1.19 ** | 0.3 | 1.16 ** | 0.22 | 1.22 ** | 0.28 |
| L | 1.16 * | 0.17 | 1.15 ** | 0.33 | 1.16 ** | 0.38 | 1.17 ** | 0.45 | 1.15 ** | 0.31 | 1.21 ** | 0.34 | 1.16 ** | 0.35 | 1.40 ** | 0.45 | 1.16 ** | 0.27 |
| M | . | . | . | . | 1.31 ** | 0.58 | 1.44 ** | 0.76 | 1.40 ** | 0.45 | 1.22 | 0.12 | 1.25 ** | 0.25 | 1.21 ** | 0.32 | 1.1 | 0.04 |
| N | 1.69 ** | 0.46 | 1.35 * | 0.24 | 1.22 ** | 0.33 | 1.37 ** | 0.8 | 1.47 ** | 0.71 | 1.27 ** | 0.39 | 1.82 ** | 0.63 | 1.26 ** | 0.54 | 2.89 ** | 0.95 |
| O | 1.09 ** | 0.05 | 1.15 ** | 0.17 | 1.16 ** | 0.27 | 1.14 ** | 0.13 | 1.18 ** | 0.2 | 1.07 ** | 0.06 | 1.13 ** | 0.12 | 1.16 ** | 0.17 | 1.21 ** | 0.25 |
| P | | | | | | | | | | | | | | | | | | |
| Q | | | | | | | | | | | | | | | | | | |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

B. Market Structure and Competitive Pressure in the Manufacturing Sector ^{a)}

Table H-B1. Number of firms by NACE sectors

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 15. | 1510 | 1996 | 2224 | 2377 | 2508 | 2663 | 2773 | 2818 | 2923 | 3178 |
| 16. | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
| 17. | 420 | 501 | 518 | 582 | 656 | 755 | 805 | 787 | 761 | 842 |
| 18. | 707 | 796 | 791 | 847 | 957 | 1042 | 1166 | 1217 | 1280 | 1489 |
| 19. | 259 | 296 | 289 | 307 | 328 | 363 | 373 | 378 | 380 | 411 |
| 20. | 599 | 739 | 779 | 860 | 1000 | 1141 | 1232 | 1283 | 1340 | 1551 |
| 21. | 110 | 134 | 158 | 176 | 195 | 219 | 246 | 257 | 276 | 318 |
| 22. | 1367 | 1596 | 1685 | 1866 | 2148 | 2495 | 2662 | 2771 | 3022 | 3521 |
| 23. | 2 | 6 | 8 | 11 | 7 | 8 | 9 | 9 | 9 | 9 |
| 24. | 346 | 400 | 404 | 445 | 471 | 518 | 516 | 532 | 553 | 576 |
| 25. | 558 | 678 | 706 | 762 | 861 | 979 | 1026 | 1087 | 1133 | 1231 |
| 26. | 415 | 482 | 511 | 540 | 616 | 691 | 738 | 775 | 825 | 952 |
| 27. | 146 | 176 | 181 | 192 | 215 | 220 | 241 | 242 | 243 | 254 |
| 28. | 1365 | 1591 | 1709 | 1867 | 2140 | 2432 | 2647 | 2795 | 3055 | 3466 |
| 29. | 1399 | 1555 | 1577 | 1621 | 1798 | 1967 | 2038 | 2040 | 2029 | 2199 |
| 30. | 85 | 95 | 95 | 102 | 124 | 144 | 160 | 168 | 184 | 198 |
| 31. | 388 | 463 | 479 | 525 | 587 | 672 | 703 | 722 | 715 | 768 |
| 32. | 295 | 342 | 364 | 389 | 445 | 499 | 519 | 530 | 542 | 609 |
| 33. | 420 | 494 | 545 | 588 | 665 | 735 | 792 | 815 | 858 | 955 |
| 34. | 131 | 165 | 164 | 185 | 193 | 215 | 230 | 243 | 258 | 259 |
| 35. | 70 | 73 | 78 | 85 | 104 | 120 | 131 | 129 | 144 | 171 |
| 36. | 517 | 609 | 634 | 702 | 838 | 949 | 1035 | 1111 | 1187 | 1464 |
| 37. | 32 | 41 | 48 | 54 | 73 | 93 | 104 | 114 | 127 | 132 |
| All firms | 11146 | 13234 | 13953 | 15089 | 16936 | 18927 | 20153 | 20830 | 21851 | 24560 |

a) The indices in Part B (referring to the manufacturing sector) are based on firm level data for a sample of manufacturing firms

Table H-B2. Share of foreign ownership in equity by NACE sectors

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|------|------|------|------|------|------|------|------|------|------|
| 15. | 29.5 | 41.3 | 46.2 | 51.5 | 52.1 | 60.6 | 58.5 | 60.0 | 63.0 | 63.9 |
| 16. | 95.9 | 95.5 | 96.3 | 97.3 | 67.4 | 93.3 | 87.0 | 83.8 | 82.3 | 82.3 |
| 17. | 16.9 | 23.2 | 30.9 | 48.2 | 48.4 | 53.8 | 49.9 | 52.1 | 57.3 | 55.8 |
| 18. | 18.7 | 28.0 | 30.5 | 38.1 | 39.5 | 43.4 | 50.1 | 51.2 | 53.1 | 56.0 |
| 19. | 10.9 | 14.3 | 20.3 | 30.5 | 48.7 | 41.6 | 50.9 | 53.9 | 57.9 | 61.0 |
| 20. | 9.7 | 18.5 | 25.6 | 45.2 | 51.9 | 52.7 | 50.4 | 48.1 | 48.2 | 45.5 |
| 21. | 22.1 | 38.1 | 41.3 | 46.3 | 43.6 | 67.0 | 72.0 | 54.9 | 53.9 | 55.7 |
| 22. | 23.1 | 23.0 | 28.5 | 35.4 | 34.7 | 32.2 | 27.4 | 32.5 | 35.9 | 31.2 |
| 23. | 0.0 | 0.1 | 1.6 | 29.1 | 31.5 | 44.9 | 54.6 | 50.6 | 52.6 | 56.0 |
| 24. | 16.6 | 19.5 | 27.0 | 40.6 | 59.2 | 59.3 | 57.7 | 62.7 | 61.1 | 62.8 |
| 25. | 25.0 | 39.4 | 47.6 | 54.9 | 57.4 | 58.0 | 56.6 | 58.0 | 52.1 | 61.6 |
| 26. | 31.0 | 42.7 | 59.7 | 68.8 | 69.5 | 71.4 | 68.8 | 69.0 | 69.9 | 64.9 |
| 27. | 9.2 | 12.6 | 17.0 | 18.5 | 36.4 | 41.9 | 52.2 | 55.2 | 47.4 | 54.8 |
| 28. | 20.1 | 32.3 | 35.4 | 40.1 | 34.6 | 46.7 | 58.4 | 57.3 | 54.6 | 56.0 |
| 29. | 19.8 | 24.0 | 31.3 | 36.7 | 44.4 | 48.8 | 50.3 | 53.0 | 59.8 | 59.7 |
| 30. | 16.8 | 31.8 | 42.9 | 41.1 | 40.7 | 74.3 | 37.4 | 39.7 | 30.9 | 32.8 |
| 31. | 15.2 | 73.0 | 80.8 | 83.8 | 85.1 | 78.8 | 84.5 | 85.3 | 76.3 | 87.0 |
| 32. | 13.5 | 19.5 | 25.2 | 45.2 | 48.1 | 53.8 | 80.4 | 84.4 | 90.2 | 94.1 |
| 33. | 19.2 | 15.0 | 15.4 | 18.3 | 34.4 | 34.4 | 28.8 | 22.4 | 31.0 | 36.5 |
| 34. | 26.1 | 33.6 | 43.5 | 55.3 | 64.9 | 72.0 | 78.2 | 77.6 | 74.8 | 87.8 |
| 35. | 40.1 | 45.7 | 36.5 | 43.4 | 37.3 | 48.8 | 38.2 | 33.0 | 36.0 | 36.2 |
| 36. | 13.5 | 23.0 | 27.3 | 29.9 | 30.7 | 32.3 | 41.1 | 42.1 | 41.7 | 41.0 |
| 37. | 35.4 | 39.4 | 35.7 | 48.4 | 14.0 | 28.7 | 42.3 | 36.2 | 35.5 | 32.3 |

Table H-B3. Share of state ownership in equity by NACE sectors

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|------|------|------|------|------|------|------|------|------|------|
| 15. | 46.7 | 30.8 | 18.3 | 13.0 | 6.7 | 1.2 | 1.0 | 1.4 | 1.1 | 1.1 |
| 16. | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 17. | 56.2 | 43.7 | 26.4 | 11.3 | 8.7 | 5.5 | 7.8 | 6.3 | 3.1 | 3.1 |
| 18. | 28.5 | 18.1 | 14.1 | 8.8 | 7.6 | 6.4 | 1.6 | 1.5 | 1.2 | 1.2 |
| 19. | 54.0 | 52.3 | 38.8 | 28.5 | 18.3 | 19.0 | 15.7 | 11.3 | 11.3 | 9.5 |
| 20. | 59.1 | 30.0 | 24.1 | 9.9 | 6.0 | 2.0 | 2.6 | 3.1 | 2.6 | 2.8 |
| 21. | 61.2 | 48.3 | 42.8 | 31.4 | 25.7 | 0.7 | 0.6 | 9.8 | 10.1 | 9.7 |
| 22. | 36.0 | 37.2 | 25.7 | 17.4 | 14.6 | 4.4 | 5.3 | 5.1 | 4.8 | 5.7 |
| 23. | 99.9 | 99.5 | 87.9 | 58.5 | 58.2 | 35.8 | 24.6 | 24.6 | 24.6 | 25.6 |
| 24. | 69.4 | 63.5 | 53.1 | 39.4 | 14.0 | 5.5 | 8.2 | 9.4 | 4.8 | 4.3 |
| 25. | 47.9 | 24.8 | 12.6 | 10.7 | 1.5 | 0.0 | 0.0 | 1.0 | 0.3 | 0.1 |
| 26. | 51.5 | 41.1 | 10.5 | 4.5 | 4.1 | 3.3 | 1.3 | 1.6 | 1.8 | 1.7 |
| 27. | 69.4 | 50.9 | 43.3 | 39.6 | 38.1 | 27.2 | 11.7 | 7.0 | 2.6 | 5.8 |
| 28. | 45.5 | 23.5 | 14.0 | 10.5 | 12.0 | 4.6 | 1.9 | 1.4 | 0.6 | 0.6 |
| 29. | 52.7 | 38.7 | 23.7 | 13.6 | 10.9 | 5.1 | 5.3 | 4.5 | 1.9 | 3.0 |
| 30. | 11.5 | 6.3 | 4.5 | 0.6 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 31. | 45.5 | 15.0 | 3.8 | 2.8 | 1.7 | 1.4 | 1.2 | 0.1 | 0.0 | 0.0 |
| 32. | 33.0 | 17.4 | 18.3 | 12.6 | 11.0 | 9.1 | 3.5 | 1.1 | 0.5 | 0.5 |
| 33. | 36.8 | 19.5 | 15.8 | 9.4 | 9.5 | 2.6 | 4.1 | 4.4 | 2.3 | 2.2 |
| 34. | 44.5 | 36.9 | 23.0 | 19.3 | 15.0 | 7.7 | 0.4 | 0.3 | 0.3 | 0.2 |
| 35. | 12.5 | 26.2 | 29.2 | 14.6 | 15.9 | 12.8 | 12.7 | 16.0 | 8.5 | 13.9 |
| 36. | 37.2 | 26.1 | 20.4 | 11.0 | 9.6 | 1.5 | 0.6 | 0.6 | 2.5 | 2.8 |
| 37. | 1.0 | 6.4 | 3.7 | 3.8 | 0.6 | 0.0 | 0.0 | 0.1 | 0.8 | 1.7 |

