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Market spreading versus market concentration: The choice of export marketing strategies reconsidered

by Harald Trabold

Summary

Empirical evidence from French exporters presented in this paper shows that the vast majority of firms follow a strategy of market concentration. These results are at odds with many other studies on the subject. The main reason for this is the size distribution of exporters which corresponds to Gibrat's law. Given the fact that only large exporters can afford to penetrate a large number of markets and that micro-, small-, and medium-size firms constitute the majority of exporters, the use of a uniform number of markets as a dividing line will automatically categorise most firms as following a strategy of market concentration. Future research on export marketing strategies should therefore be conducted with firms of similar size, of the same industry and on the same stage of the internationalisation process.

1. Introduction[1]

The last twenty years have seen a lively — mainly normative — debate on how to export successfully. Although some factors thought to determine export success have received strong support in empirical studies, evidence for the others is elusive and contradictory[2]. This is also true for the choice of an optimal strategy for selling abroad, although the literature on export marketing strategies is full of advice to exporters on how to penetrate foreign markets[3]. Among the options discussed are the strategies of *market concentration* and *market spreading*. The essence of the former strategy is to concentrate on a few key markets while the latter strategy implies to export to many markets. Both strategies are recommended and empirical studies show that both are used. However, none of the strategies could be shown to be superior which might have contributed to the declining efforts to deal with the issue[4].

This paper puts the choice of marketing strategy into perspective (section 2) and reviews the theoretical arguments in favour of each of the strategies (section 3). After a discussion of the empirical problems associated with identifying the strategies empirically (section 4) the existing empirical evidence is reviewed (section 5). Section 6 presents empirical evidence from a data set of more than 20.000 French exporters from three years. The results are at odds with many empirical studies and normative recommendations over the choice of strategy. Hence, section 7 includes the author's interpretation of these results.

This study differs from others in many respects. First, it uses enterprise-related customs data based on firms' customs declarations. This helps to eliminate sampling bias which is a problem of studies based on mailed questionnaires. Those 20 to 40% of the firms sending their questionnaires back often belong to the more active and larger exporters. Moreover, the answers of companies currently not exporting are often not used. Smaller or less active firms often don't bother to answer the questions. This results in a sample which is only representative for large

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[1] This paper is one of the outcomes of a collaboration between the International Trade Centre UNCTAD/GATT (ITC), Geneva, and the German Institute for Economic Research (DIW), Berlin, in the area of trade data analysis at enterprise level. The author wishes to thank the ITC and its staff for their hospitality on various occasions. I would also like to thank Christian Weise for substantial comments on an earlier version of this paper.

[2] Cf. Gemünden (1991), Madsen (1987).

[3] For instance Kreutzer (1989), Köhler/Hüttemann (1989), Rabino (1987), Stern/El-Ansary (1982).

[4] Most empirical studies on the issue of market spreading vs. market concentration are from the seventies and early eighties.

(perhaps also medium) and active exporters. Second, the study covers 95% of the exports to industrial countries of one of the largest export nations in the world. Even studies concentrating on export behaviour in one industry only fail to achieve such a high coverage rate. Third, the number of firms in this study (between 19732 and 27715) is much larger than in other studies (typically between 70 and 500). Fourth, firms are assigned to an industry by their share of sales of products belonging to a certain product group. Thus, a firm producing 5 products can be in five industries. Most other studies use industry definitions based on main activity of the firm, implying that a firm can be in one industry only.

2. The export marketing mix

Effective export marketing is regarded as one of the key elements of a successful export strategy — a fact which has long been stressed. Identifying and selecting the appropriate marketing strategy involves a decision on at least five variables of the marketing mix,

a) product

b) price

c) advertising

d) distribution and

e) export markets.

Decisions on these five variables cannot be taken independently from each other. It makes for instance no sense to differentiate a product to appeal to persons with higher education and income and choose discounters as marketing channels instead of specialised retailers. Designing the optimal marketing mix is therefore frequently an iterative process, where decisions on one variable are adjusted as a result of a decision on another variable of the marketing mix.

ad a) Product Decisions: With respect to product development a decision has to be taken on the degree of horizontal and vertical differentiation of a generic good[5]. Product differentiation can be viewed as a process of changing a generic good in such a way that the consumers perceive the product as different from the generic good. As a result, the market for a certain good will consist of different product versions which are imperfect substitutes and for which different prices can exist. Horizontal or product range differentiation involves decisions on design, colours, taste, etc. Vertical differentiation occurs mainly by means of quality variations.

For the purpose of exporting, most products need to be adapted according to the consumer preferences, different technical standards, or security regulations of the target market. They need to undergo product adaption, i.e. an additional round of product differentiation before they can be exported[6]. The costs of export adaption depend on the product and the requirements of the target market.

ad b) Price Decisions: Price decisions are often a critical factor in successful exporting. Unless the firm sells a relatively homogeneous product and is therefore a price taker, the firm is facing several pricing options in the export markets. One alternative is to fully exploit its competitive price advantage by charging a relatively low price. If price elasticity of demand is high, the high sales volume will more than offset the low profit margin and lead to high absolute profits in the export business. A firm can also build on its non-price competitiveness and opt for a higher profit margin by charging a similar price as the competitors. These options depend among others on supply and demand conditions, the degree of competition, product characteristics, the costs of adaption and the goals of the firm[7].

ad c) Advertising Decisions: Advertising aims at influencing the potential buyers in favour of the firm's products. Fixing an advertising strategy entails two main decisions — the writing of a copy platform and media planning. The first sets forth the claims and themes to be used, the mood of an ad, and the product features to be advertised[8]. The second comprises media-mix decisions, i.e. the identification of the most promising combination of television and radio programs, newspapers, magazines, etc. to be used.

ad d) Distribution Decisions: Setting up a distribution system involves decisions on the mode of transportation, storage and marketing channels. It aims at minimizing the costs, simultaneously ensuring timely delivery. The marketing channels ultimately determine how an exporter reaches the customers. Picking the right channel is crucial, as the performance of the channel is one of the main determinants of export success[9].

ad e) Export Market Decisions: Picking the right export markets and choosing an appropriate strategy to deal with the wide range of potential export markets are key decisions to be made in designing the export marketing mix[10]. Considerable disagreement persists on how to determine the most promising export markets. Standard international trade theory suggests to target those countries which have a comparative disadvantage in the product a firm seeks to export. Ricardian (and neo-technology) trade theory implies that a firm in a technologically advanced country should find its best export markets in countries with a low technological level. According to the Heckscher-Ohlin theory a firm should find its best export markets in countries with markedly different factor endowments than the home

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[5] Cf. Eaton/Lipsey (1989) for a comprehensive and formal discussion of product differentiation or Grimwade (1989: 118-120) for a brief and descriptive treatment.

[6] ITC (1985), Kacker (1975).

[7] See Piercy (1982) for a detailed discussion.

[8] Cf. Rabino (1982).

[9] Cf. Paulsson (1994), Kirchbach (1988), ITC (1989) or Stern/El-Ansary (1982: Chapter 12).

[10] Cf. Hooley/Newcomb (1983).

country. Both versions of standard international trade theory imply that firms in industrialised countries find their most promising export markets in developing countries.

Linder (1961) has criticized standard international trade theory because of its neglect of the demand side and argues that exporters find their best markets in countries with similar tastes as the home country. This would imply exporting mainly to a country with a similar structure of demand. As the level of economic development and the structure of demand are closely correlated, firms from high income countries would find their most promising markets in other high income countries. Similarly, the Uppsala School[11] has argued that according to the concept of psychic distance exporters pick those markets which are psychologically close to the home market. As psychologically close countries are often clustered geographically this would involve mainly exporting to neighbouring countries. Tookey (1975) suggests to build the decision on both strands and select export markets on the basis of their potential and similarity to the home market. Dichtl/Köglmayr (1987) emphasize that discontinuities in international markets and national economies impact on export market selection. It follows from this point of view that firms seek to export to politically and economically more stable markets.

Having selected a range of potential target markets the exporter has to decide on an appropriate export marketing strategy with respect to the number of target markets[12]. In principle, two types of strategies can be distinguished. The essence of the strategy of *market concentration* is to focus exports on a few key markets. Firms choose the most promising markets and may switch from one market to another if a market turns out to be not lucrative enough or too difficult to be served. They actively promote their product and try to penetrate the key markets to achieve high market shares. The managerial focus of those firms is often referred to as marketing oriented, while firms following a strategy of *market spreading* are often viewed to be selling oriented[13]. Contrary to market concentration the strategy of market spreading implies selling a product to many or all target markets simultaneously. Firms initially export to all promising markets and retreat only from the unprofitable ones. They behave more passively in the target markets in general and do not strive for high market shares in the export market.

