Transaction Costs and Standardisation in Professional Services to Small Business

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ABSTRACT. In the market of business services the easier segment of large business is being saturated. Therefore, suppliers of business services must seek to cater to the growing but more difficult segment of small business, if their growth is to be maintained. With appropriate extensions, Transaction Cost Economics can facilitate understanding of the nature of the difficulty involved. Due to effects of scale in transaction costs it is relatively more expensive to provide services tailored to the individual smaller firm. Standardisation of services may be required to make access to this market viable. The question arises whether such standardised methods should be stimulated by the government. To see how this issue is perceived by suppliers of various business services, a survey was conducted on a sample of 1,000 firms, with a response of 30%. The issue of economies of scale in transaction costs did emerge, but was not universally perceived as a problem. Many respondents confirmed the need for standardised modules. Opinions were sharply divided on the issue whether the government should step in to promote standardisation across suppliers.

Cluster analysis shows that respondents fall neatly into a number of classes that conceptually and statistically are highly distinct. Just over half of the respondents were clearly against government intervention, and about one third of these ("radical market proponents") were of that opinion even though they granted that the scale issue constituted a problem of access to the small business market. Just under half of the respondents clearly favoured government intervention, and about half of those ("radical interventionists") were of that opinion even though they saw no great problem of access due

to problems of scale, or were hesitant about that problem. Accountancy firms tended to be in favour of intervention, and business consultants tended to be against. The government might explore the matter further with accountants, while leaving the business consultants alone.

Introduction

In the present paper we conduct a theoretical and an empirical analysis of transaction costs in the provision of business services to small firms, and the role that standardisation might play to reduce transaction costs.

In the analysis of transaction costs we make use of the theory of Transaction Cost Economics (TCE) as developed primarily by Williamson (1975, 1985), with modifications and extensions where required. A transaction is an event in a process of economic exchange which involves costs of contact, contract and control. This is somewhat of a generalisation of Williamson's (1985, p. 1) definition of a transaction as a transfer "across a technologically separable interface". Costs of contact include costs of search and of marketing: the collection and the provision of information or experience on price and quality of the product, and on needs of the user. Costs of contract include costs of setting up a "governance scheme": assessment of risk due to opportunism or to exogenous causes, and the planning of measures to hedge against them in the terms of a contract or other forms of agreement. We distinguish between governance "structures" and schemes". A governance structure, as treated in TCE, refers to the type of transaction and the parties involved: the market, a hierarchy, a bilateral or a trilateral structure. A governance scheme refers to a specific construct, in the form of agreements on content, procedures and rules, designed to govern a specific transaction. Costs of control include

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costs of executing a governance scheme: monitoring performance, solving problems (including possible costs of haggling, litigation or arbitration) and adjusting an agreement.

Transaction costs have special features in the case of "credence products": products whose quality it is difficult to assess even after consumption. As a result of this property, product acceptance often relies on trust, based on reputation, prestige or personal relation. It is difficult to stipulate conditions of quality *ex ante* and to monitor performance *ex post*. Hence the user is highly vulnerable to opportunism on the part of the supplier, and it is difficult to reduce this vulnerability by explicit conditions. Examples of credence products are pharmaceuticals and intangible technical or professional services: repairs, maintenance, medical care, professional advice.

Professional business services include services such as: accounting, legal counselling, business consulting, engineering, medical counselling and care, market research, design, communication, logistics, software and computing, training.[1] Several of these services are in the nature of credence goods: If one could assess the service properly, one would hardly need it (think, for example, of a doctor or a tax consultant). This yields problems in all stages of the exchange: in search and marketing, assessment of risk, monitoring of performance. Note that this is a problem not only for the user but also for the producer: if one offers a high quality service, it is difficult to demonstrate this objectively, and attempts to do so may meet only with distrust. The magnitude of the problem depends on the user's ability to judge the quality of the service, which depends on the level of education and degree of specialisation of himself or his staff.

There are effects of scale in transaction costs, which pose particular problems in transactions involving small firms. Although scale effects in the *supply* of professional services will also emerge in the present article, the focus is on small business as a *user* of professional business services. In particular, the question is what effects of scale arise in transactions with small firm clients.