Table H-B4. Herfindahl index by NACE sectors (%)

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 15. | 0.64 | 0.62 | 0.62 | 0.64 | 0.67 | 0.75 | 0.80 | 0.78 | 0.80 | 0.82 |
| 16. | 26.76 | 27.83 | 26.34 | 27.03 | 24.35 | 27.55 | 27.54 | 27.23 | 27.16 | 31.49 |
| 17. | 2.32 | 2.44 | 2.48 | 2.44 | 2.91 | 2.42 | 1.83 | 1.70 | 3.95 | 1.73 |
| 18. | 1.07 | 0.92 | 1.13 | 1.25 | 1.37 | 1.25 | 1.23 | 3.02 | 4.21 | 6.13 |
| 19. | 3.87 | 3.27 | 2.89 | 2.54 | 2.49 | 2.49 | 3.80 | 4.13 | 3.69 | 3.89 |
| 20. | 2.05 | 2.40 | 2.52 | 2.58 | 2.61 | 2.78 | 2.84 | 2.56 | 2.39 | 2.56 |
| 21. | 11.43 | 8.85 | 8.30 | 8.23 | 7.31 | 7.69 | 7.75 | 7.72 | 8.57 | 8.71 |
| 22. | 1.06 | 0.86 | 0.84 | 0.90 | 0.82 | 0.75 | 0.77 | 0.72 | 0.70 | 0.69 |
| 23. | | 89.92 | 89.75 | 93.92 | 91.30 | 94.02 | 94.40 | 94.73 | 87.46 | 90.42 |
| 24. | 6.35 | 5.33 | 5.39 | 6.03 | 5.46 | 5.96 | 5.31 | 5.30 | 6.66 | 6.18 |
| 25. | 7.44 | 1.84 | 1.70 | 1.62 | 1.49 | 1.50 | 1.38 | 1.31 | 1.17 | 1.09 |
| 26. | 1.91 | 1.78 | 1.74 | 1.87 | 1.73 | 1.89 | 2.00 | 1.94 | 2.17 | 2.11 |
| 27. | 12.90 | 14.30 | 14.57 | 11.46 | 11.74 | 12.22 | 11.75 | 11.75 | 13.24 | 11.43 |
| 28. | 1.10 | 0.86 | 0.88 | 1.09 | 0.88 | 0.83 | 0.71 | 0.61 | 0.57 | 0.50 |
| 29. | 2.33 | 2.00 | 1.83 | 1.79 | 1.66 | 2.04 | 1.63 | 2.17 | 2.54 | 2.38 |
| 30. | 10.01 | 11.11 | 12.88 | 11.48 | 38.39 | 54.36 | 53.44 | 55.61 | 81.04 | 70.85 |
| 31. | 9.58 | 7.93 | 9.73 | 9.40 | 7.63 | 7.88 | 7.66 | 7.55 | 8.67 | 16.23 |
| 32. | 5.06 | 4.97 | 6.52 | 7.01 | 10.46 | 18.52 | 15.40 | 11.80 | 13.84 | 20.09 |
| 33. | 4.49 | 3.87 | 2.70 | 3.28 | 3.19 | 2.48 | 2.04 | 1.64 | 1.78 | 1.72 |
| 34. | 21.72 | 16.98 | 17.43 | 19.89 | 16.95 | 16.65 | 25.47 | 31.15 | 31.50 | 28.25 |
| 35. | 9.32 | 8.67 | 8.91 | 9.18 | 8.13 | 7.51 | 7.73 | 8.88 | 9.18 | 8.48 |
| 36. | 1.36 | 1.43 | 1.29 | 1.35 | 1.22 | 1.18 | 1.09 | 1.17 | 1.23 | 1.32 |
| 37. | 23.69 | 17.53 | 18.66 | 15.82 | 11.66 | 10.48 | 12.22 | 13.52 | 10.96 | 12.16 |

Table H-B5. Market share of the 5 largest firms by NACE sectors (%)

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|
| 15. | 9.1 | 9.5 | 10.2 | 10.8 | 10.9 | 12.0 | 13.2 | 12.6 | 12.3 | 11.9 |
| 16. | 100.0 | 99.9 | 99.7 | 100.0 | 99.3 | 98.8 | 98.4 | 98.4 | 97.7 | 99.8 |
| 17. | 25.6 | 26.7 | 27.6 | 27.3 | 30.9 | 28.0 | 22.5 | 21.4 | 32.5 | 21.7 |
| 18. | 16.1 | 14.6 | 17.5 | 17.8 | 18.2 | 18.0 | 18.8 | 28.6 | 32.3 | 35.8 |
| 19. | 34.0 | 32.9 | 31.4 | 29.9 | 28.6 | 27.4 | 31.5 | 32.5 | 31.0 | 33.0 |
| 20. | 24.0 | 28.0 | 28.3 | 29.5 | 30.9 | 32.3 | 31.9 | 30.5 | 28.7 | 29.8 |
| 21. | 59.5 | 54.4 | 52.5 | 52.7 | 51.2 | 54.3 | 57.8 | 56.5 | 57.1 | 57.8 |
| 22. | 16.7 | 14.7 | 13.7 | 14.6 | 13.1 | 12.7 | 14.2 | 13.3 | 12.5 | 11.8 |
| 23. | 100.0 | 100.0 | 99.6 | 99.8 | 99.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 24. | 46.8 | 44.0 | 44.3 | 46.3 | 45.3 | 47.5 | 45.0 | 44.9 | 48.3 | 47.6 |
| 25. | 43.1 | 23.4 | 21.9 | 20.8 | 19.4 | 19.5 | 19.3 | 18.0 | 16.7 | 14.6 |
| 26. | 20.6 | 19.3 | 19.8 | 19.0 | 19.6 | 22.5 | 24.2 | 24.0 | 25.2 | 26.1 |
| 27. | 68.4 | 71.5 | 72.8 | 66.3 | 63.9 | 67.3 | 63.9 | 63.6 | 67.1 | 63.9 |
| 28. | 16.4 | 13.4 | 15.1 | 17.7 | 15.4 | 15.1 | 14.0 | 12.8 | 12.1 | 11.7 |
| 29. | 26.7 | 23.1 | 21.0 | 19.7 | 18.2 | 19.8 | 18.2 | 20.0 | 21.5 | 20.8 |
| 30. | 65.0 | 67.4 | 68.6 | 65.8 | 91.2 | 96.6 | 95.9 | 96.5 | 96.5 | 94.1 |
| 31. | 52.5 | 50.9 | 52.8 | 53.5 | 71.7 | 51.6 | 50.3 | 49.9 | 42.2 | 62.9 |
| 32. | 45.5 | 45.7 | 49.7 | 51.8 | 65.5 | 71.3 | 69.2 | 68.2 | 55.1 | 55.3 |
| 33. | 37.0 | 32.9 | 28.1 | 31.7 | 31.5 | 27.6 | 26.0 | 21.6 | 24.1 | 22.4 |
| 34. | 83.1 | 82.0 | 79.1 | 80.9 | 78.5 | 78.7 | 80.0 | 80.4 | 78.4 | 75.0 |
| 35. | 61.4 | 59.9 | 60.2 | 56.1 | 56.4 | 53.0 | 56.5 | 59.4 | 61.0 | 60.5 |
| 36. | 18.2 | 18.5 | 17.1 | 17.2 | 16.7 | 16.2 | 15.6 | 17.2 | 18.0 | 14.7 |
| 37. | 77.3 | 75.7 | 83.1 | 73.9 | 63.4 | 61.9 | 62.5 | 62.5 | 58.9 | 63.3 |

Table H-B6. Relative standard deviation of sales by NACE sectors (%)

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|------|------|------|------|------|------|------|------|-------|-------|
| 15. | 2.94 | 3.38 | 3.58 | 3.78 | 3.96 | 4.36 | 4.59 | 4.59 | 4.72 | 5.00 |
| 16. | 0.58 | 0.82 | 0.76 | 0.79 | 0.84 | 0.96 | 0.96 | 0.95 | 0.95 | 1.10 |
| 17. | 2.96 | 3.35 | 3.44 | 3.63 | 4.25 | 4.15 | 3.70 | 3.52 | 5.39 | 3.68 |
| 18. | 2.57 | 2.51 | 2.81 | 3.10 | 3.47 | 3.47 | 3.66 | 5.97 | 7.27 | 9.51 |
| 19. | 3.01 | 2.94 | 2.71 | 2.61 | 2.68 | 2.83 | 3.63 | 3.82 | 3.61 | 3.87 |
| 20. | 3.36 | 4.09 | 4.32 | 4.61 | 5.01 | 5.55 | 5.83 | 5.64 | 5.57 | 6.22 |
| 21. | 3.40 | 3.29 | 3.48 | 3.67 | 3.64 | 3.98 | 4.25 | 4.34 | 4.76 | 5.17 |
| 22. | 3.67 | 3.58 | 3.62 | 3.98 | 4.09 | 4.20 | 4.43 | 4.36 | 4.49 | 4.82 |
| 23. | 9.00 | 2.10 | 2.49 | 3.05 | 2.32 | 2.55 | 2.74 | 2.74 | 2.62 | 2.67 |
| 24. | 4.58 | 4.51 | 4.56 | 5.08 | 4.97 | 5.47 | 5.14 | 5.22 | 5.98 | 5.88 |
| 25. | 6.37 | 3.39 | 3.32 | 3.37 | 3.44 | 3.70 | 3.63 | 3.63 | 3.51 | 3.52 |
| 26. | 2.63 | 2.75 | 2.81 | 3.02 | 3.11 | 3.48 | 3.71 | 3.75 | 4.11 | 4.37 |
| 27. | 4.22 | 4.92 | 5.04 | 4.58 | 4.92 | 5.09 | 5.23 | 5.24 | 5.58 | 5.29 |
| 28. | 3.74 | 3.57 | 3.75 | 4.39 | 4.22 | 4.38 | 4.20 | 4.02 | 4.05 | 4.05 |
| 29. | 5.62 | 5.48 | 5.28 | 5.29 | 5.38 | 6.25 | 5.68 | 6.57 | 7.11 | 7.16 |
| 30. | 2.74 | 3.09 | 3.35 | 3.27 | 6.83 | 8.79 | 9.19 | 9.61 | 12.17 | 11.80 |
| 31. | 6.01 | 5.97 | 6.75 | 6.95 | 6.62 | 7.21 | 7.27 | 7.32 | 7.81 | 11.12 |
| 32. | 3.73 | 4.00 | 4.77 | 5.13 | 6.75 | 9.56 | 8.88 | 7.84 | 8.60 | 11.02 |
| 33. | 4.22 | 4.26 | 3.70 | 4.28 | 4.50 | 4.15 | 3.89 | 3.51 | 3.77 | 3.93 |
| 34. | 5.24 | 5.20 | 5.25 | 5.98 | 5.63 | 5.90 | 7.59 | 8.64 | 8.96 | 8.49 |
| 35. | 2.35 | 2.31 | 2.44 | 2.61 | 2.73 | 2.83 | 3.02 | 3.23 | 3.50 | 3.67 |
| 36. | 2.46 | 2.78 | 2.68 | 2.91 | 3.04 | 3.19 | 3.20 | 3.47 | 3.69 | 4.28 |
| 37. | 2.57 | 2.49 | 2.82 | 2.75 | 2.74 | 2.96 | 3.42 | 3.80 | 3.60 | 3.88 |

