

UNIVERSITY RESEARCHERS AS PROMOTERS OF SME NETWORKING

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Abstract

The main objective of this research paper is to find out how academic researchers can utilize their expertise in promoting SME networking. This research paper summarizes the findings of the networking project financed by the European Social Foundation (ESF) and the Finnish Ministry of Labour. The project was implemented in 1995-1998 by the University of Vaasa in Finland. The point of departure in this action research project was, on the one hand, the growing interest of SMEs for different networking models and, on the other hand, the university researchers' networking-related experiences and expertise that they wanted to offer to entrepreneurs. The purpose of the project was to develop an interactive networking process between researchers and entrepreneurs and, thereby promote different cooperative ventures, which were in different phases of development. The interventions made by researchers have focused on three levels: attitudinal, cognitive and operative level. The attitudinal and cognitive level interventions focus on the dissemination of knowledge concerning networking, its benefits and prerequisites among entrepreneurs and on the correction of misunderstandings, while operative level interventions have been realised as brokering and consulting new cooperative ventures. As a result of this project and research paper, an interactive networking process is presented which emphasises the different roles of university researchers in promoting SME networking.

Introduction

The field of SME networking has become very popular in the 1990's among researchers and business people. A great number of small firms in many industries have entered into a variety of cooperative interfirm relationships to conduct their business operations. The limited resources of SMEs for research and development, production, marketing, exports, financing as well as lack of knowledge have forced entrepreneurs to search for new cooperative partners. At the same time the interest of academic researchers has naturally awakened, and a number of research papers have been published on SME networking and interfirm cooperation during this decade. These are considered as critical success factors for small and medium-sized firms by policy makers as well. Parallel with entrepreneurs' own networks many cooperative ventures of SMEs have come into existence on the initiative of public support authorities. In the form of various subsidies the public support has undoubtedly speeded up the networking process. Based on the experiences in Italy and Denmark, the network promotion models have also been applied in Finland.

Our earlier empirical studies have, however, proved that those nets initiated by 'outsiders' have a much weaker foundation than those originating from the entrepreneurs' own initiative (see e.g. Varamaki, 1996). There are at least two reasons for this: (1) lack of entrepreneur commitment and (2) unawareness of the prerequisites for different types of cooperative groups. Moreover, the earlier empirical results indicate very clearly that to enable successful cooperation the partners must have positive attitudes towards cooperation and a real intention to cooperate. This has not always been the case when public support has motivated entrepreneurs to join some cooperative groups (cf. Nielsen, Genefke, 1994). This somewhat controversial contribution of public network promotion has raised a challenge to develop a model concerning the role of the university as a contributor to SME networking.

The Department of Management and Organisation in the University of Vaasa has assumed the role of an active research forum in the field of SME networking since 1991 (e.g. Duijnhower, 1992, Murto-Koivisto, Vesalainen, 1994, Murto-Koivisto, Vesalainen, 1995, Murto-Koivisto, Routamaa, Vesalainen, 1996, Varamaki, 1996, Pihkala, Varamaki, Vesalainen, 1996, Varamaki, Pihkala, 1997, Varamaki, 1997). The perspectives in different research phases have varied from macro to micro perspectives with focus on, for example, the networking attitudes and the generality of networking among entrepreneurs, and the development, benefits and problems of cooperative groups, and networking relationships of individual firms. Moreover, the perspectives have varied from basic research to applied research. In 1995, after several years' period of basic research, the development project "Interactive networking process" was started. The purpose of this project was to utilize the experiences and knowledge that had been collected when studying interfirm cooperation between SMEs, and to promote SME networking at different levels. In a way which is typical of a project with an action research approach, we proceed through attitude and knowledge development to real operation, which in this case means starting and developing cooperation between SMEs.

The networking attitudes of Finnish entrepreneurs have mainly been quite positive (see e.g. Jonninen, 1995, Niinimaki, 1996) and this point of departure offers a natural ground for promoting interfirm cooperation. According to entrepreneurs, in order to transfer positive attitudes to operative action, further knowledge about principles of interfirm cooperation and examples of successful cooperative ventures are required.

