IS A PENROSEAN APPROACH APPROPRIATE FOR CASE STUDIES OF MANAGEMENT OF GROWTH PROCESSES IN SMES?

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ABSTRACT

A literature review of theories on how to understand growth processes in SMEs has pointed to the work of Penrose (1959/95) as offering the most comprehensive understanding of growth processes in firms.

This paper develops an analytical framework for case study analysis of management of growth processes in SMEs based on the work by Penrose (1959/95).

The framework is tried out in practice on a case study of a small Danish production firm. The case study analysis indicates that the framework works well in terms of analysing the management of growth processes.

However, the case study also reveals that not all areas of the management of growth processes were fully explained by the Penrosean theory and framework. Thus, this paper suggests an elaboration of the framework and presents an extended Penrosean framework for case-study analysis of growth processes in SMEs.

INTRODUCTION

The aim of the study is to investigate the management of growth processes in small and medium-sized enterprises (SMEs). To do so, a theoretical/analytical framework for case-study analysis of SMEs will be developed.

The theoretical starting point will be the work of Edith Penrose (1959/1995). Penrose is often mentioned as one of the major contributors in investigating growth processes and in developing a theory of growth (Lockett, Wiklund and Davidsson 2007).

In our view, Penrose offers one of the most comprehensive understandings of growth processes in firms. Penrose provides many insights into the factors that may enhance or limit growth, and she provides a way of thinking that could be useful for analysing specific case studies. Thus, we would like
to make the theory by Penrose operational and see how the theory and concepts work as an analytical framework for case-study analysis.

We want to investigate how a Penrosean framework could be appropriate for case studies of the management of growth processes in SMEs.

Using the theory on case studies of SMEs is not without difficulties. The work of Penrose is concerned with growth in general - it is not a framework for analysis of particular firms. Furthermore, the entire book is, according to Penrose, written as “a single argument no step of which can be omitted without the risk of misunderstanding later conclusions” (Penrose, 1959/95:xxii). We are, however, willing to run this risk, and we will try to extract the key points and concepts and present the results without loosing the original intensions or logic.

A third point of concern is the fact that Penrose is quite critical towards the existence of small firms. She states that in most cases small firms have a serious competitive disadvantage, and that the existence of small firms may be due to the fact that “large firms as a matter of public relations permit and protect the existence of small firms” and “In some industries entry is very easy and many hopeful would-be businessmen set up shop every year; this leads to the existence at any time of many small firms which, however, are on their way out.” (Penrose 1959/1995:221).

We disagree with this. Small firms have “small scale advantages” (Brytting, 1991) and in most economies today, small firms play a very important role in business. According to OECD, SMEs account for over 95% of all firms, 60%-70% of the total employment, and generate a large share of new jobs in the OECD economies (OECD, 2005). In the EU countries, SMEs account for approximately 75 million jobs (in 2005), and as much as 99% of all enterprises are micro, small or medium-sized (European Commission, 2005). Thus, SMEs play a very important role for the employment and for the economy as a whole (Senderovitz, 2008).

**STRUCTURE AND METHODOLOGY**

In this chapter we will provide an overview of the structure of the paper and explain the methodology of the various parts of the study.

In the following chapter we will present the operationalisation of the Penrosean theory along with an analytical framework for case-study analysis.

To develop the framework, we have extracted the key points and concepts of the Penrose theory, applying an iterative process, thoroughly scrutinising arguments and statements, followed by a more holistic “meta-view” of how to interpret what the main point of the comprehensive work of Penrose actually is.

After explaining the analytical framework, we will then present a company case where the new framework is applied, to analyse the data and information from the case.

The case includes various secondary written company information: Annual reports, pre-existing interviews (2), promotion material, and website information, as well as a 3½-hour semi-structured (transcribed) interview with the owner/manager of the firm.

After conducting the case study, we will assess
whether the framework is actually appropriate for case studies or not.

In the next section, we will adapt and extend the framework in four main areas. The adaption of the framework is done through literature reviews of the particular areas.

After the literature review, we will present the extended Penrosean framework and, finally, we will conclude on the results of the study.

### OPERATIONALISATION OF PENROSE’S GROWTH THEORY

In this chapter, we will extract the central points of Penrose’s theory and turn it into an analytical framework for understanding the management of growth processes in SMEs.