3. Market concentration vs. market spreading: Theoretical considerations

The choice of market concentration or market spreading as a strategy is dependent on a variety of situational factors which are reviewed in detail by Piercy (1981) or Ayal/Zif (1979). These factors fall into four broad categories: costs, product characteristics, firm characteristics and market conditions.

3.1 costs

Selling abroad causes fixed costs in addition to those already incurred for marketing a firm's products in the domestic market[14]. With respect to choosing the right strategy the decisive question is whether the fixed costs are due to exporting in general and are therefore independent from the number of export markets or whether they are incremental for every export market and therefore increase with the number of export markets served. High incremental fixed costs usually arise from requirements of the export market. Products may need to be adapted to conform to safety standards or technical norms. A marketing organisation with sale representatives, new offices and equipment may be necessary. In these cases the fixed costs of exporting increase with the number of export markets and a strategy of market concentration will most likely be the best choice.

Fixed costs are by and large independent from the number of export markets, if exports can be effectively handled from the home base of the company. Low incremental fixed costs arise e.g., when products don't need to be adapted, when they are mailed directly, or when they can be sold to a wholesale or trading company in the target market which sells the products and keeps the value added from this service. With low incremental fixed costs the optimal strategy for a firm will be market spreading.

The accumulation of knowledge probably constitutes the single most important source of dynamic economies of scale which can be represented by the learning or experience curve[15]. The basic idea is that the unit costs of producing goods or services decline with cumulative output or sales, as firms learn to cope with all the problems associated in setting up a new production. Ursic/Czinkota (1984) extended the production-related learning curve explanation to export expansion and found that it helps to explain the international activities of firms. It is therefore a sound theoretical proposition that firms having established their own sales organisation abroad have a much better chance to acquire export market knowledge, reap the benefits of dynamic scale economies and are able to reduce the costs of exporting. As limited marketing budgets do usually not allow for setting up their own sales organisation in a wide range of countries, companies wishing to move down the learning curve will in general choose a strategy of market concentration.

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[11] Cf. Johansen/Vahlne (1977), Wiedersheim-Paul/Welch/Olson (1978).

[12] Besides the number of target markets there are many more criteria for categorising marketing strategies. See e.g. Samli (1987), or Cooper/Kleinschmidt (1985) for different typologies of marketing strategies.

[13] Cf. Ford/Leonidou (1991).

[14] Cf. Venables (1994).

[15] Cf. Krugman/Obstfeld (1994).

3.2 product characteristics

Product characteristics determine to a large extent whether a product competes on price or non-price factors. Standardised products, envisaged for mass-market need to be price competitive in order to meet the test of the world markets. If a firm has a competitive advantage in a standardised mass product, it seems to be appropriate to reap those benefits as quickly as possible, as competitive advantages in such products tend to be extremely fleeting[16]. The optimal strategy will therefore be one of market spreading. The same is true for products designed for small market segments with specialised applications. The low sales volume achievable suggests to reap the benefits in as many markets as possible, provided there aren't high incremental fixed costs of exporting.

Technologically advanced products are likely to need personal selling and good after-sales service. They are often sold with a 1 to 3 year guarantee and tend to compete more on non-price than on price factors. An exporting firm is required to establish its own marketing and service organisation in the target market. This leads to high incremental fixed costs and therefore favours a strategy of market concentration.

3.3 firm characteristics

The strategy of market concentration involves a higher risk than the strategy of market spreading, as the loss of one export market may very well mean the loss of a substantial part of the total export volume. Hence, risk averse firms are more likely to follow a strategy of market spreading than risk taking firms.

Another factor influencing the strategy decision is the stage of internationalisation of a firm[17]. Firms in the early stages of exporting tend to concentrate on a few markets as they either do not have regular export activities, but are willing to fill unsolicited orders, or are experimental exporters with sales to a limited number of psychologically close countries. Mature and committed exporters, on the contrary, are more likely to have a larger number of markets[18].

3.4 market conditions

Market conditions also play an important role in determining the choice of an appropriate strategy. Small, unstable or new markets favour a strategy of market spreading, as export proceeds tend to be volatile under these market conditions. With unstable financial flows and profits, however, a firm is more difficult to manage and even risk-taking firms often opt for a strategy of market spreading in order to stabilise exports. On the other hand, large, stable or mature markets favour a strategy of market concentration. This is mainly due to the fact that such market conditions attract a large number of firms, thereby increasing competition. Highly competitive markets require active marketing. This involves advertisement, additional sales personal, etc. and leads to high incremental fixed costs — a situation identified above as favouring a strategy of market concentration.

Market conditions can also be characterised by the reactions of sales to marketing efforts. This relationship is often represented by sales response functions which fall into two broad categories — concave functions and s-shaped functions[19]. With an s-shaped sales response function sales initially increase slowly with the expansion of spending on marketing efforts and are only picking up after a substantial amount of money has been spent on marketing efforts. In this case it makes sense to allocate the marketing budget on a few markets in order to achieve a high sales volume and firms may wish to follow a strategy of market concentration. A concave sales response function implies that relatively high sales can be effected with comparatively low expenses on marketing efforts. The fact that diminishing returns to marketing efforts are prevalent from the very beginning results in an optimal sales/marketing effort ratio at low levels of marketing efforts. Applying a strategy of market spreading seems the rational choice for firms operating in markets with concave-shaped sales response functions.

These theoretical considerations suggest that there are probably as many reasons favouring market concentration as reasons favouring market spreading. Which of the strategies real world firms prefer can only be assessed by looking at the empirical evidence.

4. Measurement issues

Although the most common way of defining export markets is in terms of countries this approach has been criticized. First, the concept of market segmentation according to which a market for a generic good is divided into separate product markets serving different buyer needs implies that a firm might serve several product markets. For instance, the market for cigarettes has several segments (high- and low-tar cigarettes, menthol cigarettes etc.) and cigarettes from one segment hardly compete against cigarettes from another segment. Hence, a firm selling high- and low-tar cigarettes should be considered as operating in two markets. Using the number of countries as an indicator of the choice of export marketing strategy will therefore underestimate the number of export markets served. Second, it is has been argued that a group of countries with similar conditions should be considered as only one market[20]. According to this point of view a region such

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16 Cf. Porter (1990).

17 Cf. Kutschker (1994), Czinkota (1982), Wortzel/Wortzel (1981), Reid (1981), Cavusgil (1980), Bilkey/Tesar (1977) or Johanson/Wiedersheim-Paul (1975) for different models of the internationalisation process of firms.

18 Cf. Bamberger/Evers (1994).

19 Cf. Ayal/Zif (1979).

20 Cf. Hirsch/Lev (1973).

as the EU or Latin America would be one export market. In this case the number of countries would overestimate the number of markets served. Hence, defining export markets in terms of countries doesn't seem to be so bad at all, as it tends to balance the effects of over- and underestimation just described. In addition, using countries also facilitates the comparison of different studies. Both facts probably contribute to the widespread use of defining one country as one market, an approach also followed in this study.

Market concentration has been defined as a strategy focusing on a *few* key markets while the strategy of market spreading is related to selling in *many* markets. Hence, one approach to assess a firm's strategy is simply to define how many markets constitutes „few" or „many" and count the number of markets a firm is exporting to. However, deciding upon a specific number is often avoided, especially in the more normative literature. One exception is the BETRO Trust Committee (1976), which generally recommends a strategy of market concentration and explicitly states that exporters will often find their best market number between five and ten. Another is the ITI (1979) study which states that the most impressive export performance is found with those companies concentrating their efforts on ten to twelve markets.