Table H-B7. Import penetration ratio by NACE sectors (%)

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|------|------|------|------|------|------|------|------|------|------|
| 15. | 8.3 | 9.5 | 11.0 | 9.9 | 9.6 | 12.2 | 13.3 | 11.3 | 12.5 | 12.3 |
| 16. | 1.9 | 1.3 | 2.0 | 3.2 | 6.7 | 5.5 | 4.0 | 3.8 | 3.8 | 1.4 |
| 17. | 66.8 | 69.9 | 75.0 | 77.7 | 54.0 | 54.8 | 76.1 | 77.2 | 76.2 | 79.6 |
| 18. | 48.7 | 48.1 | 48.5 | 50.8 | 61.6 | 58.5 | 61.1 | 63.7 | 65.0 | 65.1 |
| 19. | 62.6 | 65.9 | 72.8 | 74.0 | 80.4 | 80.2 | 82.3 | 84.2 | 85.4 | 84.6 |
| 20. | 29.3 | 28.3 | 33.1 | 34.2 | 34.9 | 38.5 | 41.0 | 41.4 | 44.8 | 44.2 |
| 21. | 44.7 | 44.5 | 49.1 | 47.5 | 49.3 | 53.2 | 56.1 | 58.3 | 62.7 | 60.5 |
| 22. | 9.3 | 9.7 | 10.3 | 10.2 | 9.1 | 9.8 | 15.7 | 15.2 | 15.3 | 12.9 |
| 23. | 6.8 | 13.8 | 18.1 | 13.6 | 12.3 | 9.9 | 10.3 | 10.7 | 13.0 | 9.3 |
| 24. | 53.4 | 51.5 | 54.5 | 56.2 | 56.5 | 59.2 | 64.6 | 66.6 | 65.7 | 65.6 |
| 25. | 41.9 | 40.2 | 43.9 | 44.8 | 47.3 | 55.2 | 58.6 | 61.5 | 62.4 | 59.5 |
| 26. | 21.9 | 23.5 | 26.3 | 23.8 | 26.9 | 29.4 | 34.7 | 35.0 | 35.5 | 34.2 |
| 27. | 42.8 | 47.9 | 52.6 | 51.4 | 52.8 | 57.4 | 59.6 | 60.3 | 60.8 | 61.2 |
| 28. | 30.8 | 32.3 | 36.4 | 31.6 | 35.7 | 41.3 | 45.4 | 48.4 | 49.0 | 49.7 |
| 29. | 62.6 | 60.0 | 65.2 | 62.9 | 61.6 | 68.2 | 72.6 | 75.1 | 75.2 | 74.7 |
| 30. | 72.9 | 76.5 | 77.2 | 76.4 | 75.8 | 89.3 | 89.1 | 90.5 | 92.3 | 90.7 |
| 31. | 43.8 | 41.0 | 49.9 | 53.3 | 58.7 | 70.6 | 72.5 | 72.3 | 79.1 | 78.1 |
| 32. | 66.0 | 60.9 | 61.2 | 58.6 | 65.0 | 79.3 | 83.8 | 82.3 | 82.4 | 88.3 |
| 33. | 66.4 | 62.2 | 65.2 | 63.3 | 58.6 | 61.4 | 63.9 | 68.7 | 73.1 | 71.5 |
| 34. | 67.6 | 64.4 | 66.4 | 65.4 | 68.9 | 79.4 | 85.3 | 87.3 | 88.7 | 86.8 |
| 35. | 61.5 | 89.5 | 73.3 | 64.4 | 49.7 | 38.1 | 38.1 | 41.3 | 51.6 | 55.5 |
| 36. | 45.7 | 42.4 | 50.0 | 50.7 | 53.2 | 58.3 | 59.3 | 62.8 | 64.0 | 61.5 |
| 37. | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Table H-B8. Export share of the 5 largest exporters by NACE sectors (%)

| NACE 2-digit sectors | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 15. | 14.5 | 25.5 | 24.9 | 21.2 | 20.6 | 25.0 | 24.8 | 25.2 | 21.0 | 19.4 |
| 16. | 99.8 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.1 | 96.4 |
| 17. | 40.4 | 32.7 | 30.3 | 28.2 | 32.0 | 30.2 | 25.3 | 31.0 | 37.9 | 25.5 |
| 18. | 21.7 | 19.9 | 21.4 | 21.2 | 22.5 | 22.3 | 25.0 | 40.5 | 46.0 | 50.3 |
| 19. | 39.1 | 37.1 | 34.5 | 30.0 | 34.8 | 32.9 | 42.4 | 44.2 | 40.6 | 42.6 |
| 20. | 28.5 | 34.2 | 30.1 | 30.1 | 39.3 | 36.6 | 41.3 | 40.3 | 40.2 | 44.6 |
| 21. | 76.0 | 78.0 | 79.8 | 77.7 | 74.4 | 70.9 | 78.4 | 79.4 | 85.0 | 87.0 |
| 22. | 40.6 | 34.8 | 42.4 | 41.2 | 30.0 | 26.9 | 29.1 | 25.4 | 23.8 | 24.5 |
| 23. | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 24. | 64.9 | 63.6 | 64.0 | 62.6 | 62.6 | 62.8 | 60.8 | 59.0 | 61.1 | 60.7 |
| 25. | 66.4 | 39.1 | 35.1 | 37.6 | 35.7 | 32.9 | 30.8 | 28.3 | 27.6 | 26.7 |
| 26. | 40.1 | 41.2 | 39.8 | 41.2 | 49.2 | 48.0 | 47.2 | 49.0 | 49.1 | 41.3 |
| 27. | 78.9 | 82.4 | 82.4 | 74.0 | 76.2 | 76.5 | 70.0 | 68.4 | 74.4 | 75.3 |
| 28. | 31.5 | 27.5 | 25.3 | 24.9 | 22.4 | 23.5 | 23.4 | 20.7 | 15.4 | 20.0 |
| 29. | 37.0 | 34.6 | 34.1 | 31.2 | 28.6 | 33.3 | 30.2 | 33.7 | 35.3 | 32.8 |
| 30. | 65.8 | 90.7 | 94.6 | 92.8 | 99.0 | 99.6 | 99.5 | 99.6 | 99.6 | 98.2 |
| 31. | 71.6 | 70.1 | 71.1 | 66.7 | 92.0 | 62.7 | 61.2 | 62.0 | 49.6 | 71.7 |
| 32. | 47.4 | 44.8 | 51.5 | 66.1 | 79.3 | 85.1 | 83.6 | 81.2 | 49.5 | 58.4 |
| 33. | 70.3 | 60.3 | 53.9 | 51.8 | 46.3 | 44.9 | 45.2 | 45.0 | 49.1 | 42.5 |
| 34. | 88.9 | 85.6 | 80.7 | 84.9 | 83.4 | 82.3 | 82.8 | 84.1 | 81.9 | 79.6 |
| 35. | 76.1 | 72.1 | 87.2 | 82.0 | 73.0 | 76.6 | 73.6 | 73.7 | 82.6 | 79.1 |
| 36. | 23.9 | 23.0 | 20.9 | 27.9 | 26.9 | 28.7 | 28.2 | 32.2 | 34.6 | 31.7 |
| 37. | 84.7 | 94.6 | 96.7 | 94.8 | 88.6 | 81.9 | 84.9 | 71.5 | 78.6 | 81.9 |

Table H-B9. Average mark-up ratios by NACE sectors, single year OLS estimations (based on $Y=\text{sales}=f(K,L,M)$)