Penrose’s theory of growth is developed as a theory of internal growth, that is of growth without mergers or acquisitions. Penrose’s theory provides an understanding of the development of internal resources within a firm. She has a clear resource perspective on strategy and strategic management.

Central in Penrose’s theory is the distinction between (internal) resources and services. Resources are defined to include the physical “things” a firm buys, leases, or produces for its own use, and the people hired on terms that make them effectively part of the firm. Services, on the other hand, are the contributions these resources can make to the productive operations of the firm. Hence, a resource can be viewed as a bundle of possible services. It is not the resources themselves that are the ‘inputs’ in the production process, but only the services that the resources can render. The emphasis is on the productive services that are available to a firm from its own resources, particularly the productive services available from management.

It is the use of resources (i.e. the services) that provide a uniqueness of the firm, and thus can give the firm its competitive advantage, not the resource itself (Penrose, 1959/95:25). Any unused productive services can be an incentive to expand (grow) and a potential source of competitive advantage (Penrose, 1959/95:85).

One of the most important productive services for firm growth is the management services. In terms of management services, Penrose distinguishes between entrepreneurial services and managerial services. These two terms are central in understanding the growth of firms.

The difference between the two relates to the execution of entrepreneurial ideas and proposals and to the supervision of existing operations: “Entrepreneurial services are those contributions to the operations of a firm which relate to the introduction and acceptance on behalf of the firm of new ideas, particularly with respect to products, location, and significant changes in technology, to the acquisition of new managerial personnel, to fundamental changes in the administrative organization of the firm, to the raising of capital, and to the making of plans for expansion, including the choice of method of expansion.” (Penrose, 1959/95:31-32).

Managerial services are defined (indirectly) by Penrose mostly by what they are not: “It is not taking full advantage of opportunities for expansion, it is a lack of interest in experimenting with new and alien lines of activity, or moving into new geographical areas and it is the unwillingness to make more money or raise capital through procedures that will reduce the control of their firms”. Penrose, 1959, P. 34 - 35. Thus, managerial services are contributions to the operations for running the firm in its existing state, with limited innovations and no or limited growth of the firm.

It is the availability of entrepreneurial services that is a prerequisite for firm growth. To create growth, a firm deliberately needs to dedicate some of its managerial resources for entrepreneurial purposes.

**Managerial limits to growth**

Theoretically, firms have an (almost) unlimited potential to grow. There are, however, a number of factors that may set the limits to the growth of firms.
According to Penrose, there are three classes of explanations why there may be a limit to the growth of firms: Managerial ability; refers to conditions within the firm, i.e. the availability of entrepreneurial and managerial services. Product or factor markets; refers to conditions outside the firm. Uncertainty and risk; refers to a combination of internal attitudes and external conditions.

In this article, we will focus on the managerial aspects, since management is the centre of our investigation, and since management is the most important resource in terms of limitations or possibilities of growth of firms according to Penrose.

In short, it is mainly the capacity of management and the entrepreneurial services that are the limit/restriction to growth. “The existing managerial personnel of the firm necessarily set a limit to the expansion of that firm in any given period of time, as “management” cannot be hired easily in the market-place.” (Penrose, 1959/95:47). Management resources and services create a fundamental and inescapable limit to the amount of expansion a firm can undertake at any time. If the manager, especially of a small firm, is unwilling to relinquish any of his functions to others, he creates a potential bottleneck which will effectively restrict further growth.

If a firm is to continue its growth, it needs to expand the management resources as a whole, and it needs to dedicate part of its managerial resources specifically to entrepreneurial services.

**Competence of management: Entrepreneurial versus Managerial competence**

The management of a firm includes individuals who supply entrepreneurial services as well as managerial services, and the “competence of management” refers to the way in which the managerial function is carried out.

Management resources can, as mentioned above, be applied for entrepreneurial and managerial services. If a firm uses its management resources mainly for managerial services, it is, according to Penrose, likely not to grow. Penrose stresses that even if the firm is not very entrepreneurial, it can nevertheless be competently managed. However, to grow, it needs to dedicate management resources to entrepreneurial services. The growth potential of a firm is to a large extent a competence function or the quality of the available entrepreneurial services.