Small business theory

An analysis of effects of scale in transaction concerning business services should rest on a theory of small business more in general. There is a burgeoning literature on entrepreneurship in small business: on management, innovation, production, marketing, strategic planning and so on. We cannot fully set out such a theory in the present article, and just a few of the relevant main lines will have to do. Many of the varying characteristics of small business (a large measure of variation is itself an important characteristic of small business), that explain both weak and strong points, can be traced to the central characteristics of: the small scale, personality and independence of the small firm.[2]

Personality and independence together explain the large measure of variation: the personality of goals and styles of entrepreneurship provides a source of variation, and independence, in the sense of less dependence on shareholders and the attendant discipline of the stock market,[3] provides the opportunity for variation. One can choose to maintain a marginal, unprofitable business for the sake of goals that are idiosyncratic and unorthodox from the "normal" point of view of capital markets or economics textbooks.[4] One may, for example, maintain an old technology to maintain a favoured way of life, even if this yields a lower profit income that outside owners would never accept. The relevance of variation in the present context is that it creates a demand for tailoring business services to the individual firm. However, as we shall see, due to effects of scale in the provision of business services, such tailoring is most expensive where it is most needed: in the smaller firm.

Small scale accounts for much of the lower efficiency of small business in production, planning and marketing. One particular aspect of this that is relevant in the present context is the lack of specialised staff, in legal matters, personnel, marketing, financial planning and control, combined with an often low level of formal education and training of the entrepreneur and, in middle sized firms, of second echelon management.[5]

This explains to a large extent the often observed lack of formal strategic and operational planning in small firms. This creates a need for services in this area, but also a problem in the marketing of those services.

In the present context the issue of knowledge

merits attention on a somewhat deeper level, even if that takes us to a rather high level of abstraction. Differences in knowledge between small and large firms are associated with the degree to which knowledge is "tacit, in the sense discussed by Polanyi (1964). In general, much of knowledge, particularly practical knowledge involved in skill, in tacit: one is not or only partially aware of having it, while it does form action to a large extent. The importance of the concept of tacitness is that it explains how people can do things right without being able to explain how. In small business knowledge is tacit to a higher degree, because it is based more on practical experience rather than formal learning, and is less embodied in formal procedures. Tacitness of knowledge has advantages: it allows for (and partly results from) informality of task fulfillment, without many written plans, blueprints and procedures, and thereby allows for flexibility; it allows for a large measure of autonomy in work, with its attendant job satisfaction and high level of motivation; it is difficult to transfer or imitate quickly, whereby it helps to appropriate the rents from innovation, when that is in the form of tacit knowledge.[6] However, it also presents a problem for the absorption of new knowledge and technology, which contributes to the transaction costs in the provision of business services.

Effects of scale in transaction costs

Nooteboom (1990) gives a detailed discussion of effects of scale in transaction costs; in the transaction stages of contact, contract and control. Here we select problems relevant to the provision of business services, and in particular those that may be mitigated by standardisation of those services.

Costs of contact

We begin with the costs of contact, for which we refer to Nooteboom (1990, pp. 4—5):

> As explored in marketing, in particular by Rogers (1983), search costs include the process of becoming aware of a need and the possibility of its fulfillment; the searching for fitting solutions and alternatives; trial, evaluation and decision. Marketing costs form the obverse of this on the part of the producer: seeking latent needs, exploring solutions, generating alternatives and support, seeking

access to potential users. This access requires awareness on the part of the user, who is not always susceptible to novelty. This is partly a cognitive problem: existing practice is often based on tacit, implicit knowledge based on experience. Having evolved into routines or even reflexes, such knowledge is often largely or partly subconscious, and thereby is not directly open to critical reflection, let alone rapid change or replacement. The creation of awareness will often require a careful explicitation of current tacit knowledge. A problem in the transfer of new technology is next that after gaining awareness the potential user is often not capable of evaluating it for his purpose, due to lack of knowledge. If one is rational one will face this, with the conclusion that judgement has to be delegated to a greater or lesser extent. That requires trust in a dual sense: the other party (to whom judgement is delegated) has no interest in giving wrong advice (disinterestedness), and is capable of giving good advice (competence). The latter requires knowledge and experience with the relevant technology and its possibilities and impossibilities, given the specific conditions and priorities of the user firm in question.

In view of the lower level and greater degree of tacitness of knowledge in small firms, this yields effects of scale in the stage of contact. To continue the quote from Nooteboom (1990) (with italics for those problems that might be mitigated by standardisation):

> For a small firm as a buyer, awareness may therefore be difficult to achieve. For an outside marketer this is often aggravated by a lack of formal, written documentation, whereby it is *more time consuming to conduct an evaluation of present problems to assess needs*. In the subsequent stage of the evaluation of alternatives, smaller firms have more limited resources of knowledge, so that their *need to delegate evaluation* is higher.