In addition to network promotion, the present paper focuses strongly on the relationship between university and its environment, in this case small and medium-sized firms. The importance of university-industry cooperation has been widely stressed for a long time (e.g. Rubenstein, 1989, Abbot, 1991) and in the past decade the successful commercialisation of university research has widely assumed increasing importance. According to Geisler (1993), in this era of cooperative effort, strategic alliances and even clusters among businesses, the role of universities is becoming more central to successful interaction. In Western economies there has been an effort to understand the forces that shape the industrial competitiveness of companies and nations and, university-industry cooperation has begun to take on an increasingly important role. The concept of academic entrepreneurship has been introduced to describe this kind of outward activity of universities (Doutriaux, 1991, Aaltonen, 1998). The present paper seeks to clarify the complex relationship between universities and enterprises, and the main objective of this research paper is to discuss how academic researchers could utilize their expertise in promoting SME networking.

Academic entrepreneurship and consulting roles

University-SME relationships

The previous studies concerning university-industry relationships can be presented in three streams (Geisler, Furino, 1993, Aaltonen, 1998). The first stream consists of the studies which focus on a structure and the processes of interaction between participants. Researchers have generally utilised sociological and organisational models to describe and analyse university-industry programmes. In the second stream of research, certain goals, such as competitiveness, strategy and innovation are studied in detail. These studies range from non-native models of the relationship to empirical studies of one organisation or a small, ad hoc sample. The case studies of university-industry cooperation in R & D are the third main stream of research concentrating on cooperation and technology transfer. The emphasis of these studies is on the profound examination of how cooperative efforts have been planned and managed. The present paper relates closely to the second stream, focusing on the success factors of cooperation between universities and private enterprises. Moreover, this paper has some normative suggestions about network promotion.

A broad survey on academic entrepreneurship activities in seven European countries has been conducted (Aaltonen, 1998, Andersson, Klofsten, 1998). The research team examined the role of universities in the development of academic entrepreneurship within peripheral regions of Europe, namely Finland, Sweden, Northern Ireland, Wales, Spain and Portugal.

In their report Andersson and Klofsten (1998) have classified academic entrepreneurship in six categories (see Table 1). In many writings and speeches, the role of academic entrepreneurship has been increasingly emphasised in regional economic development. There are many kinds of potential benefits in strengthening the regional role of universities: (1) benefits for the universities provided by a more effective collaborative use of their teaching and research resources and application of research findings, (2) benefits to firms in the region by enhancing their competitiveness by means of product and process innovations derived from research and development, and (3) the upskilling of their personal benefits to the regional economy through strengthened economic competitiveness, stimulus via cultural aspects and a range of consumer-based roles.

Table 1 -- Different types of academic entrepreneurship	
General activity	Description
1. Large-scale scientific project	Obtaining large externally funded research projects, either through public grants or industrial sources.
2. Spin-off	Formation of a new firm or organisation to exploit the results of university research.
3. Patenting and licencing	Exploitation of patents or licenses of university research by industry
4. Consulting	Sale of personal or scientific or technological expertise to solve a specific problem
5. Contracted research	Carrying out specific externally funded research projects within a university
6. Services in general	For example external teaching, management support and placement activities, provision of testing.

Consulting has been seen as the most versatile and cost-effective means of linking university and industry of all above-mentioned types of academic entrepreneurship (JonesEvans, 1998). Consulting can, however, take multiple shapes, and thus it is necessary to identify some different types of consulting. In the following chapter we will discuss different consulting roles for network promotion.

Consulting enterprises

Through modelling the field of networking can be pictured as different sets of tasks, associated with the different contexts of networking, the levels of networking and the eventual approaches to work as a network consultant. Indeed, a researcher has a number of roles to choose from when considering the promotion of networking. These roles vary in their approach to the field from a distant discussant in the public context to the deep on-going effect of a partner. Thus, the following types of consultant can be identified:

- *The public discussant*: in this role the routes of influencing go through oral and verbal communication within public forums, referring especially to general discussions on networking and conditions of cooperation.
- *The teacher*: this is a matter of organised educational situations, lectures and other situations where gaining new knowledge is the main goal: in the educational role the effect is one-way, from the teacher to the student.
- *The training consultant*: in this role the promoter targets a certain group of businesses, where a package of network training is developed through tailored situational and needs analyses.
- *The learning consultant*: the network builder works with the group as a mentor, guiding the group to learn new things about working with each other. Guiding the learning process could take place both on the individual level as well as at the group level.
- *Process consultant*: the network promoter seeks to start and support processes of networking.
- *Resource consultant*: the external promoter makes his own competence available for the cooperation group, and thereby this seeks to gain a foothold in the operations of the group and, on the other hand, to promote the process of networking.
- *Partner*: as a partner the promoter is no longer an outsider in the process, instead he is a full member and participant in the cooperation group, with a special impact on the creation of the competitive advantage of the network which is being formed.