Assessing a strategy purely in terms of absolute numbers of export markets has several shortcomings. First of all, it neglects the size of firms. Even with low incremental fixed costs the marketing budget of small companies might only allow them to serve six or seven markets. In this case a strategy of concentration would imply selling to only two or three markets, while exporting to four or more markets would be associated with market spreading. Hence, fixing the dividing line between the two strategies in *relative* rather than in *absolute* terms would probably be preferable. However, as the discussion of the situational factors favouring either strategy has shown, there is a wide range of criteria other than firm size which can be used to decide upon what should constitute an appropriate threshold distinguishing both strategies empirically. But even if there would be agreement on using firm size, the question would remain on how to measure it[21]. Therefore, many authors prefer either to stay vague or fix the dividing line in absolute terms. Second, assessing an export marketing strategy purely in terms of the numbers of export markets neglects the stage of internationalisation of a firm. Firms in an early export stage can be characterised as reactive exporters with few and geographically close export markets[22]. Active and committed exporters on the contrary ship their goods to many markets. Hence, counting the number of export markets not only reflects choice of strategy but also the internationalisation stage of a firm. Third, it is doubtful whether a company is correctly categorized as using a strategy of market spreading if 20 or more markets are served but if 90 % of the exports go to three or four key markets. In line with this argument Piercy (1982, p. 73) has defined market spreading as *„selling to more than a dozen of export markets (although quite possibly a lot more) without devoting most efforts to a few key markets (say, five or six)."* Such a definition is cumbersome to work with empirically. Hence, it has been suggested to use concentration measures similar to the ones used in industrial economics to assess the degree of a firm s export concentration or diversification[23]. The drawback with this approach is that it is not clear which of the many indices would constitute an appropriate index in measuring a firm s export concentration[24].

Another problem arises from the different interpretations of the export marketing strategies. While it is often used in the static sense as discussed so far it is sometimes interpreted dynamically as a change in the number of export markets or a change in a concentration index, as e.g. in Ayal/Zif (1979) or Hirsch/Lev (1973). In a dynamic interpretation, a firm is following the strategy of market concentration (spreading) if the number of export markets or an index measuring the firm's export concentration is increasing (declining). It is not difficult to find examples in which a firm would be categorised as using the strategy of market concentration in a static sense while it would be using the strategy of market spreading in a dynamic sense. Take a firm which exports to one market and enters a second market abroad. Every index of concentration will indicate that the firm is following a strategy of market spreading in a dynamic sense while the firm would be categorised as following a strategy of market concentration in a static sense. The advantage of the dynamic concept of export marketing strategy lies in the avoidance of having to fix a dividing line as in the static case. However, empirically assessing export strategies in a dynamic sense poses much stronger requirements on data availability, as export data for several years are needed.

When a dynamic interpretation of the export marketing concept is used, the choice of indicators (numbers vs. concentration index) becomes crucial. For it can easily happen that the market number is rising (pointing to market spreading) while the concentration index is decreasing (pointing to market concentration).

Data requirements and a lack of criteria for choosing an appropriate index to assess export marketing strategy in a dynamic sense have probably contributed to the widespread use of the static concept. As the following review of empirical studies shows both market numbers and market shares (or concentration indices derived from both) are used in assessing which export marketing strategy firms are following.

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[21] Stigler (1983) has proposed to measure a firm's size dependent on the market to be considered, i.e. by employees in a labour market study, by revenue in a product market study, etc.

[22] Cf. Bamberger/Evers (1994).

[23] Hirsch/Lev (1973) have used the Herfindahl-index as an indicator of a firm s export concentration.

[24] See for instance Hay/Morris (1991), Scherer/Ross (1990) or Waterson (1984) for a discussion of weaknesses and strengths of different measures of concentration.

5. Review of empirical evidence

Empirical evidence on the marketing strategies chosen by firms is scarce. Even scarcer is empirical evidence on the superiority of either strategy, although it is sometimes claimed that for most firms, especially the small and medium-size exporters, a strategy of market concentration is better[25]. One of the main reason for this weak empirical evidence lies in the broad variety of dependent and independent variables used in empirical studies analysing export behaviour and export success. A meta-study reviewing more than 50 empirical studies found that more than 700 independent variables are assumed to influence export performance[26]. These variables basically represent some core factors and can be grouped into a few categories as in Gemünden (1991), Aaby/Slater (1989), Madsen (1987), Albaum/Peterson (1984) or Bilkey (1978).

With respect to the export marketing strategy only a few studies contrast market spreading with market concentration as discussed so far. Some studies use very close concepts such as nearest neighbour (concentration) versus world market (spreading) orientation. Other studies place more emphasis on the managerial attitude behind such strategies and use pairs of terms such as

— seller versus marketing orientation
— passive (reactive) versus active export orientation
— export versus export marketing orientation

to indicate whether firms are spreading or concentrating, respectively, their export efforts. As the independent variables are differently operationalised, comparison of the studies is impaired. Despite all the problems, the studies reviewed here reveal a common pattern: both types of strategies are used and are distributed roughly equally among the firms of the sample.

Applying the dynamic interpretation using the change of the Herfindahl-index of export concentration as an indicator to assess the use of strategy Hirsch/Lev (1973) found that both strategies were followed almost equally by a sample of 202 Danish, Dutch and Israelian firms. 52 % of the firms applied a strategy of market concentration while 48 % pursued one of market spreading. In all three countries export profitability was higher for firms following a strategy of market spreading.

Meidan (1975) categorised the exporters in the woollen and worsted finished fabric industry in the U.K. according to their attitude towards exporting. He found that 50 % have adopted a marketing attitude while the others were more sales oriented.

An IMR (1978) study found that 33 % of 281 British and 36 % of 282 German companies exported to up to 10 markets. Hence, about two thirds of the firms in both countries can be categorised as using a strategy of market spreading.

Johanson/Nonaka (1983) found that Japanese firms followed a strategy of market spreading in a dynamic sense. They start exporting to psychologically close countries in South East Asia and before entering the all-important European and U.S. market, exporting to Australia was often viewed as a dress-rehearsal. However, as the companies interviewed were 12 of the largest Japanese firms (Sony, Matsushita, Mitsubishi, Denki, Hitachi, Toyota, Nissan, Mazda, Honda, Japan Steel, Nippon Kokan, Kawasaki) these results cannot be considered representative.

Cooper/Kleinschmidt (1985) categorised a sample of 142 Canadian firms selling high-technology electronics by 6 export marketing strategies. Three of those strategies imply a world market orientation and the other three a nearest neighbour (U.S.) orientation of exporters[27]. Firms with world market orientation sold on average 28 % of their exports to the nearest neighbour while firms with nearest neighbour orientation shipped on average 90 % of their exports to the U.S. Although the categorisation schemes are not strictly comparable, these figures indicate that nearest neighbour orientation corresponds to a strategy of market concentration while world market orientation is close to the concept of market spreading. The results concerning the distribution of firms on the two strategies and export success resemble those of Hirsch/Lev (1973) mentioned above. Both strategies were used, however 60 % of the firms used a strategy of market spreading while 40 % used one of market concentration.

Reid (1987) analyzed export behaviour of 77 small Italian manufacturers. He found that both strategies are used depending on situation-specific factors, although superiority of either strategy could not be confirmed.

6. Empirical evidence from French customs data

6.1 Assessing the choice of strategy with market numbers

French customs data from 1985, 1988 and 1990 covering 95 % of French exports to industrialised partner countries and between 15 % and 20 % of the nation's exporters have been used to calculate the number of export markets per firm[28]. The results are presented in Table 1 which gives the distribution of French exporters by the number of export markets per firm.

In order to decide to what extent firms follow a strategy of market concentration or market spreading, a dividing line between the two strategies has to be fixed. With regard to the numbers given by BETRO (1976) and ITI (1979) a low dividing line would be four markets, i.e. approximately 10 % of the 42 export markets covered in the sample. In

[25] Cf. ITI (1979); BETRO Trust Committee (1976). For a dissenting view see Piercy (1982).

[26] Cf. Gemünden (1991).

[27] Firms were categorised as nearest neighbour exporter if they sold more than 67 % of their exports to the U.S. (an average of 67 % of Canadian manufactured exports went to the U.S. in the years of data collection).

[28] See Annex for data description, coverage and limitations.

Table 1

Distribution of French exporters by the number of export markets per firm

Number of export markets	Share of total exporters (%)		
	1985	1988	1990
1	53,2	54,1	31,3
2	17,1	16,2	23,1
3	8,7	8,6	12,8
4	5,3	5,2	7,9
5	3,5	3,8	5,7
6	2,7	2,6	4,0
7	1,9	2,0	3,2
8	1,5	1,5	2,2
9	1,1	1,2	1,8
10	0,9	0,9	1,5
11	0,7	0,7	1,2
12	0,6	0,6	1,0
13—16	1,6	1,5	2,3
17—20	0,7	0,7	1,1
21—26	0,4	0,3	0,6
27—33	0,1	0,1	0,2

Source: DIW calculations based on French customs data.

this interpretation a firm would be applying a strategy of market spreading if at least 5 markets are served. Considering that the EC had 10 members in 1985 and 12 in 1988 and 1990 this would mean that those firms following a strategy of market concentration would not have even served half of the EC countries. Even in this wide interpretation of market spreading, only 16 % of the firms in 1985 and 1988 and 25 % of the firms in 1990 used a strategy of market spreading. If eight markets are used as a dividing line, the share of firms considered using a strategy of market spreading lies between 6 % and 10 % and if 12 markets are used only 3 % to 4 % of the firms follow such a strategy.