The quality of entrepreneurial services depends on a number of factors, which will be explained briefly in the following sections:

1. **Entrepreneurial versatility.** A versatile type of executive service is needed if expansion requires major efforts on the part of the firm to develop new markets or entails branching out into new lines of production. Here the “imaginative effort, the visionary abilities, the sense of timing, and the instinctive recognition of opportunities are important” (Penrose 1959/95:37). “The really enterprising entrepreneur has not often, so far as we can see, taken demand as “given” but rather as something he ought to be able to do something about” (Penrose 1959/95:80). “When firms get into the production of products about which consumers know nothing, and for which there is no market expression at all of consumers’ ‘wants’, overt demand is clearly irrelevant.” (Penrose 1959/95:83).

2. **Fund-raising ingenuity** refers to the ability to get the financing. Successful raising of capital is seen as important for expansion, and depends on an entrepreneur's ability to create confidence in the project of the firm. Small firms often rely on a division of labour between an inventor or a skilled production manager, and a ‘businessman’ who is able to raise capital and buy on credit.

3. **Entrepreneurial ambition** is directly linked to growth. Two broad types of entrepreneurial ambition exist: The first we might call ‘product-minded’ or ‘workmanship-minded’ entrepreneurs or ‘good-will builders’. Their interests are directed towards the “technical side” of the business: improving the quality of products, reduction of costs, development of better technology, and extension of markets through better service. The second type we might call the ‘empire builder’. The empire builder is a business politician and strategist. Many empire-builders can be labelled “financial speculators”.

214
4. Entrepreneurial judgement. Unlike “versatility”, “ingenuity”, and “ambition”, the quality of entrepreneurial judgement is only partly a question of the personal characteristics or temperament of the individual. It is closely related to how the firm organises the information gathering and consulting facilities. The judgement is related to the role of expectations in the growth of firms. The “objective” productive opportunity of a firm is limited by what the firm is able to accomplish, however the entrepreneurs' subjective perception (the expectations) of the environment is important for the quality of entrepreneurial services and thus for the possibilities of a firm's behaviour and growth.

The Penrosean analytical framework

In this section, we will present the analytical framework based on the theory and concepts of Penrose. The framework is presented as a number of analysis areas, and a number of questions that should be asked for each area of the framework.

**Figure 1 - The Penrose analytical framework**

<table>
<thead>
<tr>
<th>Part A. An analysis of the general resources in the firm:</th>
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<tbody>
<tr>
<td>What resources exist in the firm? Past development? Present situation? Likely future development?</td>
</tr>
<tr>
<td>A.2 Human resources: Unskilled and skilled labour, clerical, administrative, financial, legal, technical and management staff. Focus in the analyses is on the management resources.</td>
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<tr>
<th>Part B. An analysis focusing on the management resources of the firm:</th>
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<tr>
<td>What managerial resources exist within the firm? Development so far? Present situation? Likely future development? How are the management resources used/applied?</td>
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<tr>
<th>Part C. An analysis of the management services:</th>
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<tbody>
<tr>
<td>Entrepreneurial services and/or managerial services? Does the firm have dedicated (sufficient) resources for entrepreneurial purposes? Any idle management resources (in the past, present, and likely future)?</td>
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</table>

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<tr>
<th>Part D. An analysis of the competence/quality of entrepreneurial services:</th>
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<tr>
<td>D.1. Entrepreneurial versatility.</td>
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<tr>
<td>D.2. Fund-raising ingenuity.</td>
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<td>D.3. Entrepreneurial ambition.</td>
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<td>D.4. Entrepreneurial judgement.</td>
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<tr>
<th>Part E. The result of the Penrose analysis:</th>
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<tbody>
<tr>
<td>An analysis/assessment of the managerial situation (resources and services) and the present situation and potential future growth potential of the firm.</td>
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</table>

Source: Summary of Penrose (1959/95).
CASE: AB INDUSTRY LTD.

To test the framework in practice, we have conducted an exploratory pilot field study of a small Danish high-growth production firm. The owner of the firm was interviewed in a semi-structured interview.

First, we will make a short introduction to the firm, and then analyse the case, applying the Penrosean framework.