In addition to identifying the different consulting roles associated with network promotion, the context characteristics are also necessary to define. The target contexts which a consultant may have to deal with can vary from a field with no networking activity at all, to contexts with rich and dense networking relationships. This point is important because we expect none of the consultant roles to be equally applicable to any type of context. In the following we will discuss the realities of networking in the contexts that emerged as the most meaningful for university researchers. We focus on the reasons for starting networking, the role and tasks of the outsider in the networking process, and the effectiveness of interactive networking in different contexts.

The project and the implications

The networking project was implemented in 1995-1998 by the University of Vaasa in Finland and it was financed by the European Social Foundation (ESF) and the Finnish Ministry of Labour. The point of departure in this action research project was, on the one hand, the growing interest of SMEs for different networking models and, on the other hand, the university researchers' networking-related experiences and expertise that they wanted to offer to entrepreneurs. The purpose of the project was to develop an interactive networking process between researchers and entrepreneurs and, through this, to promote different cooperative ventures, which were in different phases of development. 157 enterprises were included in different promotion interventions during this three year project. Researchers have been intensively involved in various groups which have represented different development phases. As a result of this project eight different cooperative ventures were started.

The interventions made by researchers have focused on three levels: attitudinal, cognitive and operative levels. The attitudinal and cognitive level interventions focus on the dissemination of knowledge concerning networking, its benefits and prerequisites among entrepreneurs and on the correction of misunderstandings, while operative level interventions have been implemented as brokering and consulting new cooperative ventures.

As a result of this project and research paper, we present a model of an interactive networking process, which emphasises the different roles of university researchers in promoting SME networking (see Figure 2--omitted). The promotion of networking through inducing public discussion is good for developing the attitudinal climate for networking. However, the discussion often stays at a very general level, and the foci and precision of the topics are beyond the researcher's control. These problems can be partly managed by a careful choice of the media or forum for the discussions. Our methods regarding this approach were multiple, even if we did not commit into a very analytical approach to the field of media. The greatest impact of our interventions in the public discussions was to affect the non-networking field, where the barriers to networking are overwhelming, including fears associated with networking, the lack of time, lack of knowledge, lack of willingness and lack of instant need for networking. Furthermore, measuring the impact of interventions at this level is difficult, due to the indirect and often unconscious nature of the public discussant method.

Teaching is probably the most familiar method of influencing for the university researcher. For a teacher the control of the target group is easier than for a public discussant, because the target group with its reactions can be identified interactively. In a process of network promotion teaching applies well to the situations of non-networking, where teaching focuses both on knowledge transfer and change of attitudes. On the other hand, if we should influence the groups that already do some networking, sole teaching is not the best method, though teaching can, of course, be combined successfully with different ancillary activities.

In our network promotion project we took on active teaching roles in several different contexts. However, these roles were often combined with other activities in addition to the sole training episodes. As an example, in a programme of entrepreneurship education for artists and craftsmen, we conducted teaching on creativity, during which the participants had to learn to know each other and learn to combine each others' abilities and products together to create new business combinations. In our opinion teaching should be seen as a method of network promotion, through which the focus of the target group can be attached to a certain topic (normally not related to networking), where the participants have to learn themselves to find the solutions by means of cooperation. In this method we managed to create at least one promising business that combines skilled and creative arts and crafts professionals.

The role of the training consultant has a clearly more strategic focus than the role of the teacher. The teacher focuses on the operative level within the framework of a programme specified earlier, while the training consultant is participating in the creation of these programmes and strategic development of different courses. In the non-networking field acting as training consultant works well in the form of assisting the organisers of development programmes on a short-time basis. In these situations the combination of pedagogical competencies, substance competencies as well as industrial know-how may lead to the formation of an efficient educational programme. In our project we took an active role of training consultant by assisting the development of an educational programme for future entrepreneurs. The cooperation between these two projects -- an educational project and a networking promotion project -- was fruitful, and the impact of our intervention could be seen.

Within a dense networking-context the role of the training consultant becomes important only, when it concerns the training of organisational staff that need the networking knowhow in order to cope with the changes in their own networking organisations. In the SME-sector this often means that the networking development the organisation is facing concerns a larger group of firms so that the average cost per course participants could be kept low enough.