6.2 Assessing the choice of strategy with market numbers and market shares — a bird's eye view

Another criterion for deciding whether firms use a strategy of market spreading or market concentration is to use the above mentioned definition of Piercy (1982), according to which market spreading means to sell to many markets without concentrating on a few key markets.

Table 2a

Distribution of firms' exports on their main export markets: French exports to industrialised countries 1985

number of export markets	cumulated share (in %) of exporters	average share (in %) of market n in exports (from biggest to 11th biggest market)											
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	others
1	53	100.0	.	.	.	.	.	.	.	.	.	.	.
2	70	69.3	30.7	.	.	.	.	.	.	.	.	.	.
3	79	59.0	26.2	14.8	.	.	.	.	.	.	.	.	.
4	84	52.7	24.3	14.0	8.9	.	.	.	.	.	.	.	.
5	88	48.8	22.4	13.9	9.0	5.9	.	.	.	.	.	.	.
6	91	44.5	22.1	13.7	9.2	6.2	4.3	.	.	.	.	.	.
7	92	43.3	21.0	13.4	9.1	6.1	4.1	3.0	.	.	.	.	.
8	94	41.6	20.3	13.0	8.7	6.2	4.5	3.2	2.4	.	.	.	.
9	95	38.2	19.9	12.9	9.0	6.6	5.0	3.7	2.7	2.0	.	.	.
10	96	36.3	19.6	13.5	9.4	6.6	5.0	3.7	2.6	1.9	1.4	.	.
11	97	37.2	18.8	12.5	9.0	6.6	4.9	3.6	2.7	2.0	1.5	1.1	.
12	97	35.7	18.9	12.6	8.7	6.5	4.8	3.6	2.9	2.2	1.7	1.3	1.0
13	98	35.6	18.6	11.9	8.3	6.4	4.9	3.8	3.0	2.3	1.8	1.4	1.9
14	98	34.8	17.8	12.1	8.8	6.5	4.9	3.7	2.9	2.3	1.9	1.5	2.7
15	99	32.8	18.9	11.9	8.4	6.7	4.9	4.1	3.1	2.4	1.9	1.5	3.4
16	99	28.6	18.1	12.6	9.4	7.1	5.4	4.2	3.4	2.7	2.1	1.7	4.5
17	99	31.0	17.7	12.3	9.3	7.2	5.4	3.9	3.0	2.4	1.9	1.6	4.3
18	99	30.6	16.3	11.5	8.5	6.7	5.3	4.3	3.5	2.9	2.3	1.9	6.2
19	99	30.7	17.7	11.8	8.4	6.6	5.0	4.0	3.2	2.7	2.1	1.8	5.9
20	100	31.4	16.9	11.4	8.4	6.3	5.0	3.8	3.2	2.6	2.2	1.8	6.8
21	100	26.9	17.2	12.1	10.1	7.0	5.5	3.8	3.2	2.6	2.1	1.8	7.7
22	100	30.0	17.1	11.8	8.7	6.2	4.8	3.8	3.1	2.5	2.0	1.8	8.1
23	100	29.9	17.4	11.7	8.8	6.7	5.2	4.0	3.1	2.4	2.0	1.6	7.3
24	100	28.8	14.4	11.2	8.9	7.0	5.8	4.1	3.3	2.9	2.2	1.9	9.4
25	100	27.7	18.2	11.1	8.2	6.7	5.4	3.8	3.3	2.7	2.3	2.0	8.4
26	100	29.1	17.5	10.8	7.8	6.2	5.0	4.6	3.2	2.8	2.2	1.8	9.0
27	100	27.0	16.5	10.5	8.9	7.2	5.6	4.2	3.2	2.7	2.2	1.9	10.1
28	100	24.7	17.4	11.6	8.7	7.0	6.3	4.3	3.4	2.5	2.1	1.8	10.1
29	100	25.7	18.9	16.0	8.9	7.5	6.0	3.8	2.9	1.7	1.5	1.3	5.8
30	100	23.6	15.9	10.1	10.1	7.4	5.6	4.8	3.6	3.0	2.7	2.1	11.0
31	100	21.7	15.3	10.8	9.3	8.0	6.3	5.5	3.9	3.5	3.3	2.4	10.0

Althoug this criterion leaves some room for interpretation an attempt is made here to use Piercy's definition for assessing the choice of strategy. Because of the smaller number of export markets in our data, Piercy's figures are simply divided by two. Hence, a firm follows a strategy of market spreading, if 6 or more markets are served and the main efforts are not concentrated on three key markets. It is apparent from Table 1 that 81 % to 88 % of the firms are automatically categorised as using a strategy of market concentration as they export to 5 or less markets.

A bird's eye view by firm group[29] on the remaining 12 % to 19 % of the firms reveals that the average share of the main three markets lies at approximately 80 % in each of the three years for firms exporting to 6 markets and between 56 % and 60 % for firms exporting to 20 markets (see tables 2a, 2b and 2c which give the average share of the largest, second largest etc. market by the number of export markets for all firms in the sample). It is of course a matter of interpretation whether such shares for the main three markets are considered to represent a concentration on the key markets or not. However, most of us would probably agree that not very many groups of firms are using a strategy of market spreading.

An aggregation by firm groups as in Tables 2a, 2b and 2c still doesn't rule out the possibility that this result is caused by half of the 12 % to 19 % of the firms with more than 5 export markets strongly concentrating on three main markets, while the other half would be following a strategy of market spreading. However, even if this was the case there would still be less than 10 % of the firms using a strategy of market spreading according to the definition of Piercy.

6.3 Assessing the choice of strategy with concentration index

A third criterion to assess a firm's marketing strategy is to use concentration indices similar to those used in assessing firm concentration in an industry, e.g. concentration ratios, the Herfindahl-, Rosenbluth-, Horvath- or entropy-

[29] The firms are grouped by the number of export markets.

Table 2b

Distribution of firms' exports on their main export markets: French exports to industrialised countries 1988

number of export markets	cumulated share (in %) of exporters	average share (in %) of market n in exports (from biggest to 11th biggest market)											
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	others
1	54	100.0	.	.	.	.	.	.	.	.	.	.	.
2	70	69.1	30.9	.	.	.	.	.	.	.	.	.	.
3	79	59.5	25.8	14.7	.	.	.	.	.	.	.	.	.
4	84	53.1	24.0	14.0	8.8	.	.	.	.	.	.	.	.
5	88	49.1	22.9	13.4	8.8	5.8	.	.	.	.	.	.	.
6	90	45.5	21.8	13.5	8.9	6.1	4.2	.	.	.	.	.	.
7	92	42.6	21.2	13.3	9.1	6.3	4.4	3.1	.	.	.	.	.
8	94	39.9	20.7	13.2	9.0	6.6	4.7	3.4	2.5	.	.	.	.
9	95	39.1	20.8	13.3	9.0	6.3	4.4	3.2	2.3	1.7	.	.	.
10	96	37.7	20.1	13.0	8.8	6.4	4.7	3.5	2.5	1.9	1.4	.	.
11	97	35.9	18.7	12.8	9.1	6.6	5.1	3.9	3.0	2.2	1.6	1.2	.
12	97	34.7	18.6	12.5	8.9	6.6	5.0	3.9	3.0	2.4	1.8	1.4	1.1
13	98	34.3	18.2	12.1	8.7	6.7	5.2	4.1	3.1	2.4	1.8	1.4	2.0
14	98	34.8	18.3	11.9	8.7	6.3	5.0	3.7	2.9	2.3	1.8	1.4	2.7
15	99	31.8	18.5	12.1	9.2	6.7	5.2	3.9	3.1	2.5	2.0	1.6	3.4
16	99	29.8	18.0	12.8	9.5	7.0	5.2	4.1	3.2	2.5	2.0	1.7	4.2
17	99	31.7	17.4	12.4	8.8	6.8	5.2	3.9	3.1	2.4	2.0	1.6	4.6
18	99	31.1	17.1	11.8	8.9	6.6	5.2	4.1	3.2	2.5	2.1	1.7	5.7
19	99	29.7	17.0	11.9	9.1	6.9	5.3	4.1	3.4	2.7	2.2	1.7	6.0
20	100	29.0	16.3	11.5	8.8	7.0	5.8	4.3	3.4	2.7	2.2	1.9	7.1
21	100	27.2	16.4	12.2	9.1	7.0	5.4	4.5	3.5	2.8	2.3	1.8	7.8
22	100	28.4	17.5	10.5	8.8	7.3	5.6	4.4	3.4	2.7	2.2	1.9	7.3
23	100	26.2	17.0	12.3	8.6	6.6	5.4	4.7	4.0	3.2	2.3	1.8	7.9
24	100	25.1	18.0	12.7	9.6	7.0	5.5	4.2	3.3	2.5	2.1	1.7	8.3
25	100	25.8	16.0	12.6	8.9	6.6	5.6	4.3	3.6	3.2	2.4	2.1	8.8
26	100	26.0	17.1	11.3	8.9	6.5	5.3	4.4	3.6	3.1	2.7	1.8	9.3
27	100	26.5	18.0	10.2	8.5	6.6	5.2	4.0	3.3	2.9	2.5	2.2	10.1
28	100	23.5	17.0	13.1	10.3	7.5	5.2	4.0	3.2	2.6	2.1	1.8	9.6
29	100	26.8	15.9	12.7	8.6	7.4	5.9	5.0	4.0	3.5	2.3	1.6	6.2
30	100	21.3	16.6	12.0	9.4	7.6	6.0	4.8	3.7	3.1	2.6	2.2	10.7
31	100	29.4	18.7	16.1	6.1	4.2	3.3	3.0	2.7	2.2	1.8	1.7	10.8
33	100	22.4	18.0	14.0	12.8	7.8	5.9	3.8	3.2	2.7	1.8	1.7	6.1