AB Industry Ltd. is a Danish producer and sub-contractor specialising in the production of customised steel and aluminium “bits and pieces” within laser cutting, folding, and welding. The customers of AB Industry are producers of metal products and machinery in various businesses such as agricultural machines, wind mills, industrial machinery, and electric installations.

The company was founded in 1988 by Mr. AB, and was from the beginning a traditional small welding workshop. The company was in a steady state with a few employees for nearly 10 years, but experienced an economic downturn, and almost went bankrupt at the end of the 1990’s. In the year 2000 new advanced laser cutting technology (machinery) was implemented, and since then the company has experienced yearly growth in both turnover and profits. In 2005 the firm was nominated in the European “Entrepreneurship of the Year” contest for its growth and performance. In 2007 AB Industry had approximately 36 full-time employees. The production is organised in three shifts per day and night, which means that the production process runs almost non-stop seven days a week.

The owner/manager is satisfied with the development and financial situation and is very optimistic about the future. Mr AB's goal is to double the production output within 24 months. Except for some difficulties in finding qualified staff, he sees no real obstacles or threats to continue the performance and growth of the firm.

Table 1 - Key figures. AB Industry Ltd.

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<tbody>
<tr>
<td>Gross profit</td>
<td>24,433</td>
<td>19,713</td>
<td>12,713</td>
<td>10,484</td>
<td>10,353</td>
<td>6,392</td>
</tr>
<tr>
<td>Profit before taxes</td>
<td>4,766</td>
<td>2,225</td>
<td>1,816</td>
<td>1,232</td>
<td>1,058</td>
<td>-1,484</td>
</tr>
<tr>
<td>Annual result</td>
<td>3,653</td>
<td>1,724</td>
<td>1,498</td>
<td>992</td>
<td>812</td>
<td>-867</td>
</tr>
<tr>
<td>No. of employees</td>
<td>36</td>
<td>32</td>
<td>24</td>
<td>23</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

All financial figures are in 1,000 DKK.

Source: Ernst & Young Ltd, Entrepreneurship of the Year (2006), and annual report (2007) from AB Industry Ltd.

The general resources in the firm

The firm has a number of high-tech laser cutting machines and a number of other metal cutting, folding and welding equipment. The laser cutting machines are considered the “heart” of the production equipment. The laser cutting machines are replaced with the latest technology every three or four years. So far, the production capacity and cutting speed have increased with 30-50% with every new generation of machines.

The staff consists of a number of skilled and semi-skilled metal workers who operate the various machines, plus a number of administrative staff who take care of the selling, ordering, billing, accounting, etc. The management consists mainly of Mr. AB, but with some assistance from some of the senior staff from production and administration.

Financially, the company has managed to increase its profits year by year and is now, according to the owner/manager, a well consolidated and robust company.
The management resources of the firm

The management of the firm consists of mainly one person, Mr. AB, who is the founder, owner, and the top manager as well.

The owner/manager, Mr. AB, undertakes most of the managerial tasks in the firm. He is working on expanding the management “team” and would like to delegate some of the responsibility to more people in the organisation. Some of the day-to-day decisions are made by the administrative staff in the company.

Mr. AB's brother, an IT developer, occasionally helps out with certain management issues, such as running a one-day strategy seminar (the company’s first) outside the company's premises. The company has a formal board of directors, which the owner/manager himself calls a “family board” with no real power or influence.

Mr. AB's own educational background is nine years of primary school and then a vocational education as a machinist. He has not taken any formal programmes or courses in management, leadership, or anything in that direction. Before starting the firm in 1988, he was working as a machinist in a private firm. Mr. AB explains that “I cannot stay awake during courses” and “I am not really that good at it [taking courses/programmes], although I am a member of a “forum for young leaders” – we meet 4-6 times a year”.

An analysis of the management services

In terms of dedicating the management resources to entrepreneurial and managerial services, the same person (the owner/manager) fills out both these roles alternately. The owner/manager has to perform some of the managerial tasks as well as developing new ideas, products, etc. at the same time. He acknowledges that he would like to have the time to be more proactive in terms of developing new and improved ways of enhancing the service and relationship towards the customers/clients.

In the company, all administrative staff members seem to be working hard. One of the key administrative employees just left the company, and the owner/manager has had difficulties in finding a replacement. There does not seem to be any idle management resources in the firm.