Furthermore:

> Costs of contact often contain a so-called threshold: in order to contact and assess a potential transaction partner one has to incur certain minimal costs regardless of the size of that partner or the size of the transaction: the cost of making an appointment, travel, *setting up a diagnosis or audit*, writing a report, *evaluating a proposal*, etc. Such threshold costs weigh more heavily for small than for large volumes of transaction. This creates a problem for the small firm as a buyer: the supplier has to expend relatively high marketing costs per unit of sale, which may be prohibitive below a certain volume. As a result, suppliers often charge a price with a fixed component per transaction plus a variable component in proportion to the volume of the transaction. Thus insurance companies, for example, demand a minimum (threshold) premium. As a result, below a certain volume the product is simply too expensive for the smaller firm.

Costs of contract

To assess effects of scale in the contract stage of exchange, one should consider effects of scale in the determinants of transaction costs as set out in standard transaction cost economics: opportunism, bounded rationality, asset specificity, uncertainty and frequency of transaction. Among large firms as clients there may be less inclination to opportunism because they may have more to lose in the way of investments in reputation and in a broader range of activities, and may be more visible politically. In other words: in small business there may be more "fly-by-night" operators. On the other hand, small firms may have fewer means and conditions for opportunism, due to a restricted scope of activities, knowledge and contacts. The net outcome is uncertain. The boundedness of rationality is no doubt greater in smaller firms, as discussed before. Exogenous risk of failure is greater for smaller firms, due to a more restricted range of products and spatially more constricted markets. This makes it *less attractive to make investments that are specific to a single small client,* since the threat of discontinuity is greater. If the transaction requires a *specific investment on the part of the user, the smaller user will require more safeguards* due to greater boundedness of rationality and lesser capability to absorb any loss due to discontinuity of the transaction.

Costs of control

In the control stage of exchange it is more difficult for small firms to *monitor the suppliers' performance,* due to a greater boundedness of rationality. They are themselves more difficult to monitor due a lack of formal, consistent, reasonably complete and reliable data, due to the often more informal, implicit and often highly personal nature of knowledge, oral rather than written communication, and limited presence of administrative systems. This yields problems not only in the setting up of a contract or governance scheme, but also in the monitoring of compliance and the evaluation of claims. Lack of objective information yields more "haggling". And recourse to arbitrators can be relatively expensive due to the threshold costs involved.

Summing up (Nooteboom, 1990, pp. 8−9):

Transaction costs tend to be systematically higher for smaller firms. Costs of governance schemes to reduce transaction costs also are often relatively higher for small firms: transactions may be too small to be worth the bother of such a scheme. . . . Small firms can try to mitigate this problem in several ways. Collectively, they can try to reduce transaction costs or the cost of governance schemes by furthering norms that restrict opportunistic business conduct; by stabilizing market conditions to reduce exogenous uncertainty; by *furthering technical standards or standardised procedures that reduce costs of search, evaluation, contracting, monitoring and arbitration.* . . . Individually, they can try to conduct business on the basis of personal trust.

The problems indicated here arise in general, but most of them are aggravated in the case of credence "goods" such as professional business services. If the quality of such services were equally hard to judge by large as by small firms, the difference in transaction costs between large and small firms might actually become less for credence goods, because if something cannot be judged by anyone, the problems of search, evaluation and monitoring are equally large for small and large firms. However, the quality of such services is generally more difficult to judge, both *ex ante* and *ex post,* for small than for large firms, due to differences in the availability of expert knowledge and experience required for such judgement.

Merits of standardisation

Due to scale effects, particularly in the transaction costs of contact, contract and control, it is more difficult to profitably supply professional business services to small firms than to large firms.

These problems may be mitigated by standardisation of methods and procedures. Where required, the method will remain specific to types of trade or industry, but it will minimize the need to tailor advice or information to the idiosyncratic needs of individual firms. One can think of general audits or function specific audits or check lists for choosing action (in marketing, administration, financial structure, exports, pollution, legal accountability, franchising, insurance, mergers and acquisitions, strategic planning, patenting and licensing, and so on). This may avoid or reduce costs of tailoring a service product to the specific needs of an individual user, thus reducing diseconomies of small scale in production and in

costs of contact. It may also serve to simplify the design, set-up and implementation of contracts or other governance schemes, thereby reducing scale effects in costs of contract and control.