Table 2c

Distribution of firms' exports on their main export markets: French exports to industrialised countries 1990

number of export markets	cumulated share (in %) of exporters	average share (in %) of market n in exports (from biggest to 11th biggest market)											
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	others
1	31	100.0	.	.	.	.	.	.	.	.	.	.	.
2	54	69.7	30.3	.	.	.	.	.	.	.	.	.	.
3	67	59.3	25.9	14.8	.	.	.	.	.	.	.	.	.
4	75	53.5	23.4	14.0	9.0	.	.	.	.	.	.	.	.
5	81	48.7	22.8	13.6	9.0	6.0	.	.	.	.	.	.	.
6	85	45.9	21.9	13.4	8.7	6.0	4.1	.	.	.	.	.	.
7	88	43.8	21.5	12.7	8.7	6.1	4.2	3.0	.	.	.	.	.
8	90	40.2	20.7	13.0	9.2	6.4	4.7	3.3	2.4	.	.	.	.
9	92	39.9	19.8	12.6	8.8	6.4	4.6	3.4	2.6	1.9	.	.	.
10	94	37.4	19.7	12.8	8.9	6.5	4.9	3.6	2.7	2.0	1.5	.	.
11	95	36.6	19.2	12.7	8.9	6.5	4.7	3.6	2.8	2.1	1.6	1.2	.
12	96	34.4	19.0	12.7	8.7	6.7	5.1	3.9	3.0	2.3	1.8	1.4	1.0
13	97	34.8	18.3	12.0	8.7	6.5	5.1	3.8	3.1	2.4	1.9	1.4	1.9
14	97	34.8	17.5	12.2	8.8	6.7	4.9	3.8	3.1	2.3	1.9	1.4	2.7
15	98	32.5	17.7	12.0	8.8	6.9	5.3	4.2	3.2	2.6	1.9	1.5	3.4
16	98	30.8	18.0	12.9	9.2	6.8	5.2	3.9	3.0	2.5	2.0	1.6	4.3
17	98	32.9	17.7	11.9	8.5	6.5	4.8	3.8	3.0	2.4	2.0	1.7	4.8
18	99	27.7	18.4	12.9	9.2	6.7	5.1	4.1	3.4	2.6	2.2	1.8	6.0
19	99	29.3	17.1	12.0	9.3	7.0	5.3	4.1	3.3	2.6	2.1	1.8	6.2
20	99	28.1	18.6	12.7	9.4	6.8	5.2	4.1	3.2	2.6	2.0	1.6	5.8
21	99	26.7	15.8	11.4	8.9	7.5	6.0	4.5	3.7	3.1	2.5	2.1	7.7
22	99	25.2	17.3	12.6	9.4	7.6	5.6	4.5	3.6	2.8	2.4	1.8	7.2
23	100	26.4	16.0	11.7	9.6	7.4	5.4	4.2	3.4	2.8	2.3	2.1	8.9
24	100	26.1	15.6	12.3	9.0	7.1	5.3	4.5	3.7	3.0	2.7	2.1	8.7
25	100	26.6	17.2	12.0	8.9	6.7	5.5	4.6	3.4	2.8	2.1	1.8	8.5
26	100	23.8	16.2	12.7	10.7	7.9	6.4	4.6	3.5	2.9	1.9	1.5	8.0
27	100	26.3	16.4	11.5	8.2	7.1	5.8	4.9	4.1	3.2	2.3	1.7	8.6
28	100	21.8	15.6	13.8	10.9	7.8	5.6	4.6	3.9	2.6	2.3	1.8	9.3
29	100	25.8	17.8	10.8	7.8	6.6	5.6	4.6	3.7	3.1	2.0	1.7	10.4
30	100	34.1	22.5	9.8	6.6	5.2	3.7	3.4	2.9	2.2	1.3	1.1	7.1
31	100	21.7	17.4	11.9	8.1	4.6	4.2	3.8	3.8	3.7	3.0	2.5	15.3
32	100	19.0	14.0	12.7	11.7	9.2	7.1	5.5	4.1	3.1	2.4	1.6	9.7
33	100	22.4	18.3	14.8	13.2	7.5	6.6	4.1	2.2	1.6	1.5	1.4	6.5

index[30]. Most of the concentration indices have a more or less strong theoretical foundation related to the field of industrial economics. Still, the choice of an index is to some extent arbitrary[31]. With respect to assessing export marketing strategies there is no guidance to which index should be used. We have opted to use the Herfindahl-index for two reasons. First, it is probably the most widely used concentration-index. Second, it was used in the study of Hirsch/Lev (1973) which is — to the best of our knowledge — the only study using a concentration index to assess the choice of strategy.

The Herfindahl-index of a firm's export concentration is calculated by summing the squared shares of each export market in total exports:

$$H = \sum_{i=1}^{n} S_i^2$$

where s_i = share of export market i in total firm exports, and n = number of export markets per firm.

The Herfindahl-index has a maximum of one (absolute concentration) and a minimum of 1/n (equal distribution). Hence, the more concentrated a firm's exports, the higher the index. As with market numbers, a dividing line has to be defined to assign a firm to a strategy but unfortunately, there are no criteria to fix such a value. Therefore, Table 3 provides a summary of the export market concentration of French firms in which exporters are grouped into classes by their value of the Herfindahl-index. If index values between 0 and 0.3 are defined to indicate a strategy of market spreading, between 13 % and 19 % of French exporters follow this strategy[32]. If the upper limit is increased to 0.4,

[30] Cf. Needham (1978) for a detailed discussion of those indices.

[31] In most cases the choice of index doesn't make a difference, as the index values are highly correlated (see Hay/Morris (1991)).

[32] Stigler (1969) has used the Herfindahl-index equal to 0.25 as a dividing line to differentiate between concentrated and not concentrated industries.

Table 3

Export market concentration of French firms

Herfindahl-index	share and cumulated share of firms (in %)					
	1985		1988		1990	
1	53	*53*	54	*54*	31	*31*
0.99-0.61	9	*62*	8	*62*	13	*44*
0.60-0.51	10	*72*	10	*72*	14	*58*
0.50-0.41	7	*79*	7	*79*	11	*69*
0.40-0.31	8	*87*	8	*87*	12	*81*
0.30-0.21	8	*95*	8	*95*	12	*93*
0.20-0.00	5	*100*	5	*100*	7	*100*

Source: DIW calculations based on French customs data.

the share of firms considered to spread their export efforts goes up to between 21 % and 31 %. Increasing the upper limit further, e.g. to 0.5 doesn't seem to be appropriate. The value of the Herfindahl-index can only reach or go beyond 0.5 if the largest export market accounts for at least 50 % of a firm's export revenues — a fact which is hard to reconcile with the notion of market spreading.