| NACE sectors | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | |
|--------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|---------|----------------|
| | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² | Markup | R ² |
| 15. | 1.08 ** | 0.11 | 1.11 ** | 0.15 | 1.07 ** | 0.08 | 1.09 ** | 0.19 | 1.11 ** | 0.13 | 1.07 ** | 0.12 | 1.06 ** | 0.07 | 1.10 ** | 0.21 | 1.08 ** | 0.08 |
| 17. | 1.02 | 0 | 1.27 ** | 0.18 | 1.43 ** | 0.39 | 1.08 ** | 0.09 | 1.13 ** | 0.16 | 1.09 ** | 0.07 | 1.25 ** | 0.34 | 1.07 * | 0.03 | 1.10 ** | 0.11 |
| 18. | 1.24 ** | 0.38 | 1.16 ** | 0.24 | 1.14 ** | 0.25 | 1.20 ** | 0.32 | 1.16 ** | 0.32 | 1.11 ** | 0.16 | 1.18 ** | 0.3 | 1.12 ** | 0.17 | 1.15 ** | 0.16 |
| 19. | 1.07 | 0.03 | 1.04 | 0.01 | 1.12 ** | 0.1 | 1.15 ** | 0.28 | 1.08 ** | 0.09 | 1.12 ** | 0.18 | 1.11 ** | 0.14 | 1.11 ** | 0.18 | 1.16 ** | 0.21 |
| 20. | 1.07 ** | 0.09 | 1.09 ** | 0.12 | 1.12 ** | 0.13 | 1.10 ** | 0.12 | 1.18 ** | 0.16 | 1.09 ** | 0.13 | 1.10 ** | 0.1 | 1.13 ** | 0.25 | 1.10 ** | 0.08 |
| 21. | 1.28 ** | 0.52 | 1.27 ** | 0.8 | 1.16 ** | 0.53 | 1.23 ** | 0.52 | 1.24 ** | 0.77 | 1.22 ** | 0.43 | 1.35 ** | 0.67 | 1.19 ** | 0.34 | 1.24 ** | 0.65 |
| 22. | 1.36 ** | 0.22 | 1.13 ** | 0.18 | 1.13 ** | 0.19 | 1.12 ** | 0.39 | 1.16 ** | 0.39 | 1.16 ** | 0.21 | 1.15 ** | 0.39 | 1.11 ** | 0.36 | 1.14 ** | 0.36 |
| 24. | 1.24 ** | 0.64 | 1.84 ** | 0.39 | 1.28 ** | 0.76 | 1.14 ** | 0.41 | 1.32 ** | 0.63 | 1.35 ** | 0.66 | 1.06 | 0.01 | 1.24 ** | 0.41 | 1.25 ** | 0.62 |
| 25. | 1.28 ** | 0.49 | 1.25 ** | 0.23 | 1.13 ** | 0.2 | 1.18 ** | 0.45 | 1.14 ** | 0.24 | 1.20 ** | 0.36 | 1.17 ** | 0.5 | 1.15 ** | 0.24 | 1.15 ** | 0.33 |
| 26. | 1.24 ** | 0.53 | 1.24 ** | 0.45 | 1.27 ** | 0.67 | 1.32 ** | 0.51 | 1.29 ** | 0.44 | 1.40 ** | 0.55 | 1.33 ** | 0.6 | 1.33 ** | 0.7 | 1.37 ** | 0.49 |
| 27. | 0.87 ** | 0.17 | 1.06 ** | 0.18 | 1.13 ** | 0.23 | 1.08 ** | 0.22 | 1.08 * | 0.11 | 1.25 ** | 0.34 | 1.10 ** | 0.28 | 1.11 ** | 0.36 | 1.05 * | 0.07 |
| 28. | 1.04 * | 0.02 | 1.10 ** | 0.1 | 1.18 ** | 0.4 | 1.12 ** | 0.21 | 1.16 ** | 0.25 | 1.23 ** | 0.34 | 1.15 ** | 0.28 | 1.17 ** | 0.36 | 1.17 ** | 0.25 |
| 29. | 1.12 ** | 0.16 | 1.15 ** | 0.25 | 1.17 ** | 0.35 | 1.14 ** | 0.24 | 1.15 ** | 0.36 | 1.16 ** | 0.44 | 1.14 ** | 0.3 | 1.12 ** | 0.21 | 1.12 ** | 0.24 |
| 30. | | | 1.30 * | 0.52 | 1.16 | 0.06 | 2.58 * | 0.74 | 1.15 | 0.14 | 1.54 * | 0.39 | 1.20 * | 0.34 | 1.14 | 0.24 | 1.01 | 0.01 |
| 31. | 1.09 * | 0.09 | 1.36 ** | 0.54 | 1.18 ** | 0.37 | 1.35 ** | 0.38 | 1.24 ** | 0.4 | 1.27 ** | 0.35 | 1.26 ** | 0.42 | 1.08 ** | 0.09 | 1.20 ** | 0.25 |
| 32. | 1.18 ** | 0.41 | 1.34 ** | 0.39 | 1.21 ** | 0.32 | 1.21 ** | 0.3 | 1.11 ** | 0.13 | 1.18 ** | 0.15 | 1.15 ** | 0.13 | 1.24 ** | 0.27 | 1.53 ** | 0.34 |
| 33. | 1.18 ** | 0.31 | 1.19 ** | 0.35 | 1.34 ** | 0.48 | 1.18 ** | 0.31 | 1.35 ** | 0.31 | 1.16 ** | 0.33 | 1.18 ** | 0.37 | 1.16 ** | 0.36 | 1.16 ** | 0.22 |
| 34. | 1.09 | 0.09 | 1.60 ** | 0.45 | 1.11 * | 0.08 | 1.36 ** | 0.55 | 1.17 ** | 0.24 | 1.16 ** | 0.32 | 1.10 ** | 0.12 | 1.25 ** | 0.46 | 1.11 ** | 0.17 |
| 35. | 1.19 | 0.24 | 1.21 | 0.28 | 1.22 ** | 0.6 | 1.10 ** | 0.54 | 1.17 ** | 0.39 | 1.14 ** | 0.47 | 1.10 ** | 0.3 | 1.16 ** | 0.3 | 1.08 * | 0.14 |
| 36. | 1.11 ** | 0.15 | 1.42 ** | 0.37 | 1.19 ** | 0.42 | 1.13 ** | 0.14 | 1.12 ** | 0.24 | 1.23 ** | 0.19 | 1.15 ** | 0.29 | 1.13 ** | 0.23 | 1.09 ** | 0.16 |
| 37. | | | | | | | 1.03 | 0.12 | 1.09 | 0.18 | 1.02 | 0.01 | 1.07 | 0.14 | 1.05 | 0.14 | 1.04 | 0.05 |

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

R O M A N I A

Table R-1. Number of firms by NACE sections

| NACE sections/Year | | 1998 | 1999 | 2000 | 2001 |
|--------------------|--|---------------|---------------|---------------|---------------|
| A | Agriculture | 7283 | 7229 | 6986 | 7255 |
| B | Hunting and forestry | 567 | 688 | 716 | 841 |
| C | Fishing | 137 | 180 | 189 | 200 |
| D | Mining and quarrying | 339 | 382 | 388 | 431 |
| E | Manufacturing | 36438 | 37284 | 38023 | 39536 |
| F | Electricity, gas and water supply | 333 | 354 | 355 | 393 |
| G | Construction | 8261 | 8932 | 9598 | 10997 |
| H | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | 198405 | 188744 | 176118 | 170470 |
| I | Hotels and restaurants | 14713 | 13882 | 13047 | 12749 |
| J | Transport and storage | 9848 | 10203 | 10601 | 12228 |
| K | Postal services and telecommunications | 521 | 607 | 715 | 937 |
| L | Financial intermediation | 885 | 1289 | 1561 | 1855 |
| M | Real estate, renting and business activities | 20479 | 20703 | 22036 | 25429 |
| N | Public administration and defense; compulsory social security | 263 | 394 | 423 | 455 |
| O | Education | 308 | 334 | 329 | 357 |
| P | Health and social work | 3811 | 3914 | 3472 | 3642 |
| R | Other community, social and personal service activities | 18489 | 18179 | 18012 | 17996 |
| S | Activities of households' employees | 65 | 51 | 39 | 30 |
| T | Activities of extra-territorial organisms | 16 | 8 | 6 | 4 |
| Total | | 321161 | 313357 | 302614 | 305805 |

Table 2. Number of firms by NACE subsections

| NACE subsections/ Year | 1998 | 1999 | 2000 | 2001 |
|---|------|------|------|------|
| 1Agriculture, hunting and related service activities | 7283 | 7229 | 6986 | 7255 |
| 2Forestry, logging and related service activities | 567 | 688 | 716 | 841 |
| 5Fishing, fish farming and related service activities | 137 | 180 | 189 | 200 |
| 10Mining of coal and lignite; extraction of peat | 45 | 32 | 21 | 24 |
| 11Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 62 | 69 | 69 | 68 |
| 12Mining of uranium and thorium ores | 9 | 3 | 3 | 5 |
| 13Mining of metal ores | 57 | 52 | 39 | 32 |
| 14Other mining and quarrying | 166 | 226 | 256 | 302 |
| 15Other mining and quarrying | 9263 | 8997 | 8571 | 8631 |
| 16Manufacture of tobacco products | 103 | 48 | 34 | 30 |
| 17Manufacture of textiles | 3005 | 2919 | 2814 | 2895 |
| 18Manufacture of wearing apparel; dressing and dyeing of fur | 2797 | 2895 | 3037 | 3251 |
| 19Tanning and dressing of leather; manufacture of luggage, handbags, saddlers, harness and footwear | 1346 | 1343 | 1384 | 1526 |
| 20Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | 5586 | 5794 | 6157 | 6225 |
| 21Manufacture of pulp, paper and paper products | 389 | 414 | 459 | 500 |
| 22Publishing, printing and reproduction of recorded media | 1959 | 2143 | 2218 | 2355 |
| 23Manufacture of coke, refined petroleum products and nuclear fuel | 34 | 28 | 28 | 31 |
| 24Manufacture of chemicals and chemical products | 1106 | 1103 | 1088 | 1088 |
| 25Manufacture of rubber and plastic products | 1723 | 1657 | 1607 | 1607 |
| 26Manufacture of other non-metallic mineral products | 1243 | 1302 | 1378 | 1488 |
| 27Manufacture of basic metals | 445 | 471 | 466 | 475 |
| 28Manufacture of fabricated metal products, except machinery and equipment | 2642 | 2840 | 3019 | 3153 |
| 29Manufacture of machinery and equipment n.e.c. | 392 | 449 | 506 | 608 |
| 30Manufacture of office machinery and computers | 173 | 185 | 185 | 238 |
| 31Manufacture of electrical machinery and apparatus n.e.c. | 570 | 575 | 572 | 627 |
| 32Manufacture of radio, television and communication equipment and apparatus | 162 | 170 | 162 | 174 |
| 33Manufacture of medical, precision and optical instruments, watches and clocks | 300 | 334 | 343 | 404 |
| 34Manufacture of motor vehicles, trailers and semi-trailers | 260 | 288 | 304 | 312 |
| 35Manufacture of other transport equipment | 155 | 193 | 231 | 276 |
| 36Manufacture of furniture; manufacturing n.e.c. | 2262 | 2463 | 2654 | 2900 |

| | | | | | |
|----|--|--------|--------|--------|--------|
| 37 | Recycling | 523 | 673 | 806 | 742 |
| 40 | Electricity, gas, steam and hot water supply | 185 | 201 | 190 | 205 |
| 41 | Collection, purification and distribution of water | 148 | 153 | 165 | 188 |
| 45 | Construction | 8261 | 8932 | 9598 | 10997 |
| 50 | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel | 5497 | 6585 | 7080 | 7575 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 41527 | 41452 | 40688 | 40216 |
| 52 | Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods | 151381 | 140707 | 128350 | 122679 |
| 55 | Hotels and restaurants | 14713 | 13882 | 13047 | 12749 |
| 60 | Land transport; transport via pipelines | 8274 | 8500 | 8752 | 10182 |
| 61 | Water transport | 106 | 114 | 131 | 149 |
| 62 | Air transport | 36 | 40 | 64 | 57 |
| 63 | Supporting and auxiliary transport activities; activities of travel agencies | 1432 | 1549 | 1654 | 1840 |
| 64 | Post and telecommunications | 521 | 607 | 715 | 937 |
| 65 | Financial intermediation, except insurance and pension funding | 695 | 1029 | 1207 | 1417 |
| 66 | Insurance and pension funding, except compulsory social security | 33 | 45 | 39 | 80 |
| 67 | Activities auxiliary to financial intermediation | 157 | 215 | 315 | 358 |
| 70 | Real estate activities | 1698 | 2103 | 2503 | 2998 |
| 71 | Renting of machinery and equipment without operator and of personal and household goods | 1561 | 1169 | 969 | 902 |
| 72 | Computer and related activities | 2393 | 2701 | 3166 | 3962 |
| 73 | Research and development | 246 | 260 | 283 | 297 |
| 74 | Other business activities | 14581 | 14470 | 15115 | 17270 |
| 75 | Public administration and defence; compulsory social security | 263 | 394 | 423 | 455 |
| 80 | Education | 308 | 334 | 329 | 357 |
| 85 | Health and social work | 3811 | 3914 | 3472 | 3642 |
| 90 | Sewage and refuse disposal, sanitation and similar activities | 247 | 240 | 261 | 282 |
| 91 | Activities of membership organizations n.e.c. | 91 | 91 | 83 | 76 |
| 92 | Recreational, cultural and sporting activities | 2100 | 2002 | 1991 | 2123 |
| 93 | Other service activities | 16051 | 15846 | 15677 | 15515 |
| 95 | Activities of households as employers of domestic staff | 65 | 51 | 39 | 30 |
| 99 | Extra-territorial organizations and bodies | 16 | 8 | 6 | 4 |
| | Total | 321161 | 313357 | 302614 | 305805 |

Table R-3. Number of firms by ownership categories (% of total number of firms)

| | 1998 | 1999 | 2000 | 2001 |
|--------------------------------|-------|-------|-------|-------|
| State ownership | 5.0 | 3.6 | 2.9 | 2.9 |
| Majority state-owned | 7.1 | 4.9 | 2.7 | 1.9 |
| Majority private owned | 5.0 | 3.8 | 2.7 | 2.3 |
| Private ownership | 81.8 | 86.9 | 91.0 | 92.3 |
| Cooperatives | 1.0 | 0.9 | 0.8 | 0.6 |
| Community ownership | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Above sample as % of all firms | 4.77 | 4.50 | 4.88 | 4.78 |

Note: The reported breakdown on ownership is based on a sample of firms producing 80% of the total turnover in each of the reported years.