The potential merits of standardisation are as follows:

For the supplier of the service:
- — the investment in the product is less specific to the individual user, whereby the supplier is less susceptible to risks of opportunism or of discontinuity on the part of the user;
- — the set-up or threshold costs of providing the product is less: less effort in making a diagnosis, in tailoring the product to the needs of the user. This includes both costs of production and costs of contact;
- — the set-up or threshold costs of setting up a contract or other governance scheme are less because the product is standardised, and because a standardised product makes only standard demands on information and administrative procedures in the user firm, which are more likely to be fulfilled;
- — for similar reasons, the scale effect and level of costs of control are also reduced.

For the user of the service, in case the product is also standardised across suppliers:
- — the investment in knowledge about the product is less specific to the supplier, whereby the user is less susceptible to risks of opportunism;
- — the contact costs of search and evaluation prior to purchase are lower. This reduces costs not only for the small entrepreneur, but also for semi-public agencies that are subsidised to provide information, guidance and counselling to small firms, and hence should save government expenditure;
- — costs of switching from one supplier to another are also less with respect to contract and control.

There are, however, also potential disadvantages of standardisation:

For the supplier of the service, in case of cross-supplier standardisation:
- — reduced opportunity to differentiate one's product and thereby create loyal and

dependent customers, at a higher profit margin.

For the user of the service:
- — in case of standardisation across users: less tailoring to the varied needs and idiosyncracies of small business users (though if one is prepared to pay for the higher costs, suppliers are likely to be willing to provide a more tailor-made service);
- — in case of standardisation also across suppliers: less competition among suppliers to satisfy the demands of users.

The needs and opportunities for standardisation, and for the opposite policy of differentiation, will vary between different types of professional service and different market conditions and positions. Standardisation is easier where there are fairly fixed rules, codes or conventions (as in legal matters, accounting, insurance) and more difficult where the service involves more fluid judgement, subjectivity, or personal skill (as in marketing, strategy, personnel, organisation, culture).

Perceptions and opinions of suppliers

To investigate the issue empirically, a survey was conducted of perceptions and opinions on the matter among suppliers of professional business services in the Netherlands, in a research project commissioned by the ministry of economic affairs.

A sample of 1,000 firms was drawn from the list of service firms registered for the Dutch SMO management support subsidy scheme ("subsidie-regeling management ondersteuning", which yields a subsidy on the costs of consultancy support to small firms). Of the roughly 2,500 firms on this list a random selection of 350 was made from the 1,800 firms with less than 6 employees, and the remaining 650 firms well all selected, for a postal enquiry conducted in 1989. The response rate was 30 % for both segments, and the response was distributed over firm sizes in the same way as the sample. The questions concerned characteristics of the service firm, type of service supplied, and perceptions and opinions on several issues concerning the market of small business. The composition of responding firms was as follows: almost 50% general consultancy firms, 20% accountancy firms: 10% marketing/advertising/marketresearch

firms and 10% computer service and consultancy firms. The remaining 10% consisted mainly of engineering firms. 80% of the firms existed less than 30 years, and 50% less than 10 years. About 75% was engaged in advice to individual small and medium sized enterprises (SME, defined as firms with less than 100 persons engaged). Assessments were asked, on a five point scale of agreement/disagreement, on a number of propositions concerning the SME market. Scores can vary from 1 (strong disagreement) to 5 (strong agreement). The propositions are listed in Table I.

TABLE I
Propositions on the market of SME

Index	Proposition
1.	Advice tailored to individual firms is too expensive for SME.
2.	From the perspective of costs one can work for SME only with more or less standardised modules for groups of firms (e.g., by type of trade).
3.	Even the use of standardised modules in individual firms requires consultancy/guidance which makes it too expensive for SME.
4.	By subject (auditing, export, etc.), the proprietary consultancy modules developed by different commercial consultancy firms hardly differ.
5.	It would be more efficient to develop standardised modules with government subsidies and make them publicly available.
6.	The development of proprietary modules yields commercial firms a possibility to differentiate products and to specialise, which favours the competitiveness and the quality of consultancy.

Note the radicality of proposition 5. It does not propose government intervention for the mere promotion of standardisation, but for the actual development of publicly available standard modules for advisory services.