6.4 Industry breakdown

In order assess industry effects on the choice of strategy two of the three indicators used so far — market numbers and share of the main three markets — were calculated on a disaggregated level. Although the industries differ in terms of the maximum number of export markets and the number of exporters, the aggregate pattern as shown in

Table 4

Share of firms with 4 or less export markets by industry (in %)

Industry	1985	1988	1990	average
Vegetables	94	94	93	94
Wine	83	83	83	83
Wood	96	96	95	96
Furniture	95	93	93	94
Fish	96	94	96	95
Iron and steel	80	82	84	82
Non-ferrous metals	85	84	85	85
Glass and ceramics	81	86	84	84
Base chemicals	77	77	76	77
Perfume	75	76	77	76
Pharmaceutical products	78	79	75	77
Metal products	89	90	90	90
Agricultural machines	85	86	86	86
Machinery, general and specialised	86	88	87	87
Office machines and data processing equipment	89	88	88	88
Electrical components	81	83	84	83
Electronic components	84	86	86	85
Consumer electronics	85	88	85	86
Household equipment	83	81	83	82
Motor cars and pieces	87	89	90	89
Utilitarian vehicles, coaches and trailers	95	93	94	94
Motorcycles, cycles and pieces	78	87	89	85
Clocks, precision engineering, optics	85	85	85	85
Dairy products	83	80	78	80
Textiles	83	82	81	82
Leather and furs	90	92	93	92
Shoes	83	82	82	82
Clothing	88	86	86	87
Pulp and paper	84	84	84	84
Toys	83	88	86	86
Sports and camping equipment	87	88	87	87

Source: DIW calculations based on French customs data.

tables 2a, 2b and 2c is almost the same on the disaggregated level: Most firm groups in an industry concentrate on a few key markets and even those spreading their export efforts over many markets derive the bulk of their exports from selling to three or four key markets[33]. Table 4 gives the percentage of firms exporting to four or less markets by industry. On a three year average, between 96 % (wood) and 76 % (perfume) of the firms in an industry export to four markets or less. It is remarkable that these percentages are almost constant in 30 of the 31 industries for all three years, although the number of exporters varies considerably between the three years. Only motorcycles and cycles show a difference of more than five percentage-points between any of the three years (see Table 4). It seems that there are industry effects which play a role in determining the share of firms concentrating on key markets. These industry effects might be due to the situational factors discussed above. It also seems that industries producing relatively homogeneous products which are costly to transport tend to concentrate their efforts on fewer markets. It is, however, far beyond the scope of this paper to explore the causes of those differences in more detail.

Summary of results: Although different dividing lines between the two strategies and the use of different concepts to assess the use of a certain strategy lead to (slightly) different shares of firms categorised as following either strategy, the empirical evidence from a large sample of firms leaves no doubt that the majority of French exporters were following a strategy of market concentration in a static sense when trading with industrialised countries. This seems to be all grist to the mills of those recommending that firms should concentrate their efforts on a few export markets. However, as we shall see below there is more to the choice of strategy than meets the eye.

7. The choice of export marketing trategy reconsidered

The main reason why the majority of French firms are following a strategy of market concentration is not so much due to the fact that they are voluntarily opting for this

[33] Cf. Trabold (1995), annexes 2, 3 and 4, where the cumulated share of exporters and the distribution of export revenues on the main markets per firm group are shown by industry.

Figure 1

Correlation between average export value of French firms and the number of export markets served — 1985

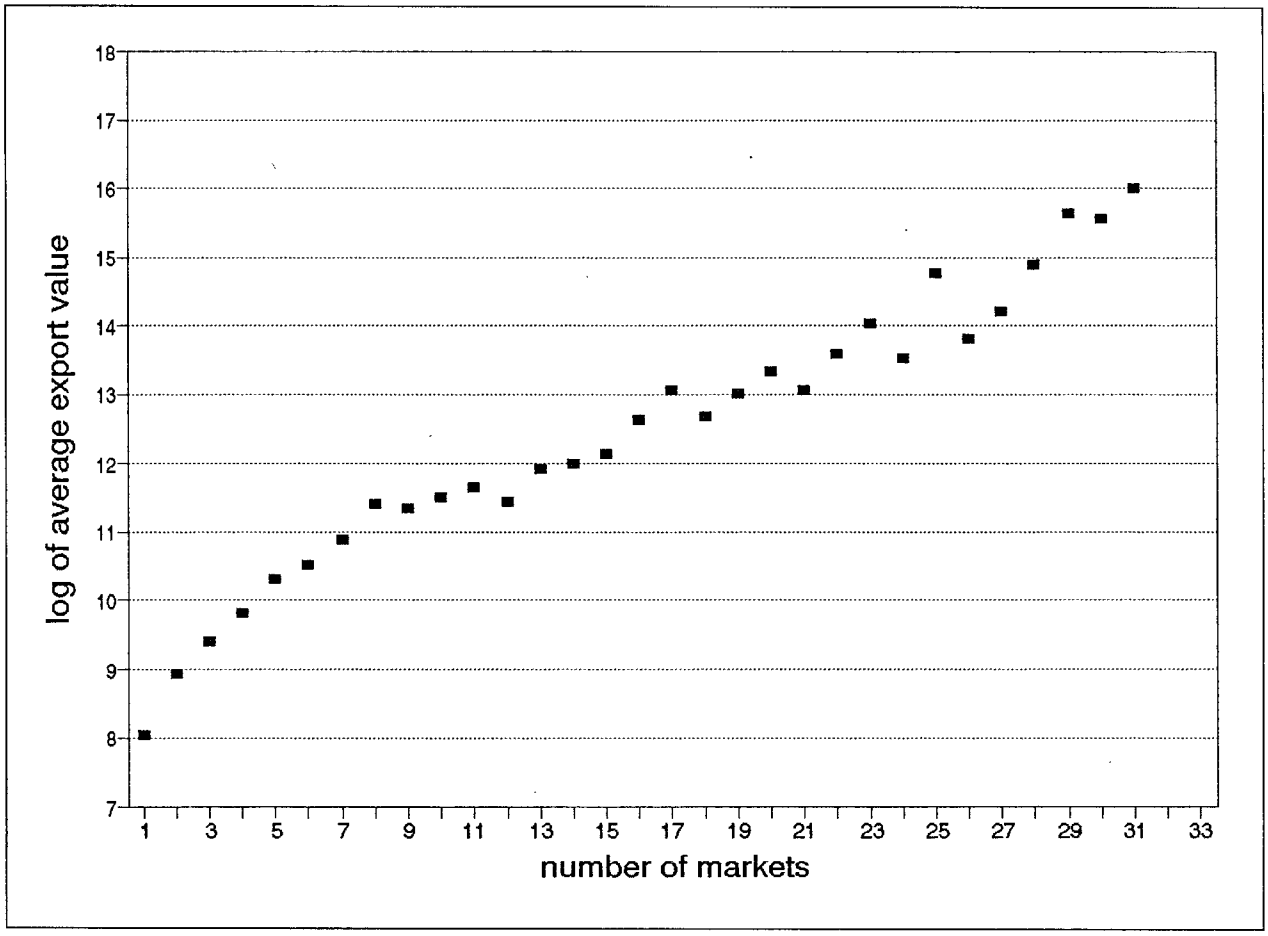


Figure 2 **Correlation between average export value of French firms and the number of export markets served — 1988**