Table R-4. Breakdown of gross output (net sales) by NACE sections (% of total)

| NACE sections/ Year | | 1999 | 2000 | 2001 |
|---------------------|--|-------|-------|-------|
| A | Agriculture | 2.1 | 1.8 | 1.9 |
| B | Hunting and forestry | 0.4 | 0.5 | 0.4 |
| C | Fishing | 0.03 | 0.02 | 0.02 |
| D | Mining and quarrying | 5.4 | 5.6 | 4.1 |
| E | Manufacturing | 28.8 | 29.9 | 30.3 |
| F | Electricity, gas and water supply | 8.3 | 4.2 | 7.1 |
| G | Construction | 4.9 | 5.2 | 5.4 |
| H | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | 36.5 | 38.1 | 37.0 |
| I | Hotels and restaurants | 1.0 | 1.0 | 0.9 |
| J | Transport and storage | 4.8 | 4.8 | 4.9 |
| K | Postal services and telecommunications | 2.6 | 3.0 | 1.8 |
| L | Financial intermediation | 0.2 | 0.3 | 0.3 |
| M | Real estate, renting and business activities | 2.8 | 3.3 | 3.5 |
| N | Public administration and defense; compulsory social security | 0.2 | 0.2 | 0.2 |
| O | Education | 0.02 | 0.01 | 0.02 |
| P | Health and social work | 0.1 | 0.1 | 0.1 |
| Q | Other community, social and personal service activities | 1.9 | 1.9 | 1.8 |
| S | Activities of households' employees | 0.001 | 0.001 | 0.001 |
| T | Activities of extra-territorial organisms | 0.001 | 0.004 | 0.001 |

Table R-5. Breakdown of gross output (net sales) by NACE subsections (of total)

| NACE subsections\Year | | 1999 | 2000 | 2001 |
|------------------------------|---|------|------|------|
| 1 | Agriculture, hunting and related service activities | 2.10 | 1.78 | 1.88 |
| 2 | Forestry, logging and related service activities | 0.45 | 0.48 | 0.45 |
| 5 | Fishing, fish farming and related service activities | 0.03 | 0.02 | 0.02 |
| 10 | Mining of coal and lignite; extraction of peat | 0.56 | 0.67 | 0.61 |
| 11 | Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 4.47 | 4.62 | 3.21 |
| 12 | Mining of uranium and thorium ores | 0.01 | 0.02 | 0.01 |
| 13 | Mining of metal ores | 0.09 | 0.11 | 0.10 |
| 14 | Other mining and quarrying | 0.23 | 0.22 | 0.22 |
| 15 | Other mining and quarrying | 6.22 | 6.17 | 6.27 |
| 16 | Manufacture of tobacco products | 0.55 | 0.54 | 0.78 |
| 17 | Manufacture of textiles | 1.60 | 1.56 | 1.42 |
| 18 | Manufacture of wearing apparel; dressing and dyeing of fur | 0.84 | 0.97 | 1.23 |
| 19 | Tanning and dressing of leather; manufacture of luggage, handbags, saddlers, harness and footwear | 0.63 | 0.61 | 0.68 |
| 20 | Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | 1.28 | 1.44 | 1.32 |
| 21 | Manufacture of pulp, paper and paper products | 0.50 | 0.60 | 0.56 |
| 22 | Publishing, printing and reproduction of recorded media | 0.68 | 0.70 | 0.70 |
| 23 | Manufacture of coke, refined petroleum products and nuclear fuel | 0.91 | 1.16 | 1.69 |
| 24 | Manufacture of chemicals and chemical products | 2.18 | 2.56 | 2.15 |
| 25 | Manufacture of rubber and plastic products | 0.76 | 0.80 | 0.89 |
| 26 | Manufacture of other non-metallic mineral products | 1.41 | 1.45 | 1.40 |
| 27 | Manufacture of basic metals | 3.14 | 3.42 | 3.31 |
| 28 | Manufacture of fabricated metal products, except machinery and equipment | 1.51 | 1.40 | 1.46 |
| 29 | Manufacture of machinery and equipment n.e.c. | 1.21 | 1.18 | 1.40 |
| 30 | Manufacture of office machinery and computers | 0.19 | 0.15 | 0.14 |
| 31 | Manufacture of electrical machinery and apparatus n.e.c. | 0.83 | 0.98 | 0.88 |
| 32 | Manufacture of radio, television and communication equipment and apparatus | 0.43 | 0.43 | 0.38 |
| 33 | Manufacture of medical, precision and optical instruments, watches and clocks | 0.18 | 0.20 | 0.20 |
| 34 | Manufacture of motor vehicles, trailers and semi-trailers | 1.67 | 1.33 | 1.40 |
| 35 | Manufacture of other transport equipment | 0.96 | 0.86 | 0.73 |
| 36 | Manufacture of furniture; manufacturing n.e.c. | 0.86 | 0.92 | 0.99 |
| 37 | Recycling | 0.26 | 0.53 | 0.37 |
| 40 | Electricity, gas, steam and hot water supply | 7.73 | 3.68 | 6.65 |
| 41 | Collection, purification and distribution of water | 0.54 | 0.53 | 0.47 |

| | | | | |
|----|--|-------|-------|-------|
| 45 | Construction | 4.88 | 5.18 | 5.38 |
| 50 | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel | 3.51 | 3.34 | 3.28 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 22.04 | 24.09 | 23.71 |
| 52 | Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods | 10.99 | 10.69 | 10.01 |
| 55 | Hotels and restaurants | 0.96 | 1.05 | 0.94 |
| 60 | Land transport; transport via pipelines | 3.11 | 3.16 | 3.26 |
| 61 | Water transport | 0.23 | 0.21 | 0.16 |
| 62 | Air transport | 0.31 | 0.32 | 0.30 |
| 63 | Supporting and auxiliary transport activities; activities of travel agencies | 1.11 | 1.16 | 1.19 |
| 64 | Post and telecommunications | 2.65 | 2.97 | 1.82 |
| 65 | Financial intermediation, except insurance and pension funding | 0.20 | 0.22 | 0.28 |
| 66 | Insurance and pension funding, except compulsory social security | 0.00 | 0.00 | 0.00 |
| 67 | Activities auxiliary to financial intermediation | 0.03 | 0.03 | 0.03 |
| 70 | Real estate activities | 0.26 | 0.32 | 0.33 |
| 71 | Renting of machinery and equipment without operator and of personal and household goods | 0.13 | 0.14 | 0.17 |
| 72 | Computer and related activities | 0.27 | 0.37 | 0.51 |
| 73 | Research and development | 0.19 | 0.18 | 0.18 |
| 74 | Other business activities | 1.93 | 2.30 | 2.35 |
| 75 | Public administration and defense; compulsory social security | 0.22 | 0.22 | 0.20 |
| 80 | Education | 0.02 | 0.01 | 0.02 |
| 85 | Health and social work | 0.09 | 0.09 | 0.11 |
| 90 | Sewage and refuse disposal, sanitation and similar activities | 0.17 | 0.15 | 0.14 |
| 91 | Activities of membership organizations n.e.c. | 0.02 | 0.01 | 0.00 |
| 92 | Recreational, cultural and sporting activities | 0.61 | 0.70 | 0.61 |
| 93 | Other service activities | 1.13 | 1.05 | 1.05 |
| 95 | Activities of households as employers of domestic staff | 0.00 | 0.00 | 0.00 |
| 99 | Extra-territorial organizations and bodies | 0.00 | 0.00 | 0.00 |

Table R-6. Breakdown of gross output (net sales) by ownership categories (% of total)

| | 1999 | 2000 | 2001 |
|--------------------------------|-------|-------|-------|
| State ownership | 19.9 | 17.6 | 18.5 |
| Majority state-owned | 10.4 | 8.4 | 6.4 |
| Majority private owned | 5.5 | 4.8 | 3.9 |
| Private ownership | 63.9 | 68.9 | 71.0 |
| Cooperatives | 0.4 | 0.3 | 0.2 |
| Community ownership | 0.0 | 0.0 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 |
| Above sample as % of all firms | 80.00 | 80.00 | 80.46 |

Table R-7. Indicators of competitive pressure: Herfindahl index by NACE subsections

| NACE subsections\Year | | 1999 | 2000 | 2001 |
|-----------------------|---|----------|----------|----------|
| 1 | Agriculture, hunting and related service activities | 0.004161 | 0.004640 | 0.007147 |
| 2 | Forestry, logging and related service activities | 0.380635 | 0.394605 | 0.405778 |
| 5 | Fishing, fish farming and related service activities | 0.031456 | 0.024185 | 0.028812 |
| 10 | Mining of coal and lignite; extraction of peat | 0.477704 | 0.535749 | 0.551113 |
| 11 | Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 0.576484 | 0.697480 | 0.766296 |
| 12 | Mining of uranium and thorium ores | 0.946771 | 0.997190 | 0.968333 |
| 13 | Mining of metal ores | 0.332874 | 0.328866 | 0.237264 |
| 14 | Other mining and quarrying | 0.095699 | 0.083798 | 0.077828 |
| 15 | Other mining and quarrying | 0.003562 | 0.004059 | 0.005235 |
| 16 | Manufacture of tobacco products | 0.454001 | 0.295733 | 0.179016 |
| 17 | Manufacture of textiles | 0.005560 | 0.006145 | 0.006549 |
| 18 | Manufacture of wearing apparel; dressing and dyeing of fur | 0.008873 | 0.005986 | 0.007680 |
| 19 | Tanning and dressing of leather; manufacture of luggage, handbags, saddlers, harness and footwear | 0.010835 | 0.006026 | 0.005123 |
| 20 | Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | 0.003569 | 0.003246 | 0.004367 |
| 21 | Manufacture of pulp, paper and paper products | 0.040704 | 0.041102 | 0.037030 |
| 22 | Publishing, printing and reproduction of recorded media | 0.013004 | 0.013472 | 0.011228 |
| 23 | Manufacture of coke, refined petroleum products and nuclear fuel | 0.169393 | 0.247613 | 0.272373 |
| 24 | Manufacture of chemicals and chemical products | 0.040558 | 0.041495 | 0.040012 |
| 25 | Manufacture of rubber and plastic products | 0.024869 | 0.021470 | 0.018294 |
| 26 | Manufacture of other non-metallic mineral products | 0.026709 | 0.021327 | 0.022826 |
| 27 | Manufacture of basic metals | 0.157153 | 0.170480 | 0.136121 |
| 28 | Manufacture of fabricated metal products, except machinery and equipment | 0.006408 | 0.006373 | 0.005641 |
| 29 | Manufacture of machinery and equipment n.e.c. | 0.021050 | 0.020530 | 0.018324 |
| 30 | Manufacture of office machinery and computers | 0.045664 | 0.051936 | 0.057765 |
| 31 | Manufacture of electrical machinery and apparatus n.e.c. | 0.037968 | 0.038813 | 0.034379 |
| 32 | Manufacture of radio, television and communication equipment and apparatus | 0.100026 | 0.187023 | 0.194918 |
| 33 | Manufacture of medical, precision and optical instruments, watches and clocks | 0.031509 | 0.033295 | 0.031488 |
| 34 | Manufacture of motor vehicles, trailers and semi-trailers | 0.141605 | 0.126544 | 0.109760 |
| 35 | Manufacture of other transport equipment | 0.042742 | 0.044328 | 0.042486 |