Of the totality of respondents only 20% agreed with the first proposition that individual consultancy is too expensive for SME, but 25% neither agreed nor disagreed. This outcome may at least partly be due to the existence of the SMO scheme, which was after all geared to making consultancy to small business less expensive. The response on the second proposition on the desirability of standardised modules was in line with this outcome. On the third proposition that even with

standardised modules consultancy to SME is too expensive there was massive disagreement.

On the fourth proposition that modules for the same type of activity hardly differ between competing suppliers, most respondents had no clear opinion either way. Opinions were divided very sharply on the controversial fifth proposition that it would be more efficient to develop publicly available modules with government subsidy. 18% had no clear opinion either way; 38% agreed (22% agreed totally) and 46% disagreed (31% totally). When the sample is split according to size of the service firm, the counterintuitive result is that the percentage of agreement is higher for the larger firms. A split according to type of service shows that particularly accountants agree (61% agree, 28% disagree), and particularly business consultants disagree (30% agree, 53% disagree), but even within these groups there still is considerable variation. The difference between accountants and business consultants can easily be interpreted: accountancy is much more easy to standardise than business consultancy, and among accountants there probably already is a proliferation of seemingly different but actually similar procedures.

Cluster analysis

The results suggested that it might be worth while to investigate, with the aid of cluster analysis, to what extent respondents fell into distinct classes.

The survey had also had the purpose to investigate, for the ministry of economic affairs, perceptions and opinions on the accessibility of the market of policy research in the area of SME, commissioned by ministries and other governmental or semi-governmental agencies, of the results of such research and of the basic data required to conduct such research. In the cluster analysis these questions also were taken into account.

The corresponding propositions to respondents, again with a five point scale of agreement/disagreement, are listed in Table II.

Only those respondents were included in the cluster analysis who had answered at least 7 of the 9 questions from Table I and II. This reduced the number of firms to 225.

Applying Ward's method to the scores on the propositions in Table I and Table II we arrived at

TABLE II
Propositions on the market of governmental policy research

Index	Proposition
7.	Organisations that can conduct policy research in the area of SME have sufficient insight in the research questions of interest to sponsors of this type of research, and have sufficient access to this market.
8.	Organisations that conduct policy research in the area of SME have sufficient insight in and access to the available research results (in the form of publications) in the area of SME.
9.	There are sufficient public basic data (national and international statistics, databases of firms, market data, etc.). Further data can be produced by the market.

six clusters, which were subsequently analysed according to the response to the propositions in combination with other characteristics that did not contribute to the clustering, such as type of service, size of firm etc.

For each of the 9 propositions it was investigated, by means of an analysis of variance, to what extent the between-cluster variance was significant (in view of the within-cluster variance). The largest difference emerged for proposition 5, illustrating again how sharply opinions were divided on the issue of government intervention. Differences were not significant (at a 5% confidence level) for proposition 4. Differences were significant at the 1% level for all other propositions. Details on F values are given in Appendix A. For pairs of clusters the significance of differences in scores was investigated by means of T-tests.

The clusters were investigated in terms of B and H ratio's, which are defined as follows:

$$B_{ij} = \frac{(\mu_{ij} - \mu_j)}{\sigma_j^2}$$

$$H_{ij} = \frac{\sigma_{ij}^2}{\sigma_j^2},$$

where: i indexes the cluster and j indexes the variable (the propositions from Table I and II), and μ and σ^2 are the mean and the variance.

The B-ratio indicates the importance of the variable for the identification of the cluster. The H-ratio is an index of homogeneity: the lower the

ratio, the more homogeneous (unanimous) the cluster is with respect to the variable (proposition).

In Appendix A the average scores and corresponding variances and the B- and H-ratio's are provided for the six clusters.

The clusters can perhaps best be characterised graphically as follows: In Figure 1 we locate the clusters in a space spanned by the scores on the two of the most crucial issues: proposition 1: perception of the problem that tailor made advice is too expensive for small firms (due to threshold transaction costs); proposition 5: opinion on the desirability of the development of standardised, publicly available modules with government finance. In this space each of the six clusters has a box with sides determined by the following formulae:

vertical: relative scores on intervention
$$B_{i5} - H_{i5} \text{ to } B_{i5} + H_{i5},$$
horizontal: relative scores on market access
$$B_{i1} - H_{i1} \text{ to } B_{i1} + H_{i1}.$$

Thus the boxes indicate both how the clusters differ with respect to the two central issues, and how unanimous they are on those issues.

With reference to Figure 1 we now label and discuss the six clusters.