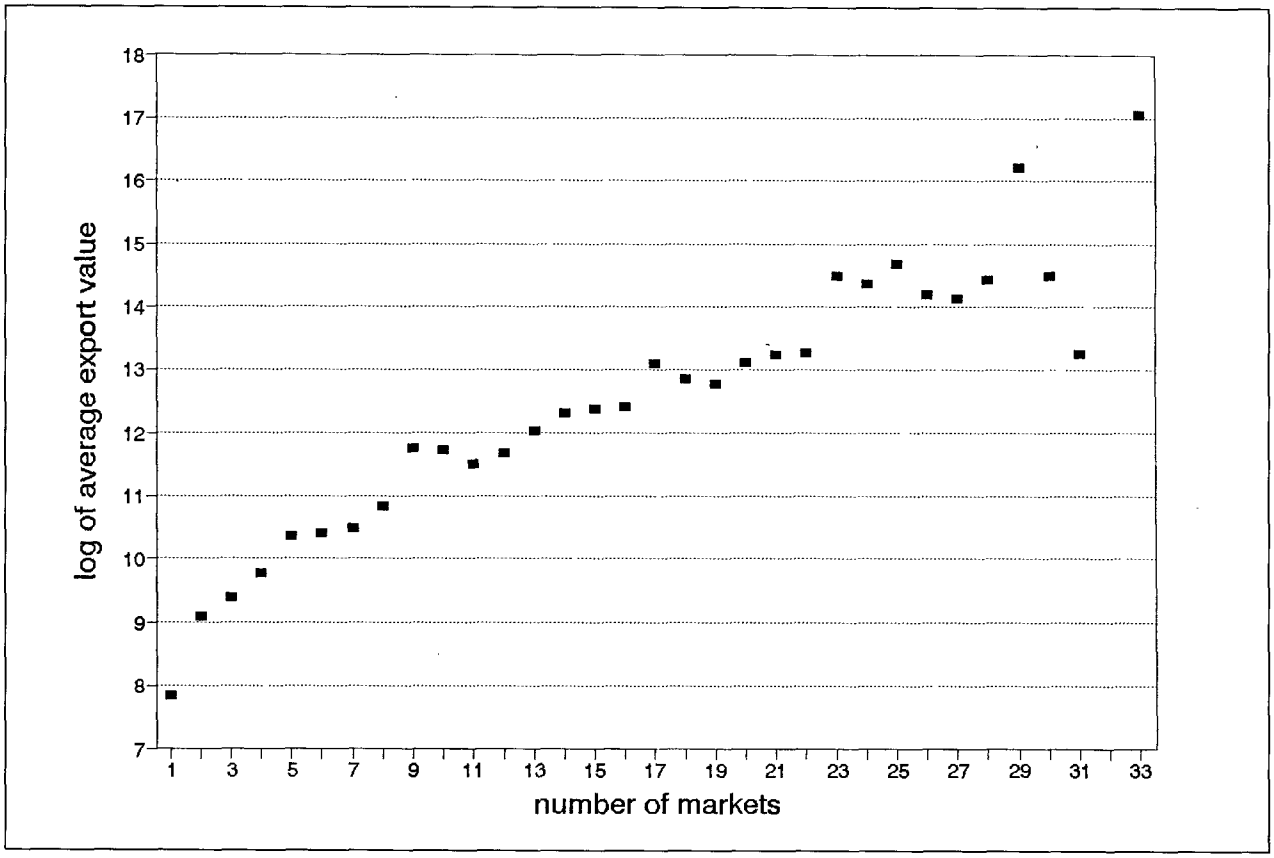
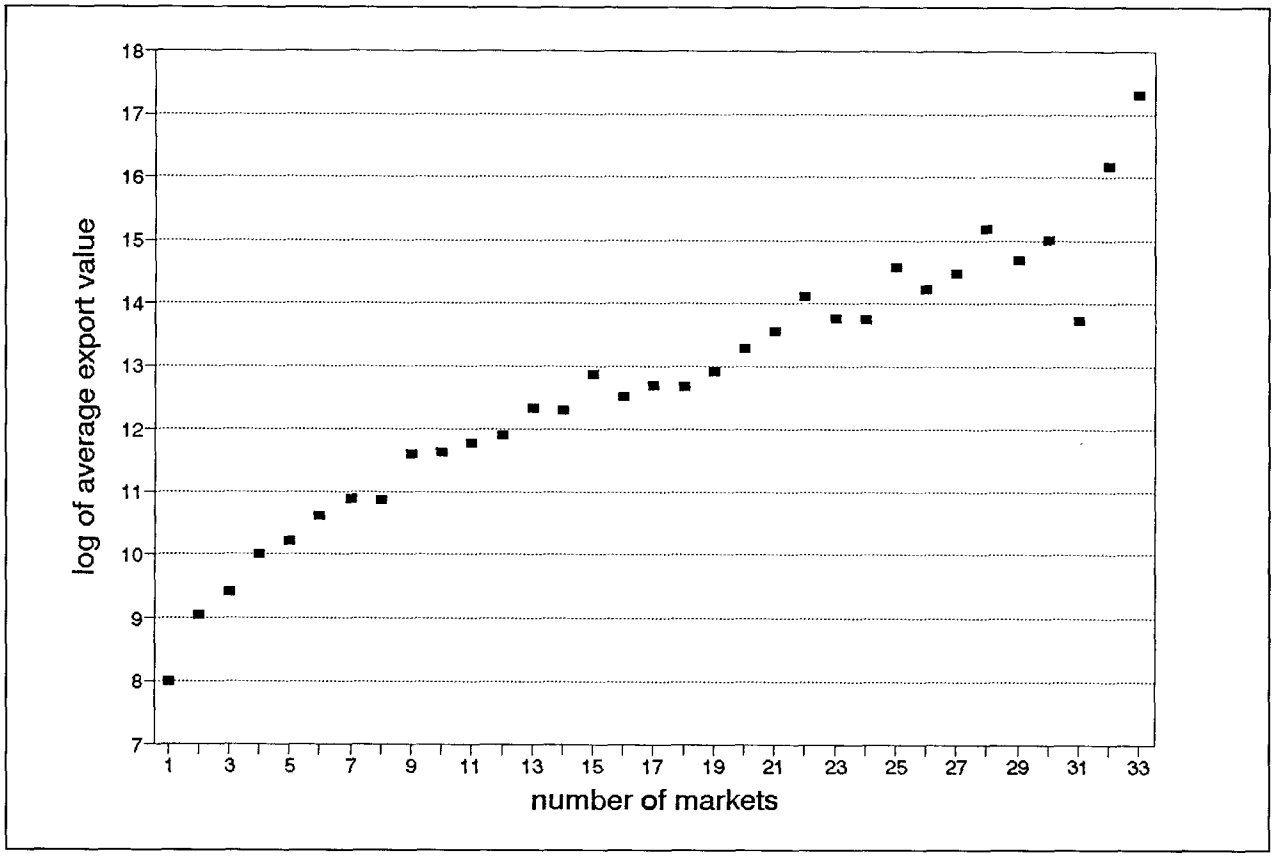


Figure 3 **Correlation between average export value of French firms and the number of export markets served — 1990**



strategy. Most of them simply don't have another choice, as they are too small. There are several theoretical arguments supporting this point of view: First, although situational factors can be found leading to low incremental fixed costs in exporting to an additional country, it is also clear that in many cases these costs are high. Small and medium-sized firms very often do not have the financial resources available to cover the fixed costs of exporting to an additional market. Secondly, similar to the concept of minimum efficient scale (MES) in production there is a minimum efficient scale in exporting (MESE)[34]. That is, in order to cover the fixed costs of entering a new export market, a certain sales volume is needed in a foreign market. Small firms, especially, might simply not have the physical capacity to produce the necessary quantities to cross MESE in more than one or two export markets. Third, a firm can never be sure it will be successful in a new foreign market. Loosing a given amount of fixed costs on entering a foreign market is associated with a higher risk for smaller firms. This is also the main reason why simply increasing production by employing additional resources doesn't solve the problem of crossing MESE. Our proposition is therefore, that on average, firm size determines the optimal number of export markets[35].

In order to check this proposition the log of average firm group exports was regressed against the number of export markets. The log of average export revenue is used for two reasons. First, theoretical considerations and empirical evidence suggest that the size distribution of firms in an economy and an industry can often be approximated by a lognormal distribution (Gibrat's law)[36]. Hence, if firms are ordered by ascending firm size on the x-axis in a diagram with the corresponding firm size graphed on the y-axis, the resulting curve can be approximated by an exponential function. Second, export intensity[37] is — on average — higher for larger firms[38].

It follows from these two facts that the distribution of firms' export revenues can also be approximated by a lognormal distribution. If the proposition that larger firms have a greater number of export markets is correct, the curve resulting from graphing the number of export markets on the x-axis and firm's export revenues on the y-axis should also resemble an exponential function. The correlation between the log of average exports per firm group and number of export markets is obvious from Figures 1 to 3 with R^2 of 0.96, 0.89 and 0.93 for 1985, 1988 and 1990, respectively, and coefficients significant at the 0.01 level.

Our proposition is therefore that the causality runs from firm size to the number of export markets: The larger a firm the more export markets can be served. The situational fac-

[34] Cf. Auquier (1980).

[35] This proposition is in line with other studies identifying firm size as a major factor influencing export behaviour, e.g. Culpan (1989).

[36] Cf. Gibrat (1931), Kalecki (1945), Nelson/Winter (1982), Scherer/Ross (1990).

[37] Export intensity is defined as the share of exports in total sales of a firm.

[38] Cf. Auquier (1980).