| | | | | |
|----|--|----------|----------|----------|
| 36 | Manufacture of furniture; manufacturing n.e.c. | 0.009338 | 0.007269 | 0.007641 |
| 37 | Recycling | 0.018239 | 0.016377 | 0.014308 |
| 40 | Electricity, gas, steam and hot water supply | 0.219490 | 0.189809 | 0.208661 |
| 41 | Collection, purification and distribution of water | 0.060487 | 0.054592 | 0.061702 |
| 45 | Construction | 0.004013 | 0.004362 | 0.003858 |
| 50 | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel | 0.013249 | 0.009138 | 0.006087 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 0.001670 | 0.002278 | 0.002361 |
| 52 | Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods | 0.001462 | 0.002615 | 0.000433 |
| 55 | Hotels and restaurants | 0.006307 | 0.008809 | 0.007660 |
| 60 | Land transport; transport via pipelines | 0.083854 | 0.078721 | 0.066094 |
| 61 | Water transport | 0.059430 | 0.072192 | 0.082482 |
| 62 | Air transport | 0.824643 | 0.825388 | 0.783440 |
| 63 | Supporting and auxiliary transport activities; activities of travel agencies | 0.049838 | 0.030101 | 0.024216 |
| 64 | Post and telecommunications | 0.295824 | 0.271416 | 0.237571 |
| 65 | Financial intermediation, except insurance and pension funding | 0.039019 | 0.034423 | 0.036623 |
| 66 | Insurance and pension funding, except compulsory social security | 0.186537 | 0.145842 | 0.194931 |
| 67 | Activities auxiliary to financial intermediation | 0.037011 | 0.017795 | 0.022310 |
| 70 | Real estate activities | 0.028278 | 0.017251 | 0.014256 |
| 71 | Renting of machinery and equipment without operator and of personal and household goods | 0.024031 | 0.027474 | 0.031681 |
| 72 | Computer and related activities | 0.008751 | 0.010110 | 0.010467 |
| 73 | Research and development | 0.019963 | 0.017895 | 0.019052 |
| 74 | Other business activities | 0.004533 | 0.003814 | 0.002916 |
| 75 | Public administration and defence; compulsory social security | 0.762271 | 0.820267 | 0.800322 |
| 80 | Education | 0.072703 | 0.051212 | 0.072380 |
| 85 | Health and social work | 0.021765 | 0.026870 | 0.020248 |
| 90 | Sewage and refuse disposal, sanitation and similar activities | 0.105376 | 0.049483 | 0.041871 |
| 91 | Activities of membership organizations n.e.c. | 0.138762 | 0.151554 | 0.080516 |
| 92 | Recreational, cultural and sporting activities | 0.057973 | 0.057499 | 0.047728 |
| 93 | Other service activities | 0.007165 | 0.008029 | 0.003199 |
| 95 | Activities of households as employers of domestic staff | 0.148629 | 0.309935 | 0.168336 |
| 99 | Extra-territorial organizations and bodies | 0.615195 | 0.977612 | 0.311636 |

Table R-8. Indicators of competitive pressure: market share of the 5 largest firms by NACE subsections

| NACE subsections\Year | | 1999 | 2000 | 2001 |
|-----------------------|---|--------|--------|--------|
| 1 | Agriculture, hunting and related service activities | 10.34 | 9.40 | 13.80 |
| 2 | Forestry, logging and related service activities | 68.63 | 71.96 | 68.73 |
| 5 | Fishing, fish farming and related service activities | 30.37 | 26.08 | 30.19 |
| 10 | Mining of coal and lignite; extraction of peat | 99.44 | 99.37 | 99.59 |
| 11 | Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 94.06 | 95.94 | 95.56 |
| 12 | Mining of uranium and thorium ores | 100.00 | 100.00 | 100.00 |
| 13 | Mining of metal ores | 78.02 | 90.95 | 92.19 |
| 14 | Other mining and quarrying | 46.68 | 37.85 | 46.06 |
| 15 | Other mining and quarrying | 7.87 | 8.14 | 11.23 |
| 16 | Manufacture of tobacco products | 96.13 | 95.71 | 89.44 |
| 17 | Manufacture of textiles | 12.51 | 13.11 | 11.05 |
| 18 | Manufacture of wearing apparel; dressing and dyeing of fur | 16.90 | 15.92 | 13.54 |
| 19 | Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear | 27.34 | 15.82 | 9.01 |
| 20 | Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | 6.78 | 8.82 | 9.72 |
| 21 | Manufacture of pulp, paper and paper products | 32.26 | 30.82 | 35.80 |
| 22 | Publishing, printing and reproduction of recorded media | 17.53 | 18.31 | 17.27 |
| 23 | Manufacture of coke, refined petroleum products and nuclear fuel | 73.48 | 81.81 | 91.30 |
| 24 | Manufacture of chemicals and chemical products | 30.02 | 33.75 | 34.94 |
| 25 | Manufacture of rubber and plastic products | 21.94 | 20.48 | 24.65 |
| 26 | Manufacture of other non-metallic mineral products | 26.92 | 25.10 | 24.59 |
| 27 | Manufacture of basic metals | 51.35 | 57.07 | 59.68 |
| 28 | Manufacture of fabricated metal products, except machinery and equipment | 9.34 | 6.78 | 11.03 |
| 29 | Manufacture of machinery and equipment n.e.c. | 23.93 | 21.39 | 22.34 |
| 30 | Manufacture of office machinery and computers | 39.36 | 42.80 | 45.85 |
| 31 | Manufacture of electrical machinery and apparatus n.e.c. | 33.71 | 35.78 | 32.98 |
| 32 | Manufacture of radio, television and communication equipment and apparatus | 62.84 | 63.80 | 75.02 |
| 33 | Manufacture of medical, precision and optical instruments, watches and clocks | 31.34 | 33.51 | 30.83 |
| 34 | Manufacture of motor vehicles, trailers and semi-trailers | 70.74 | 60.56 | 59.52 |
| 35 | Manufacture of other transport equipment | 36.90 | 29.69 | 36.24 |

| | | | | |
|----|--|-------|-------|--------|
| 36 | Manufacture of furniture; manufacturing n.e.c. | 16.99 | 14.46 | 12.76 |
| 37 | Recycling | 12.67 | 15.78 | 20.19 |
| 40 | Electricity, gas, steam and hot water supply | 86.76 | 76.20 | 82.42 |
| 41 | Collection, purification and distribution of water | 45.01 | 44.54 | 47.20 |
| 45 | Construction | 10.76 | 11.31 | 10.40 |
| 50 | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel | 22.60 | 17.42 | 14.10 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 6.89 | 7.48 | 8.51 |
| 52 | Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods | 4.77 | 6.65 | 2.75 |
| 55 | Hotels and restaurants | 14.95 | 17.83 | 16.35 |
| 60 | Land transport; transport via pipelines | 65.63 | 58.53 | 50.13 |
| 61 | Water transport | 65.66 | 73.13 | 48.07 |
| 62 | Air transport | 85.94 | 79.95 | 96.67 |
| 63 | Supporting and auxiliary transport activities; activities of travel agencies | 18.70 | 16.73 | 26.95 |
| 64 | Post and telecommunications | 84.72 | 85.59 | 82.52 |
| 65 | Financial intermediation, except insurance and pension funding | 38.31 | 32.49 | 36.57 |
| 66 | Insurance and pension funding, except compulsory social security | 70.78 | 70.43 | 70.47 |
| 67 | Activities auxiliary to financial intermediation | 32.64 | 22.09 | 25.19 |
| 70 | Real estate activities | 30.39 | 23.08 | 21.58 |
| 71 | Renting of machinery and equipment without operator and of personal and household goods | 27.68 | 29.90 | 34.31 |
| 72 | Computer and related activities | 18.06 | 21.49 | 17.84 |
| 73 | Research and development | 24.01 | 21.16 | 22.36 |
| 74 | Other business activities | 11.15 | 9.87 | 7.29 |
| 75 | Public administration and defence; compulsory social security | 93.32 | 95.05 | 93.99 |
| 80 | Education | 49.52 | 46.45 | 45.92 |
| 85 | Health and social work | 22.86 | 27.21 | 27.06 |
| 90 | Sewage and refuse disposal, sanitation and similar activities | 51.70 | 35.34 | 36.40 |
| 91 | Activities of membership organizations n.e.c. | 75.78 | 64.84 | 47.74 |
| 92 | Recreational, cultural and sporting activities | 47.12 | 47.96 | 43.09 |
| 93 | Other service activities | 13.69 | 14.34 | 8.75 |
| 95 | Activities of households as employers of domestic staff | 71.23 | 84.86 | 78.36 |
| 99 | Extra-territorial organizations and bodies | 98.32 | 99.97 | 100.00 |

Table R-9. Indicators of competitive pressure: share of investment in net sales by NACE-3 sectors in manufacturing

| | 1999 | 2000 | 2001 |
|---|-------|-------|-------|
| Total manufacturing | 6.26 | 5.38 | 7.08 |
| 151 Production, processing and preserving of meat and meat products | 3.51 | 4.40 | 3.24 |
| 152 Processing and preserving of fish and fish products | 0.94 | 1.37 | 4.06 |
| 153 Processing and preserving of fruit and vegetables | 8.51 | 6.54 | 5.94 |
| 154 Manufacture of vegetable and animal oils and fats | 3.91 | 3.55 | 3.21 |
| 155 Manufacture of dairy products | 9.23 | NA | 6.15 |
| 156 Manufacture of grain mill products, starches and starch products | 1.84 | 1.68 | 11.37 |
| 157 Manufacture of prepared animal feeds | 1.30 | 2.79 | 2.76 |
| 158 Manufacture of other food products | 4.67 | 6.34 | 6.74 |
| 159 Manufacture of beverages | 11.30 | 7.70 | 16.38 |
| 160 Manufacture of tobacco products | 10.67 | 1.34 | 6.19 |
| 171 Preparation and spinning of textile fibres | 7.76 | 8.23 | 5.42 |
| 172 Textile weaving | 7.26 | 5.55 | 6.34 |
| 173 Finishing of textiles | 3.50 | 5.01 | 5.08 |
| 174 Manufacture of made-up textile articles, except apparel | 0.58 | 0.77 | 2.09 |
| 175 Manufacture of other textiles | 2.62 | 2.71 | 2.31 |
| 176 Manufacture of knitted and crocheted fabrics | 0.16 | 2.78 | 13.89 |
| 177 Manufacture of knitted and crocheted articles | 8.89 | 5.99 | 8.77 |
| 181 Manufacture of leather clothes | 0.74 | 5.94 | 1.23 |
| 182 Manufacture of other wearing apparel and accessories | NA | 12.13 | 9.49 |
| 183 Dressing and dyeing of fur; manufacture of articles of fur | 0.88 | 3.46 | 1.67 |
| 191 Tanning and dressing of leather | 3.15 | 5.98 | 4.61 |
| 192 Manufacture of luggage, handbags and the like, saddlery and harness | 4.49 | 3.79 | 6.11 |
| 193 Manufacture of footwear | 7.04 | 6.32 | 6.17 |
| 201 Sawmilling and planing of wood; impregnation of wood | 5.25 | 5.96 | 6.75 |
| 202 Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board, fibre board and other panels and boards | NA | NA | NA |
| 203 Manufacture of builders carpentry and joinery | 5.20 | 11.31 | NA |