Radical market proponents: cluster 4 (n = 39)

These 39 firms agree more than the overall average, though their opinions are not strong, that there is a problem of market access (tailor made services too expensive for small firms; average score on proposition 1 is 3.5 with variance 1.0). *Nevertheless* they strongly and fairly unanimously oppose the idea that the government should intervene with public standardised modules (average score on proposition 5 is 1.7 with variance 0.7).

Concerning the issues in Table II, the firms in this cluster tend to consider the market of public policy research, its output and the data required reasonably transparent and accessible.

When we look at the background variables we find that compared with overall averages the cluster contains relatively more business consultants (rather than accountants), more small firms, fewer small and more large clients, more public policy research.

Considered market proponents: clusters 1 (n = 42) and 5 (n = 41)

These 83 firms clearly disagree with the thesis that there is a problem of market access due to effects of scale (average score on proposition 1 for cluster 1 is 1.7 with variance 0.6, for cluster 5 1.6 with variance 0.5). Presumably *because* they see no market problem, both oppose the idea of government intervention for standardisation, but cluster 1 is significantly more outspoken about this (average 1.3 on proposition 5, with variance 0.4) than cluster 5 (average 2.0 with variance 0.8).

There is a significant difference between the two clusters in their opinion on the market of public policy research: cluster 5 sees no problems, but cluster 1 does (for details, see Appendix A).

Both clusters contain relatively more business consultants and fewer accountants, and have more international contacts. Cluster 5 contains relatively more small firms. Cluster 1 contains relatively more large firms, and firms that are subsidiaries of (sometimes foreign) large firms.

Considered interventionists: cluster 3 (n = 51)

These 51 firms are clearly in favour of government intervention for standardisation (average score on proposition 5 is 4.2 with variance 1.1), presumably *because* more than the overall average they tend to see a problem of access to the market of SME, although their views are not very strong (average score on proposition 1 is 3.4 with variance 1.0).

The cluster contains relatively more accountants and less business consultants, and more older and larger firms.

Radical interventionists: clusters 2 (n = 23) and 6 (n = 29)

These 52 firms are clearly in favour of government intervention for standardisation, but cluster 2 is significantly more outspoken on this issue (average score on proposition 5 is 4.5 with variance 0.4) than cluster 6 (average 3.9 with variance 0.8). This interventionist position is taken *in spite of the fact* that in cluster 2 there is much doubt about any problem of access to the SME market (average score on proposition 1 is 2.5 with variance 1.3), and in cluster 6 there is a clear belief that there is

no problem of access (average score of 1.7 with variance 0.7).

Cluster 2 further distinguishes itself from other clusters by being significantly more hesitant about the positive role of proprietary modules for product differentiation and competition in product quality (proposition 6), and by being significantly less optimistic about the sufficiency of public data available for SME research (proposition 9).

Cluster 2 contains relatively more accountants, more small firms, less research for central government agencies, and more research for local semi-public agencies. Cluster 6 also contains fewer larger firms and conducts less research for central government agencies. It has the fewest international contacts, and conducts relatively less regular consulting for individual firms.

As an extension of Figure 1 a full discriminant analysis was also conducted, but this did not add any significant and relevant new insights. With four discriminant functions 83% of the respondents were located in the proper clusters. The first most powerful function consisted mainly of proposition 5 (intervention), and the second function consisted of the first 3 propositions (market accessibility). Thus the results resemble those of Figure 1.

Conclusions

The use of transaction cost economics, with appropriate extensions into small business economics, appears to yield promise for the analysis of small business markets; in particular the market for professional business services. Analysis of this market is relevant from the perspective of government policy: business services can be of considerable importance in supporting entrepreneurship in small business.

Theoretically, one would expect effects of scale, particularly in transaction costs, which make the supply of professional business services to small firms relatively expensive, and perhaps too expensive for the desired dynamics to develop. Standardisation of advisory services, in proprietary modules of competing suppliers, or modules that are standardised across suppliers, may help to solve the problem.