Table 5

Distribution of French exports by export revenue and the number of export markets (1990)
(in % of the number of firms in respective class)

export revenue of firms (in Mill. FF)	number of export markets											
	1	2	3	4	5	6	7	8	9	10	11	>11
< 2	82	17	1	0	0	0	0	0	0	0	0	0
2 <= 4	34	43	18	4	0	0	0	0	0	0	0	0
4 <= 6	19	34	26	15	6	1	0	0	0	0	0	0
6 <= 9	14	25	26	17	12	4	1	0	0	0	0	0
9 <= 12	11	19	20	18	14	11	4	2	1	0	0	0
12 <= 15	10	13	17	19	17	11	7	3	2	1	0	0
15 <= 20	6	12	13	12	16	15	10	8	4	3	1	0
20 <= 30	5	9	11	10	16	10	12	8	7	5	3	2
30 <= 50	4	7	7	9	9	11	11	11	8	7	6	10
50 <= 100	3	3	6	5	5	7	10	11	6	8	10	26
100 <= 300	1	3	2	3	3	5	4	5	8	7	9	50
300 <= 1000	0	1	1	3	1	3	2	1	2	5	3	78
>1000	0	4	0	0	0	3	1	0	1	3	4	85

Source: DIW calculations based on French customs data.

tors under which a firm operates determine whether more or less markets are served. This proposition is in line with the IMR (1978) and Bamberger/Evers (1994). These two are among the few studies which differentiate the number of export markets by firm size; both find that firm size heavily influences the number of export markets[39]. Our findings point into the same direction (see Table 5 which gives the share of firms exporting to 1, 2, and so forth markets by classes of export revenues)[40]. The larger the firms, the more export markets are served on average. For example, half of the firms with export revenues between six and nine mill. FF export to two or three markets only while half of the firms with export revenues between 100 and 300 mill. FF export to at least 11 markets. The proposed causality cannot be proven. Claiming however, that market numbers determine export volumes would be rather unreasonable as one would need to find an explanation of why firms are not growing and increasing profits by simply increasing the number of their export markets.

Additional support for our proposition that firm size determines the choice of export marketing strategy can be found in looking at some of those firms not included in our data set. The smallest 110.000 to 115.000 exporters (micro-exporters) account for 3.1 % and 2.8 % of total French exports in 1990 and 1988, respectively[41]. Average export per micro-exporter was FF 300,000 in 1990 and FF 230,000 in 1988, which is 10 % to 12 % of the average export revenues of those firms exporting to one market only. Even with low incremental fixed costs of exporting it is difficult to imagine that many of those 110.000 to 115.000 micro-exporters are serving more than four or five markets. On the contrary, as confirmed in discussions with French customs officials prior to the preparation of the data set, the vast majority of micro-exporters have less than 4 export markets, for reasons mentioned above. Hence, if all French exporters would be taken as the basis for an assessment of marketing strategy, the share of firms following a strategy of market concentration would even be higher than the shares given in section 6.

8. Conclusions

The empirical evidence presented in this paper shows that the vast majority of firms follow a strategy of market concentration when market numbers or a combination of market numbers and the share of the key markets is used as an indicator. The situation changes slightly in favour of the strategy of market spreading if the Herfindahl-index is used to assess the choice of strategy[42]. It was proposed in section 7 that the main reason for this is the size distribution of exporters which corresponds to Gibrat's law. In addition, industry effects and the stage of internationalisation were also found to affect the number of export markets. It therefore seems to be appropriate to fix the dividing line between the strategies of market spreading and market concentration in relative terms. Firms of a size class exporting to more (less) than a certain number of partner countries should be categorized as following a strategy of market spreading (concentration). This operationalisation has of course similar problems as the other definitions and poses stronger requirements on data availability. However, given the fact that only large exporters can afford to penetrate a large number of markets and that micro-, small-, and medium-size firms constitute the majority of exporters, the use of a uniform number of markets as a dividing line between the two strategies will automatically categorise most firms as following a strategy of market concentration. Future research on the superiority of either strategy should therefore be conducted with firms of similar size, the same industry and the same stage of the internationalisation process.

Annex: Data, coverage and limitations

Data Source

The present study is based on enterprise-level trade data from France for the years 1985, 1988 and 1990[43]. The primary data has been kindly provided by the French Department of Customs (Direction générale des douanes et droits indirects, Sous-direction des statistiques et de l'information, Bureau C/1, Ministère de l'économie, des finances et du budget, Paris) to the International Trade Centre UNCTAD/GATT (ITC) in Geneva. The data were analyzed in the framework of the collaboration between the ITC and the DIW in the area of trade data analysis at enterprise level.

The study is based on trade data at the 4-digit French product nomenclature NAPCE[44]. The industries surveyed in this paper are defined on the basis of NAPCE and can be found in Trabold (1995, annex 6). Primary data provide details on more than 200 countries and territories. A list of the countries covered in this study can be found in Trabold (1995, annex 7).

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[39] In addition, Bamberger/Evers (1994) found that the stage of internationalisation and the industry, to which a firm belongs, matter.

[40] Export revenues can be used to measure firm size just as any other indicator, e.g. value added, number of employees.

[41] Cf. Direction g n rale des douanes et droits indirects (1989, 1991).

[42] These results are at odds with many other studies on the subject. It is beyond the scope of this paper to explore the reasons behind it. Our study relies on a very large data set including many small exporters eliminating sampling bias towards larger (and perhaps more active) exporters, which is sometimes hold responsible for non-representative results (see Piercy 1982). Sampling bias towards larger firms in many other studies on the subject appears to be a strong candidate for explaining the different results.

[43] Enterprise-level trade data were collected directly from firms' customs declaration. They have been aggregated by year, flow (export, import), country of destination, product and firm.

[44] NAPCE stands for „Nomenclature d'Activités et des Produits pour le Commerce Extérieur". A complete list with the original product names in French is available from French customs authorities or the author. An English translation of NAPCE can be found in Trabold (1995, annex 5).

Coverage

Similar to the situation in other countries French foreign trade is highly concentrated[45]. The 250 largest exporters account for 50 %, the 5000 largest exporters for 90 % of French exports[46]. This concentration is also reflected on the level of transactions: the largest 100.000 export transactions (export value > 500.000 FF) cover 95 % of French exports to industrialised countries.

In order to reduce the size of the primary data set[47], all export transactions with a value of less than 500.000 FF and import transactions with a value of less than FF 610.000 were excluded.

Limitations

Due to the transaction threshold used several limitations need to be kept in mind:

a) The study focuses on French exports to industrialised countries, i.e. the maximum number of export markets a firm can have is 42. However, this covers more than three quarters of French exports, as between 81 % and 85 % of total French exports in the three years under consideration went to these 42 countries. This results in a coverage ratio of 95 % in exports to those 42 countries.

b) For many firms included in the data set, the number of industrialised partner countries is slightly higher thancalculated from the data. To make up for this deficiency in the data and the fact that only exports to industrialised countries were analyzed, low dividing lines were used to assess the choice of strategy. The deficiency in the data, however, has almost no repercussions on the other two indicators used. Average export value of those firms exporting to 6 or more markets is FF 170 mill. to FF 190 mill. Even in the unlikely case of having missed out on 4 markets per firm with the maximum possible loss of export volume of FF 500.000 per transaction the share of the largest three markets in total exports would only be 1 percentage point less. Since the Herfindahl-index is calculated as the summed squares of the shares of the export markets in a firm's total exports, this omission matters even less. In addition, as explained in the text, the vast majority of the omitted micro-exporters (between 110,000 and 115,000) export to less than four countries (most of them even export to only one). The inclusion of those micro-exporters would probably even more than offset the underestimation in market numbers of the firms included and identify an even higher share of firms as using a strategy of market concentration.

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[45] Cf. Bergsten (1991), Trabold (1994).

[46] Cf. Direction g n rale des douanes et droits indirects (1991, 1989).

[47] Cf. Kirchbach/Trabold-Nübler (1992).

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Zusammenfassung

Markterweiterung versus Marktkonzentration: Eine kritische Betrachtung der Diskussion von Exportmarketingstrategien

Dieser Artikel zeigt, daß die große Mehrheit der französischen Exporteure eine Strategie der Konzentration auf wenige Exportmärkte anwendet. Dieses Ergebnis steht im Widerspruch zu vielen anderen Studien zu dieser Thematik. Der Hauptgrund dafür liegt in den unterschiedlichen Unternehmensgrößen. Wegen der hohen Fixkosten des Exports können es sich nur wenige große Unternehmen leisten, eine große Zahl von Exportmärkten zu beliefern. Kleine und mittlere Unternehmen haben keine andere Wahl als sich auf wenige Märkte zu konzentrieren. Künftige Untersuchungen zu diesem Thema sollten Firmen von ähnlicher Größe umfassen.