An analysis of the competence/quality of entrepreneurial services:

1. Entrepreneurial versatility

The turning point and success of the firm started in year 2000 when the owner switched technology and bought some very advanced laser cutting machinery. In his own words: “I had no customers and nothing to do, and I didn’t know what to make or do with it [the large laser cutting machine]. In year 2000 I could see that laser cutting was slowly coming into the market, but it was still only for the “chosen few” to have one and it was expensive and the welding plants didn’t have them yet. So I thought, this might be it!” Mr. AB explains the process before he made the major investment in the new technology: “It was mostly intuition. I have never been any good at making all these plans, budgets and stuff. If I am making a budget, like with this one, it’s more like just a quick thought”.

2. Fund-raising ingenuity

The firm gets its external financing mainly from the local bank. When the company bought the new machinery, the bank supplied the necessary capital. Mr. AB provided some statements and figures, but he says that most importantly he has been loyal and honest with the bank for years, and that they trust him and his word. If the bank asks him today for a 12-month budget, he explains to them that they can get it in 12 months time from now!

Apart from the support from the bank, the firm has not raised any capital from external sources.
3. Entrepreneurial ambition

Mr. AB has a strong interest in the technical side of the business. He is very preoccupied with the technical performance of the machinery, and is directly involved in expanding the production into new areas, developing customer services, and improving the relationship with the customers. Maintaining a good relationship and developing solutions in close cooperation with the customers are of key importance according to Mr. AB. His ambition is to double the production of the firm within the next 24 months. However, when asked about the development of the firm the previous years, the owner/manager says: “I didn’t have a clue that it was going to turn out like this. In fact, I am not sure that we fully understand how it happened”. And when asked about the likely situation in five years from now, the answer is: “If only I knew!!”

4. Entrepreneurial judgement

The firm acknowledges that there is competition in the market. They can see by the “hit rate” that they do not get all the orders from the requests from the clients. They do not, however, make any kind of systematic gathering of competitor or market information. The founder does not believe in the value of making e.g. competitor analyses: “This is not something we spend time on” and “It is not beneficial for the business. It’s just an awful waste of time: Oh, look at the neighbours, now they are working again, and we are doing nothing!! It doesn't benefit us in any way.” No market information is gathered systematically in the firm.

As for the “subjective productive opportunity”, the expectations of the environment, the owner/manager is optimistic and believes that the total market will grow in the future and that the company will be able to manage and continue to grow: “The number of customers grow, and the customer firms and orders grow bigger and bigger, and we will grow together with them!”

The results of the Penrose analysis

Although the owner/manager is satisfied and optimistic, the analysis revealed some points of concern and potential future challenges for the company.

The management resources of the firm are – even considering it relatively small size – quite limited. The owner/manager is trying to expand the management team, but so far he is the main (only) real management resource in the company. This might create a Penrosean managerial limit to growth, creating a bottleneck, and will soon set a limit to the expansion of the firm.

The management resources are used for both managerial and entrepreneurial services, but if the management resources are not expanded, the available entrepreneurial services might be insufficient to continue the growth of the firm. Even today the owner/manager acknowledges that there is not enough time and resources (entrepreneurial services in the Penrosean terminology) to develop and improve the customer services and relationships.

As for the competence of the entrepreneurial services, the analysis showed that the firm (the owner/manager) has been quite versatile, investing in reasonably new and advanced technology in the year 2000, and have continued to develop and expand the technology and the product offerings to its clients. The company was able to attract the necessary cash from the local bank, however the owner/manager acknowledges himself that this is not his biggest strength. The ability to attract large amounts of equity, if this proved necessary, could be somewhat limited, considering the lack of plans or budgets.

Mr. AB has strong interests and ambitions in terms of improving the technical quality of the product offerings and the services towards the clients. He is directly involved in the development process and has the ambition to double the production within two years.

The entrepreneurial judgement of the firm is interesting. The company is doing well in terms of financial and client performance, but is not concerned with gathering information about the competitors or other kinds of systematic information gathering that would normally be part of an MIS
DISCUSSING AND EXTENDING THE PENROSEAN FRAMEWORK

We know that this case study cannot describe or reveal all kinds of growth processes in SMEs. The case is a small company with limited management resources. The management consists of one person, which means that it is difficult to separate the managerial and entrepreneurial services. Nevertheless, we will argue that the case study can be used to determine whether the framework can be used in case studies and we argue that the case can be used to suggest some extensions to the Penrosean framework.