An empirical survey was conducted of opinions on the matter among suppliers of professional business services. In the first analysis, the problem
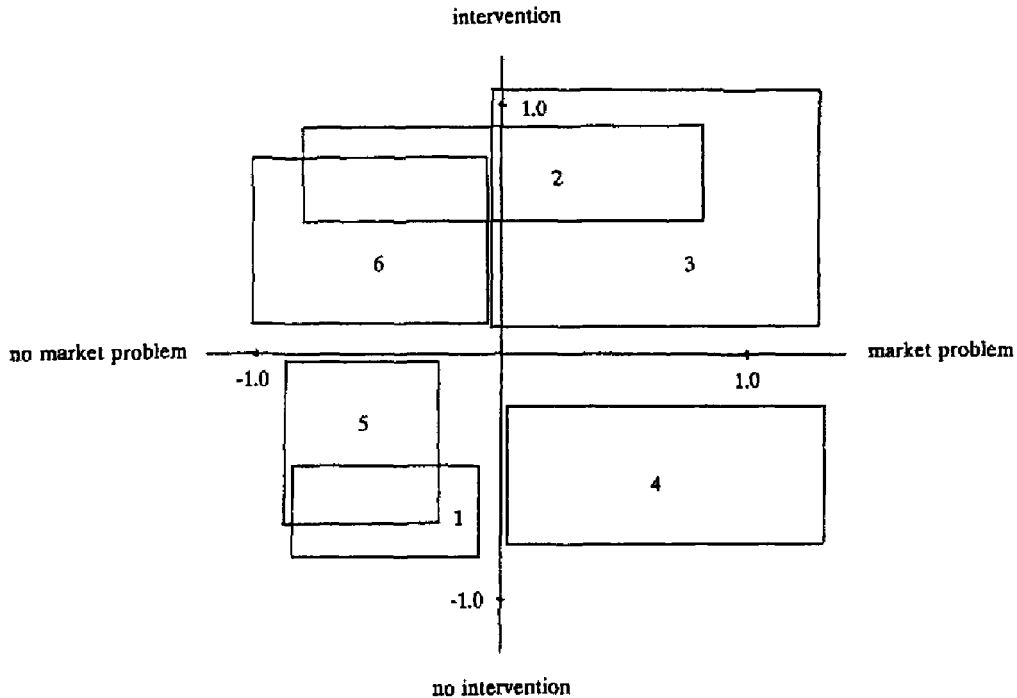
Fig. 1. Location of the clusters.

of higher costs in the provision of professional business services to smaller firms is recognised in the empirical study, but not in a very pronounced fashion. In the second analysis, on the basis of clustering, the issue emerges more clearly.

Opinions are divided on the issue whether the government should promote standardisation of modules across firms. On the whole, both small and large accountancy firms are largely in favour of the idea, while business consultants tend to oppose it. This makes sense: accountancy is more susceptible to standardisation than business consultancy. In accountancy a proliferation of proprietary modules has already appeared, and their value for obtaining competitive advantage may have eroded. Outside accountancy, many see proprietary modules as a legitimate competitive weapon.

A cluster analysis reveals distinct groups:

— "radical market proponents" (17% of respondents), who are opposed to government intervention for standardisation, in spite of the fact that they tend to perceive a problem of access to the market due to effects of scale;

— "considered market proponents" (36%), who do not see a problem of market access due to scale problems and, presumably therefore, oppose government intervention;

— "considered interventionists" (23%), who tend to see a problem of market access due to scale problems and, presumably therefore, are in favour of government action for standardisation;

— "radical interventionists" (23%), who are in favour of government intervention even though they are hesitant about any problems of access due to scale problems or even are confident that there is no such problem.

The conclusions for policy appear to be as follows:

— Although the extent of the problem of access due to effects of scale in costs of transaction and production appears to be less than expected, the problem does emerge significantly. It may have been softened by the subsidy scheme for management support for small firms (SMO). It does

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bring firms to the development of proprietary standardised modules for SME.

— Opinions are sharply divided on the desirability of government action to promote standardisation of modules across firms. More easily standardised activities (accounting) appear to be more eligible than less easily standardised activities (business consultancy). The government might explore the matter further with accountancy firms, who are more favorable, while leaving business consultants alone, at least for the time being.

Appendix A: Numerical details of the cluster analysis

Table AI gives the F-values in the analysis of variance between clusters, for each of the nine propositions.

TABLE AI
F-values

Proposition	F-value
1	39.6[a]
2	43.8[a]
3	23.5[a]
4	1.4
5	98.9[a]
6	10.3[a]
7	7.4[a]
8	7.7[a]
9	25.0[a]

[a] = significant at 0.01 level.

For each of the 6 clusters and each of the 9 propositions Table AII provides the average scores and corresponding variances, and Table AIII provides the B-ratio's and H-ratio's.