| | | | | |
|-----|--|-------|-------|-------|
| 204 | Manufacture of wooden containers | 2.39 | 6.18 | 2.76 |
| 205 | Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials | 2.57 | 2.25 | 3.36 |
| 211 | Manufacture of pulp, paper and paperboard | 3.03 | 5.62 | 5.10 |
| 212 | Manufacture of articles of paper and paperboard | 10.20 | 4.98 | 4.19 |
| 221 | Publishing | 4.56 | 3.33 | 3.42 |
| 222 | Printing and service activities related to printing | 4.29 | 5.69 | 8.29 |
| 223 | Reproduction of recorded media | 0.49 | 2.86 | 1.76 |
| 231 | Manufacture of coke oven products | NA | NA | NA |
| 232 | Manufacture of refined petroleum products | 5.22 | 6.69 | 4.31 |
| 233 | Processing of nuclear fuel | NA | NA | NA |
| 241 | Manufacture of basic chemicals | 13.53 | 8.02 | 6.60 |
| 242 | Manufacture of pesticides and other agro-chemical products | 3.15 | 3.09 | 5.11 |
| 243 | Manufacture of paints, varnishes and similar coatings, printing ink and mastics | 4.07 | 3.37 | 3.61 |
| 244 | Manufacture of pharmaceuticals, medicinal chemicals and botanical products | 5.47 | 7.02 | 10.40 |
| 245 | Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations | 11.58 | 4.28 | 2.77 |
| 246 | Manufacture of other chemical products | 3.61 | 2.07 | 3.40 |
| 247 | Manufacture of man-made fibres | 2.19 | 1.66 | 13.52 |
| 251 | Manufacture of rubber products | 4.63 | 7.25 | 13.40 |
| 252 | Manufacture of plastic products | 11.07 | 8.65 | 14.03 |
| 261 | Manufacture of glass and glass products | 14.10 | 11.58 | 6.57 |
| 262 | Manufacture of non-refractory ceramic goods other than for construction purposes; manufacture of refractory ceramic products | 9.85 | 2.64 | 3.41 |
| 263 | Manufacture of ceramic tiles and flags | NA | 6.10 | 3.94 |
| 264 | Manufacture of bricks, tiles and construction products, in baked clay | 9.02 | 4.92 | 6.59 |
| 265 | Manufacture of cement, lime and plaster | NA | NA | NA |
| 266 | Manufacture of articles of concrete, plaster and cement | 8.73 | 9.84 | 10.37 |
| 267 | Cutting, shaping and finishing of ornamental and building stone | NA | NA | NA |
| 268 | Manufacture of other non-metallic mineral products | 0.74 | 1.79 | 0.88 |

| | | | | |
|-----|---|-------|-------|-------|
| 271 | Manufacture of basic iron and steel and of ferro-alloys | 7.18 | 5.79 | 5.60 |
| 272 | Manufacture of tubes | 9.35 | 2.80 | 6.77 |
| 273 | Other first processing of iron and steel | 3.33 | 1.80 | 4.68 |
| 274 | Manufacture of basic precious and non-ferrous metals | 3.98 | 6.29 | 7.02 |
| 275 | Casting of metals | 3.20 | 3.10 | 7.83 |
| 281 | Manufacture of structural metal products | 6.01 | 2.74 | 4.23 |
| 282 | Manufacture of tanks, reservoirs and containers of metal; manufacture of central heating radiators and boilers | 6.89 | 2.16 | 3.94 |
| 283 | Manufacture of steam generators, except central heating hot water boilers | NA | 2.23 | 1.14 |
| 284 | Forging, pressing, stamping and roll forming of metal; powder metallurgy | 3.78 | 2.23 | 3.54 |
| 285 | Treatment and coating of metals; general mechanical engineering | 5.75 | 12.59 | NA |
| 286 | Manufacture of cutlery, tools and general hardware | 5.58 | 6.40 | 7.36 |
| 287 | Manufacture of other fabricated metal products | 3.24 | 2.74 | 3.48 |
| 291 | Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines | 9.06 | 7.27 | 8.76 |
| 292 | Manufacture of other general purpose machinery | 2.20 | 7.65 | 4.48 |
| 293 | Manufacture of agricultural and forestry machinery | 2.11 | 1.70 | 1.96 |
| 294 | Manufacture of machine tools | 2.40 | 6.39 | 4.08 |
| 295 | Manufacture of other special purpose machinery | 5.12 | 6.40 | 6.66 |
| 296 | Manufacture of weapons and ammunition | NA | NA | NA |
| 297 | Manufacture of domestic appliances n.e.c. | 15.45 | 4.01 | 3.88 |
| 300 | Manufacture of office machinery and computers | 0.96 | 1.15 | 1.23 |
| 311 | Manufacture of electric motors, generators and transformers | 3.55 | 2.42 | 4.59 |
| 312 | Manufacture of electricity distribution and control apparatus | 4.11 | 9.07 | 4.76 |
| 313 | Manufacture of insulated wire and cable | 1.55 | 1.44 | 7.81 |
| 314 | Manufacture of accumulators, primary cells and primary batteries | 2.95 | 0.96 | 5.11 |
| 315 | Manufacture of lighting equipment and electric lamps | 0.98 | 2.31 | 8.42 |
| 316 | Manufacture of electrical equipment n.e.c. | 16.86 | 26.09 | 14.18 |
| 321 | Manufacture of electronic valves and tubes and other electronic components | NA | NA | NA |

| | | | | |
|-----|--|-------|-------|-------|
| 322 | Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy | 7.75 | 8.22 | 4.91 |
| 323 | Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods | 6.07 | 2.26 | 0.55 |
| 331 | Manufacture of medical and surgical equipment and orthopedic appliances | 11.05 | 7.08 | 5.94 |
| 332 | Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment | NA | 11.62 | 9.94 |
| 333 | Manufacture of industrial process control equipment | 4.33 | 1.26 | 0.98 |
| 334 | Manufacture of optical instruments and photographic equipment | 2.90 | 4.37 | 13.68 |
| 335 | Manufacture of watches and clocks | 0.24 | NA | 13.49 |
| 341 | Manufacture of motor vehicles | 7.21 | 2.12 | 8.73 |
| 342 | Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers | NA | NA | NA |
| 343 | Manufacture of parts and accessories for motor vehicles and their engines | 7.87 | 4.40 | 5.15 |
| 351 | Building and repairing of ships and boats | 2.06 | 3.58 | 8.31 |
| 352 | Manufacture of railway and tramway locomotives and rolling stock | 1.96 | 2.68 | 3.81 |
| 353 | Manufacture of aircraft and spacecraft | 5.15 | 1.40 | 2.08 |
| 354 | Manufacture of motorcycles and bicycles | 0.15 | 0.23 | 6.91 |
| 355 | Manufacture of other transport equipment n.e.c. | NA | NA | 0.88 |
| 361 | Manufacture of furniture | 5.80 | 8.22 | 6.00 |
| 362 | Manufacture of jewellers and related articles | 10.39 | 13.69 | 4.74 |
| 363 | Manufacture of musical instruments | 5.20 | 5.95 | 7.95 |
| 364 | Manufacture of sports goods | 5.84 | 23.78 | 3.62 |
| 365 | Manufacture of games and toys | 9.16 | 10.19 | 4.25 |
| 366 | Miscellaneous manufacturing n.e.c. | 1.32 | 0.95 | 2.98 |
| 371 | Recycling of metal waste and scrap | 1.57 | 1.31 | 2.62 |
| 372 | Recycling of non-metal waste and scrap | 1.12 | 2.21 | 18.77 |

Table R-10. Indicators of competitive pressure: share of exports in net sales by NACE sections

| NACE sections/ Year | | 1999 | 2000 |
|---------------------|--|------|------|
| A | Agriculture | 7.9 | 3.4 |
| B | Hunting and forestry | 18.8 | 15.4 |
| C | Fishing | 1.2 | 0.6 |
| D | Mining and quarrying | 8.0 | 10.2 |
| E | Manufacturing | 26.8 | 30.0 |
| F | Electricity, gas and water supply | 0.0 | 0.7 |
| G | Construction | 2.4 | 1.9 |
| H | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | 7.1 | 5.7 |
| I | Hotels and restaurants | 1.4 | 3.8 |
| J | Transport and storage | 28.4 | 28.8 |
| K | Postal services and telecommunications | 10.8 | 7.6 |
| L | Financial intermediation | 1.4 | 0.7 |
| M | Real estate, renting and business activities | 9.5 | 12.9 |
| N | Public administration and defense; compulsory social security | 0.2 | 0.0 |
| O | Education | 0.6 | 1.0 |
| P | Health and social work | 0.2 | 0.2 |
| R | Other community, social and personal service activities | 7.6 | 8.0 |
| S | Activities of households' employees | | |
| T | Activities of extra-territorial organisms | | |

Table R-11. Indicators of competitive pressure: share of exports in net sales by NACE subsections

| NACE subsections/Year | | 1999 | 2000 |
|-----------------------|---|-------|-------|
| 1 | Agriculture, hunting and related service activities | 7.89 | 3.47 |
| 2 | Forestry, logging and related service activities | 16.71 | 15.99 |
| 5 | Fishing, fish farming and related service activities | 1.19 | 0.62 |
| 10 | Mining of coal and lignite; extraction of peat | 0.00 | 0.00 |
| 11 | Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 8.30 | 10.62 |
| 12 | Mining of uranium and thorium ores | 0.00 | 0.00 |
| 13 | Mining of metal ores | 39.54 | 56.18 |
| 14 | Other mining and quarrying | 10.54 | 9.40 |
| 15 | Other mining and quarrying | 3.30 | 2.44 |
| 16 | Manufacture of tobacco products | 0.00 | 0.30 |
| 17 | Manufacture of textiles | 58.58 | 61.26 |
| 18 | Manufacture of wearing apparel; dressing and dyeing of fur | 66.36 | 67.81 |
| 19 | Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear | 50.91 | 58.34 |
| 20 | Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | 47.67 | 58.13 |
| 21 | Manufacture of pulp, paper and paper products | 15.85 | 19.15 |
| 22 | Publishing, printing and reproduction of recorded media | 0.77 | 1.11 |
| 23 | Manufacture of coke, refined petroleum products and nuclear fuel | 13.92 | 33.73 |
| 24 | Manufacture of chemicals and chemical products | 25.77 | 30.17 |
| 25 | Manufacture of rubber and plastic products | 17.98 | 16.64 |
| 26 | Manufacture of other non-metallic mineral products | 24.74 | 23.98 |
| 27 | Manufacture of basic metals | 44.34 | 44.29 |
| 28 | Manufacture of fabricated metal products, except machinery and equipment | 22.67 | 24.99 |
| 29 | Manufacture of machinery and equipment n.e.c. | 34.35 | 34.84 |
| 30 | Manufacture of office machinery and computers | 3.21 | 2.75 |
| 31 | Manufacture of electrical machinery and apparatus n.e.c. | 26.26 | 34.60 |
| 32 | Manufacture of radio, television and communication equipment and apparatus | 23.11 | 45.91 |
| 33 | Manufacture of medical, precision and optical instruments, watches and clocks | 11.38 | 12.08 |
| 34 | Manufacture of motor vehicles, trailers and semi-trailers | 20.75 | 21.59 |
| 35 | Manufacture of other transport equipment | 49.19 | 54.07 |
| 36 | Manufacture of furniture; manufacturing n.e.c. | 51.07 | 50.35 |
| 37 | Recycling | 28.58 | 37.39 |
| 40 | Electricity, gas, steam and hot water supply | 0.02 | 0.75 |
| 41 | Collection, purification and distribution of water | 0.02 | 0.04 |