On the basis of the case-study analysis, we believe that the Penrosean framework provides a good and usable framework for case-study analysis of SMEs. The Penrosean understanding and framework provide an explicit focus on important aspects of the management of growth processes, and may reveal current and potential problems of the firm.

However, the case study also shows that some areas of the management of growth processes from the case are not fully explained by the Penrosean theory and framework. Thus, in the following chapter, on the basis of the case study, we will discuss some of these areas. And on the basis of a literature review of the particular area, we will suggest some adoptions and extensions to the Penrosean framework.

Planning or emergence as the managerial logic for achieving growth

Penrose repeatedly argues that planning is a basic managerial tool for achieving and managing growth. However, the case study suggests that planning in the classical/theoretical sense as explained by e.g. Penrose (1959), Chandler (1962), and Ansoff (1965) may not be the only way to describe and understand the growth processes of SMEs.

Some researchers argue that other perspectives than the planning approach are better suited to explain the management of growth processes. Mintzberg and Westley (2001) explain the rationale of three different perspectives (or “sets of logic”) for making strategic decisions: Thinking first, relating to the classical planning perspective, or Seeing first, relating to the visionary leader or “artist” who can see or envision the direction and goals, and Doing first, relating to the “craftsman” conducting a trial and error experimental process.

The owner/manager in the case seems to be seeing and especially doing first, rather than planning the growth process. The view of doing first is, as opposed to thinking first, further developed and explained in the concept of effectuation (Sarasvathy, 2001).

In the same line of reasoning, the logic of an emergent strategy (Mintzberg and Waters, 1985), and logical incrementalism (Quinn, 1978) might be better ways of explaining and understanding the management processes in SMEs.

Fletcher and Harris (2002) have operationalised the difference between a deliberate and emergent strategy, and have proposed seven aspects/characteristics that describe and distinguish each of the two opposing strategic perspectives.

The above discussion of the planning and emergence/effectuation perspectives could be called the entrepreneurial logic (Sarasvathy 2001) and should be added as a separate part of the entrepreneurial competence in the Penrosean framework (part D.5).

Management of networks for managing growth

The case shows that the relationship with the clients is of key importance. To understand management of growth processes, we need to include the management of networks, relationships, and sharing resources.
Philipsen, Damgaard and Johnsen (2008) have focused on the capabilities that the firm needs to have to build, maintain, and develop customer relationships. The study highlights the fact that different kinds of clients require different types of current and future capabilities to seize opportunities and sustain and improve customer relationships and networks.

The ability to manage growth should include the perspective of managing networks and relationships. Managing networks and relationships can be seen as a separate new part of the competence of entrepreneurial services, called entrepreneurial networking (part D.6) in the extended Penrosean framework.

**Entrepreneurial versus managerial services**

The distinction between managerial and entrepreneurial services is a key point in the Penrosean framework. The case study shows that the potential lack of entrepreneurial services might indeed be one of the biggest challenges for the future growth of the firm.

Since the work of Penrose was published in 1959, several researchers have developed the notions of entrepreneurial and managerial services further, and thus we would like to extend the Penrosean framework with some of these contributions for a deeper understanding of the management of growth processes.

Stevenson (1983) focuses on entrepreneurial thinking and behaviour and proposes a dichotomy with the entrepreneur (the seeker of opportunities) and the administrator (the guardian of existing resources) to investigate how entrepreneurs identify opportunities and make use of resources. This framework makes it possible to see entrepreneurship not as an “either or”, but rather as a mix of the two types of managerial behaviours. The dichotomy of managerial behaviours by Stevenson resembles Penrose’s distinction between entrepreneurial and managerial services, and can thus be seen as an elaboration and specification of the underlying factors/dimensions of Penrose’s two types of management behaviour.

Several studies investigate the characteristics and related business performance of entrepreneurial behaviour and managerial/administrative behaviour. In general, entrepreneurial behaviour is related to achievement, motivation, risk taking, and innovation, whereas managerial behaviour is more focused towards providing family income without a (strong) desire for growth and without engaging in (large) new innovative practices. (Carland, Hoy, Boulton and Carland, 1984, Stewart, Watson, Carland and Carland, 1998, Brown, Davidsson and Wiklund, 2001).