TABLE AII
Average scores and variances

Proposition	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6	
	Av	Var	Av	Var	Av	Var	Av	Var	Av	Var	Av	Var
1	1.7	0.6	2.5	1.3	3.4	1.0	3.5	1.0	1.6	0.5	1.7	0.7
2	2.0	1.0	2.0	1.0	3.7	0.6	3.1	1.2	1.3	0.3	2.3	1.1
3	1.4	0.4	1.8	1.1	2.8	1.2	2.4	1.3	1.3	0.3	1.1	0.1
4	2.8	1.0	3.2	1.3	2.8	1.4	2.8	0.7	2.5	1.2	2.7	0.7
5	1.3	0.4	4.5	0.4	4.2	1.1	1.7	0.7	2.0	0.8	3.9	0.8
6	4.3	0.8	2.8	1.7	4.0	1.2	4.4	1.0	3.9	1.6	4.7	0.2
7	2.6	0.6	3.0	1.8	2.8	1.0	3.4	1.0	3.7	0.9	3.0	0.5
8	2.5	0.6	3.2	2.2	3.0	1.2	3.6	0.9	3.6	0.7	3.0	0.6
9	2.5	0.9	1.8	0.9	3.2	1.1	3.9	0.8	4.0	0.5	3.4	1.0

TABLE AIII
B-ratio's and H-ratio's

Proposition	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6	
	B	H	B	H	B	H	B	H	B	H	B	H
1	−0.47	0.38	0.01	0.82	0.63	0.66	0.68	0.65	−0.57	0.32	−0.53	0.48
2	−0.36	0.45	−0.35	0.69	0.83	0.42	0.41	0.79	−0.76	0.19	−0.14	0.70
3	−0.38	0.38	−0.07	0.94	0.79	1.0	0.42	1.2	−0.52	0.26	−0.63	0.11
4	0.05	0.94	0.37	1.2	0.02	1.3	0.04	0.62	−0.27	1.1	0.08	0.67
5	−0.64	0.18	0.73	0.19	0.59	0.48	−0.49	0.28	−0.35	0.33	0.46	0.33
6	0.17	0.64	−0.97	1.3	−0.04	0.88	0.23	0.78	−0.14	1.2	0.48	0.17
7	−0.46	0.56	−0.10	1.7	−0.26	0.96	0.35	0.98	0.56	0.83	−0.06	0.47
8	−0.57	0.58	0.03	1.9	−0.12	1.1	0.42	0.79	0.45	0.62	−0.16	0.55
9	−0.52	0.70	−1.0	0.66	−0.03	0.80	0.55	0.63	0.55	0.37	0.12	0.72

Notes

[1] They are meant to exclude business services such as cleaning and catering.

[2] See Nooteboom (1987).

[3] Of course the entrepreneur is never fully independent: there are always the constraints of the legal framework, of norms and standards, of banks, and of family owners or partners, but this allows for more idiosyncracy than the stock market. The disciplinary effect on managers on the stock market and of the market for managers is well known from recent economic theories of organization (principal-agency theory).

[4] Cf. Nooteboom (1988).

[5] In this respect there is much variation, however, in particular between more traditional entrepreneurs and spin-offs of firms, often in areas of new technology, from universities and large corporations, where the entrepreneur often has a university degree.

[6] Cf. Dosi (1988).

References

Dosi, G., 1988, 'Sources, Procedures and Microeconomic Effects of Innovation', *Journal of Economic Literature* **26**, 1120—1171.

Nooteboom, B., 1987, 'Do's and Dont's of Small Business' (in Dutch Doen en laten van het midden- en kleinbedrijf), in *To the Measure of Small Business* (in Dutch: *Op maat van het midden- en kleinbedrijf*), Report to the government no. 30, part II, Scientific Council for Governmental Policy (Wetenschappelijke Raad voor het Regeringsbeleid), the Hague.

Nooteboom, B., 1988, 'The Facts About Small Business and the Real Values of Its Life World', *American Journal of Economics and Sociology* **47**(3), 299—314.

Nooteboom, B., 1990, *Effects of Scale in Transaction Costs*, Research Report No. 90—12, School of Management & Organisation, Groningen University, P. O. Box 800, 9700 AV, Groningen, the Netherlands.

Polanyi, M., 1962, *Personal Knowledge*, London: Routledge.

Rogers, E. M., 1983, *Diffusion of Innovations*, New York: MacMillan.

Williamson, O. E., 1975, *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press.

Williamson, O. E., 1985, *The Economic Institutions of Capitalism: Firms Markets, Relational Contracting*, New York: The Free Press.