| | | | |
|----|--|-------|-------|
| 45 | Construction | 2.36 | 1.87 |
| 50 | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel | 0.86 | 1.62 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 11.35 | 8.53 |
| 52 | Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods | 0.94 | 1.16 |
| 55 | Hotels and restaurants | 1.44 | 3.62 |
| 60 | Land transport; transport via pipelines | 12.68 | 14.66 |
| 61 | Water transport | 54.95 | 55.71 |
| 62 | Air transport | 87.27 | 85.96 |
| 63 | Supporting and auxiliary transport activities; activities of travel agencies | 51.72 | 45.50 |
| 64 | Post and telecommunications | 10.60 | 7.63 |
| 65 | Financial intermediation, except insurance and pension funding | 0.33 | 0.78 |
| 66 | Insurance and pension funding, except compulsory social security | 0.00 | 0.21 |
| 67 | Activities auxiliary to financial intermediation | 7.15 | 1.54 |
| 70 | Real estate activities | 1.21 | 0.58 |
| 71 | Renting of machinery and equipment without operator and of personal and household goods | 2.22 | 9.09 |
| 72 | Computer and related activities | 18.15 | 24.37 |
| 73 | Research and development | 5.37 | 5.25 |
| 74 | Other business activities | 10.40 | 13.53 |
| 75 | Public administration and defense; compulsory social security | 0.20 | 0.00 |
| 80 | Education | 0.58 | 1.03 |
| 85 | Health and social work | 0.19 | 0.18 |
| 90 | Sewage and refuse disposal, sanitation and similar activities | 0.01 | 0.02 |
| 91 | Activities of membership organizations n.e.c. | 7.65 | 0.04 |
| 92 | Recreational, cultural and sporting activities | 3.15 | 2.75 |
| 93 | Other service activities | 10.96 | 12.55 |
| 95 | Activities of households as employers of domestic staff | 0.00 | 0.00 |
| 99 | Extra-territorial organizations and bodies | 0.00 | 0.00 |

S L O V E N I A

Table S-1: Breakdown of gross output (net sales) by sectors,1994-1999

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| DA | 0.152 | 0.145 | 0.147 | 0.140 | 0.136 | 0.142 |
| DB | 0.073 | 0.073 | 0.069 | 0.070 | 0.073 | 0.074 |
| DC | 0.032 | 0.024 | 0.021 | 0.018 | 0.017 | 0.016 |
| DD | 0.031 | 0.031 | 0.031 | 0.029 | 0.028 | 0.029 |
| DE | 0.085 | 0.084 | 0.081 | 0.077 | 0.074 | 0.076 |
| DF | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 |
| DG | 0.119 | 0.117 | 0.122 | 0.127 | 0.122 | 0.128 |
| DH | 0.049 | 0.049 | 0.048 | 0.048 | 0.042 | 0.035 |
| DI | 0.039 | 0.039 | 0.043 | 0.042 | 0.041 | 0.041 |
| DJ | 0.109 | 0.120 | 0.113 | 0.117 | 0.118 | 0.120 |
| DK | 0.062 | 0.062 | 0.063 | 0.068 | 0.071 | 0.069 |
| DL | 0.101 | 0.102 | 0.107 | 0.109 | 0.106 | 0.113 |
| DM | 0.111 | 0.114 | 0.118 | 0.116 | 0.138 | 0.121 |
| DN | 0.037 | 0.039 | 0.037 | 0.038 | 0.036 | 0.036 |

Table S-2: Herfindahl indices in Slovenia, by sector, 1994-1999

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------|-------|-------|-------|-------|-------|
| DA | 0.147 | 0.147 | 0.149 | 0.152 | 0.152 | 0.152 |
| DB | 0.114 | 0.114 | 0.114 | 0.121 | 0.122 | 0.122 |
| DC | 0.017 | 0.017 | 0.017 | 0.018 | 0.015 | 0.015 |
| DD | 0.012 | 0.010 | 0.011 | 0.011 | 0.010 | 0.010 |
| DE | 0.055 | 0.051 | 0.050 | 0.046 | 0.053 | 0.053 |
| DF | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DG | 0.107 | 0.107 | 0.116 | 0.101 | 0.102 | 0.102 |
| DH | 0.026 | 0.028 | 0.029 | 0.028 | 0.037 | 0.037 |
| DI | 0.115 | 0.111 | 0.121 | 0.117 | 0.118 | 0.118 |
| DJ | 0.156 | 0.154 | 0.141 | 0.131 | 0.133 | 0.133 |
| DK | 0.067 | 0.066 | 0.067 | 0.064 | 0.069 | 0.069 |
| DL | 0.075 | 0.075 | 0.075 | 0.076 | 0.076 | 0.076 |
| DM | 0.060 | 0.061 | 0.064 | 0.065 | 0.065 | 0.065 |
| DN | 0.054 | 0.052 | 0.051 | 0.051 | 0.051 | 0.051 |

Table S-3: Foreign firms' sales shares in Slovenia, by sector, 1994-1999

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| DA | 7.50 | 7.75 | 8.79 | 8.59 | 8.44 | 8.44 |
| DB | 1.32 | 1.73 | 1.82 | 1.83 | 2.08 | 2.08 |
| DC | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DD | 0.21 | 0.38 | 0.74 | 0.57 | 0.67 | 0.67 |
| DE | 12.61 | 12.16 | 12.02 | 12.57 | 11.50 | 11.50 |
| DF | - | - | - | - | - | - |
| DG | 14.99 | 14.83 | 16.30 | 20.26 | 20.78 | 20.78 |
| DH | 7.58 | 9.41 | 8.54 | 7.83 | 19.55 | 19.55 |
| DI | 8.65 | 8.81 | 11.50 | 12.42 | 12.56 | 12.56 |
| DJ | 2.39 | 2.52 | 4.07 | 5.80 | 6.80 | 6.80 |
| DK | 16.94 | 16.42 | 15.86 | 18.83 | 20.84 | 20.84 |
| DL | 14.16 | 12.56 | 13.54 | 12.44 | 13.34 | 13.34 |
| DM | 29.40 | 27.96 | 30.32 | 25.27 | 26.01 | 26.01 |
| DN | 2.05 | 2.89 | 1.82 | 0.05 | 0.06 | 0.06 |

Table S-4: Firms' exports shares in Slovenia, simple average by firms, 1994-99

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| DA | 7.94 | 7.34 | 7.94 | 8.05 | 8.68 | 8.74 |
| DB | 45.52 | 46.23 | 45.99 | 46.71 | 45.62 | 40.35 |
| DC | 51.63 | 52.99 | 56.20 | 54.17 | 53.08 | 44.87 |
| DD | 34.82 | 37.87 | 36.45 | 35.84 | 35.82 | 32.72 |
| DE | 11.08 | 12.13 | 11.54 | 12.31 | 13.14 | 11.68 |
| DF | 19.00 | 19.92 | 33.52 | 40.39 | 24.28 | 20.85 |
| DG | 35.59 | 37.58 | 40.26 | 43.98 | 44.53 | 43.96 |
| DH | 31.32 | 33.01 | 33.54 | 35.85 | 35.01 | 32.88 |
| DI | 22.79 | 21.81 | 22.33 | 23.04 | 23.98 | 23.69 |
| DJ | 30.76 | 32.96 | 34.41 | 37.23 | 37.85 | 37.82 |
| DK | 39.01 | 41.00 | 43.81 | 45.12 | 45.27 | 41.62 |
| DL | 30.45 | 32.16 | 34.27 | 35.35 | 35.81 | 34.57 |
| DM | 41.93 | 43.46 | 40.15 | 43.80 | 43.96 | 39.28 |
| DN | 36.70 | 32.91 | 34.43 | 36.33 | 34.94 | 34.83 |

Table S-5: EU's import penetration in Slovenia, by sector, 1995-1999

| | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------------|-------------|-------------|-------------|-------------|
| D | 0.450 | 0.446 | 0.443 | 0.460 | 0.469 |
| DA | 0.038 | 0.043 | 0.041 | 0.044 | 0.047 |
| DB | 0.816 | 0.855 | 0.813 | 0.693 | 0.637 |
| DC | 0.543 | 0.622 | 0.622 | 0.581 | 0.533 |
| DD | 0.648 | 0.595 | 0.625 | 0.643 | 0.652 |
| DE | 0.286 | 0.253 | 0.255 | 0.252 | 0.255 |
| DF | 0.034 | 0.102 | 0.070 | 0.021 | 0.052 |
| DG | 0.234 | 0.184 | 0.179 | 0.194 | 0.225 |
| DH | 0.406 | 0.402 | 0.394 | 0.444 | 0.401 |
| DI | 0.344 | 0.320 | 0.285 | 0.295 | 0.299 |
| DJ | 0.489 | 0.487 | 0.501 | 0.498 | 0.506 |
| DK | 0.671 | 0.712 | 0.628 | 0.648 | 0.656 |
| DL | 0.543 | 0.537 | 0.525 | 0.538 | 0.611 |
| DM | 0.719 | 0.762 | 0.803 | 0.850 | 0.886 |
| DN | 0.666 | 0.732 | 0.778 | 0.757 | 0.809 |

Table S-6: Estimates of markups, by sectors, 1994-1999

| | markup (Lerner index) | <i>t</i> -stat (robust s.e.) | ordinary <i>t</i> -stat | No. of observ. |
|-----------|-----------------------------|---------------------------------|----------------------------|-------------------|
| D | 0.145 | 1.68 | 9.00 | 5185 |
| DA | 0.317 | 5.36 | 11.10 | 525 |
| DB | 0.122 | 0.90 | 2.20 | 517 |
| DC | 0.417 | 1.02 | 1.28 | 68 |
| DD | 0.547 | 7.95 | 8.37 | 314 |
| DE | 0.373 | 4.53 | 9.75 | 443 |
| DG | 0.429 | 2.62 | 5.46 | 253 |
| DH | 0.204 | 0.77 | 1.53 | 307 |
| DI | 0.117 | 1.34 | 1.83 | 270 |
| DJ | 0.080 | 0.34 | 2.20 | 716 |
| DK | 0.250 | 1.44 | 2.58 | 522 |
| DL | 0.300 | 2.88 | 3.88 | 711 |
| DM | -0.265 | -0.98 | -2.28 | 148 |
| DN | 0.037 | 0.38 | 0.87 | 386 |