Empirical evidence seems to suggest that firms with a dedicated focus on entrepreneurial behaviour achieve higher growth rates than the more “non-entrepreneurial” firms, as was predicted by Penrose. (Brown, Davidsson and Wiklund, 2001, Sadler-Smith, Hampson, Chaston, and Badger, 2003, Wiklund and Shepherd, 2005, Runyan, Droge, and Swinney 2008).

The concepts are further developed by some researchers who suggest that the management of growth processes should be seen as a matter of balancing entrepreneurial and managerial behaviour. In an article from 1991, March discusses the dualism as a balance between exploration and exploitation from a learning perspective. Exploration includes risk taking, experimentation, play, flexibility, variation, search, discovery, and innovation, and can thus be seen as similar to Penrose’s “entrepreneurial service”. Exploitation, on the other hand, includes things such as efficiency, selection, refinement, choice, implementation, production, and execution, and thus resembles the “managerial services” and behaviour. According to March, maintaining an appropriate balance between exploration and exploitation is essential for survival and prosperity.

Teece, Pisano, Shuen, 1997 present the dynamic capabilities approach. Developing dynamic capabilities requires both the exploitation of existing firm-specific capabilities and exploring new ones to achieve competitive advantage, thus suggesting an integration of entrepreneurial and managerial services and behaviour.

Eisenhardt and Martin (2000) add to the theory of dynamic capabilities by arguing that dynamic capabilities are not entirely idiosyncratic, i.e. not entirely firm-specific, and argue that dynamic
capabilities lead to competitive advantages, but not to sustainable competitive advantages, since firms are – to some extent – able to develop the same (best practice) capabilities. In his note “Understanding Dynamic Capabilities” from 2003, Winter contributes to the discussion by introducing a “capability hierarchy” with (at least) three classes of capabilities: Ordinary (zero-level) capabilities are the capabilities needed to keep the business as it is now, i.e. selling the same products on the same scale to the same customers. Dynamic (higher-order) capabilities are change-oriented, and are the capabilities needed to make changes, new products, new markets, etc. Ad-hoc (temporary) capabilities are needed when unexpected changes occur, and when the necessary behaviours are non-repetitive.

The above contributions should be seen as an elaboration on the Penrosonian discussion of entrepreneurial and managerial services (part C in the extended framework), and should be included in the analytical framework. The ability to manage the balance of entrepreneurial and managerial services and to develop dynamic capabilities can also be seen as an entrepreneurial management competence in its own right, and should thus be added to the framework as a separate part of the entrepreneurial competences as well. The competence is called entrepreneurial balance and dynamic capabilities (part D.7).

**Limited growth potential due to external factors and path dependencies**

Penrose developed her work looking at production companies in the 1950’s where growth opportunities were immense, and she assumed that theoretically there are few limits to the growth opportunities of firms (Lockett, Wiklund and Davidsson 2007).

The case study suggests that this is not quite so. There are a number of domestic and foreign competitors in the market (regardless of the fact that the company does not wish to deal with them at all). As a sub-contractor, the company is very dependent on the development of the markets of the customers. There are indeed external limits to growth, and there seem to be less favourable growth opportunities generally than was suggested by Penrose (Lockett, Wiklund and Davidsson, 2007). Even though the focus of this analysis is strictly on management, the market situation should not be left completely unattended. The external growth opportunities may put severe constraints on the company, and thus may also affect the degrees of freedom and manoeuvring possibilities of the management of the firm.

The way the external opportunities and limitations are handled should be added as a part of the entrepreneurial judgement (D.4) in the Penrosonian framework.

Furthermore, the case study shows that the development and growth of the firm have been very much within the same line of business. Even the relatively dramatic shift in technology in the year 2000 still very much relies on the same market and the same internal competencies and capabilities of the owner/manager and the firm.

Lockett, Wiklund and Davidsson (2007) elaborate Penrose’s ideas and argue that firms will need to search in their existing operations to find new growth opportunities. Due to path dependencies, however (Nelson and Winter, 1982), the pursuit of growth opportunities in new fields of activity is inherently costly and difficult, and previous (organic) growth will limit production opportunities of the firm and thus also future growth.