When assuming the role of learning consultant, the network promoter's main field consists of networks already operating actively. The learning consultant works in the network to promote the network participants' learning of the new way of operation. Because the role of the learning consultant closely resembles mentoring, ordinary university researchers (especially the younger ones!) do not have many opportunities to take on this role. Indeed, the best possible choice for this role would be senior entrepreneur or manager, who by his/her own personal credibility can promote the change in attitudes and thus makes learning possible.

In process consulting the consultant seeks to promote change by means of initiating different change processes in the target organisation. In principle, process consulting is applicable to all networking situations, but its nature varies strongly. In a context with no or only little networking, process consulting focuses on the potential network, and process consulting primarily seeks the formation of new networks. As consultation assignment this situation is most problematic because, with no cooperation within the field, it is difficult to find the payer.

With our project funds directed especially at project promotion, process consulting was the most suitable route for us to promote networking. By entering the field of SMEs, discussing with entrepreneurs and looking for 'seeds of networking' (that is ideas, needs and already existing ties of friendship) we sought to promote networking among the SMEs and entrepreneurs.

The process networking consultant is closer to the traditional Organisation Development-consulting, when there is already some level of networking in the target field. In these cases, the target of the change may be a relationship between two separate firms, or cooperation within a networking group of several firms. This also makes a traditional process assignment possible, because targeted firms that gain the benefit and pay for the services can be identified. During our project we applied process consulting within a cooperative group with very positive outcomes. The intervention was carefully planned to include several stages of discussion and interaction. We also used special tools for broadening the perspectives of networking.

The resource consultant operates in the network as an active member, and thus contributes to the networks' operative (or strategic) work. The main difference between a process consultant and a resource consultant is that the process consultant seeks to promote change in which the implementation of change takes place through the action and behaviour of the network participants themselves, whereas a resource consultant is a member in the group, and the goal of his participation is available for the network as a resource, and he thereby promotes networking through the 'normal' operation of the group. During our project we took on the role of the resource consultant in two situations. In one case, we participated in the development of the group's business plan and helped out with the collection of information for funding the implementation of the plans. In the other case, we offered our research expertise by carrying out a survey of customer satisfaction for participating firms. The central part here is that during the process the university is actually networking with the SMEs, and this networking could assume any shape or take any competence that could be of use to both parties into consideration. Our goal in this was that by offering a certain service we are capable of entering into the dense relationships between the SMEs and in this way we could influence the prerequisites for networking.

The other extreme of the networking continuum between the university and the independent firms has been reached when the cooperation between the university and SMEs creates a new business together as partners. One of the central prerequisites for this is that the core competencies of the university and the SMEs can be combined. The most visible core competency of the university is the expertise in training and research. Thus, the business partnerships could be possible only in those projects where this expertise could bring along new value to the SME business operations. However, though we did not seek to create this type of cooperation, one relationship between the university researchers and a company did develop into a situation where this combination of skills could have been sold in other contexts, too.

Discussion

The promotion of networking remains quite a challenging task for university researchers, due to the difficulties in finding suitable approaches to enter the field. In our promotion project we identified the roles of a learning consultant and a process consultant as the most prevalent routes for university researchers to foster networking. As we pointed out earlier, the best match between the firms and university is reached when both parties can bring their core competencies and combine them in the networking efforts. The core competencies of the university researchers are usually education and research, and thus the situations where these competencies can be applied, provide the best context for operation.

The roles of a public discussant, teacher and training consultant also quite often belong to the responsibilities of the university researcher. However, a more precise awareness of the prerequisites for successful operation in these roles is important, and these roles must also be applied, whenever possible and suitable.

The roles of the resource consultant and a partner are more likely to suit private consultants than university researchers, because of their needs for intense participation in the cooperation efforts. A partnership could be seen, however, as a route for a university researcher to completely operate within the private sector enterprises, and in this way carry out academic entrepreneurship in its purest way.

In addition to basic research it is fruitful for university researchers to take part in action research projects like this, and we suggest some implications for further basic research:

- (1) to study how the different approaches to network promotion correlate to success in network creation
- (2) our study experiences suggest that the network promotion approaches have implications also on the development processes of networks and therefore we suggest further research on the processes of network development in different promotive approaches
- (3) to compare the development processes and success of internally initiated and externally initiated cooperative groups
- (4) network promotion carried out by university researchers is a form of academic entrepreneurship and, therefore, we suggest that further research could be carried out on the best practice routes for university researchers to move into academic entrepreneurship in its purest form.

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