Previous experience and path dependencies should be added as a part of the general resources in the Penrosonian framework (part A.3), in other words as a factor that may restrict the opportunities for growth, and thus also influence the management of the growth process.
Extension and adaption of the Penrosean framework

The new extended Penrosean framework is presented in figure 2. The additions are written in **bold italic** to make it easier to see the new extended parts of the framework.

**Figure 2 - The extended Penrosean framework for case-study analysis**

<table>
<thead>
<tr>
<th>Part A. An analysis of the general resources in the firm:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What resources exist in the firm? Past development? Present situation? Likely future development?</td>
</tr>
<tr>
<td>A.2 Human resources: Unskilled and skilled labour, clerical, administrative, financial, legal, technical and management staff. Focus in the analyses is on the management resources.</td>
</tr>
<tr>
<td><strong>A.3 Path dependencies:</strong> Previous experience and path dependencies may limit the degrees of managerial manoeuvrability.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part B. An analysis focusing on the management resources of the firm:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What managerial resources exist within the firm? Development so far? Present situation? Likely future development? Path dependencies and routines? How are the management resources used/applied?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part C. An analysis of the management services:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial services and/or managerial services? Does the firm have dedicated (sufficient) resources for entrepreneurial purposes? Any idle management resources (in the past, present and likely future)?</td>
</tr>
<tr>
<td><strong>How does the firm balance entrepreneurial and managerial services? The balance between exploration and exploitation and the understanding and development of dynamic capabilities?</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part D. An analysis of the competence/quality of entrepreneurial services:</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.1. Entrepreneurial versatility.</td>
</tr>
<tr>
<td>D.2. Fund-raising ingenuity.</td>
</tr>
<tr>
<td>D.3. Entrepreneurial ambition.</td>
</tr>
<tr>
<td>D.4. Entrepreneurial judgement, including management of external opportunities and limitations.</td>
</tr>
<tr>
<td><strong>D.5 Entrepreneurial logic (planning vs. emergence/effectuation).</strong></td>
</tr>
<tr>
<td><strong>D.6 Entrepreneurial networking. Managing networks and relationships.</strong></td>
</tr>
<tr>
<td><strong>D.7 Entrepreneurial balance and dynamic capabilities. Balancing entrepreneurial and managerial services and developing dynamic capabilities.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part E. The result of the Penrose analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>An analysis/assessment of the managerial situation (resources and services) and the present situation and potential future growth potential of the firm.</td>
</tr>
</tbody>
</table>
CONCLUSION

Understanding growth processes and how to maintain or enhance firm growth can be relevant both from a research perspective, from a business/management perspective, and from an SME and entrepreneurship policy perspective.

In this paper, a framework was constructed to investigate the management of growth processes in SMEs, using the Penrosean approach. The case-study analysis and the literature review formed the background for adapting and refining the framework.

The conclusion is that the work by Penrose, 50 years after it was first published, still offers valuable insights for understanding the factors that limit and enhance growth of firms, and that the (extended) Penrosean framework is appropriate for case studies of the management of growth processes in SMEs.

We hope that the framework may contribute to a better theoretical understanding of the factors that influence growth processes, and may provide inspiration for future research on management and growth processes in SMEs.

This paper has taken the first step towards developing and testing the framework. Further theoretical and/or empirical research may develop the construct further, and reveal even more factors and perspectives that may refine and improve the understanding of the management of growth processes in SMEs.

NOTES

(1) The economic figures presented from the OECD and the EU are calculated on the basis of the definitions of official national bodies in the various OECD countries and regions, such as the European Commission in the EU and the Small Business Administration in the US. SMEs are defined by the European Commission as firms up to 250 full-time employees and an annual turnover of max. €50 million or a balance sheet of max. €43 million. The Small Business Administration in the US defines small firms (equal to SMEs) depending on their line of business: for example, manufacturing firms up to 500 employees, and wholesale trade firms up to 100 employees. For further details on defining SMEs, see Senderovitz, 2008.

(2) The company was selected and contacted in corporation with Ernst & Young, "Entrepreneurship of the Year". Ernst & Young has kindly given access to their company database including financial data as well as transcripts of company interviews from their "Entrepreneurship of the Year" programme.

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