Int. J. Management and Enterprise Development, Vol.X, No. X, 200X

Business Growth Models: Review of Past 60 Years

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Abstract: This study reviews growth configurations research published over the past 60 years. Numerous configuration models seek to clarify the management priorities in the early growth of companies. However, an extensive review is missing from the literature and the variability of attributes among the models leads to confusion. The study identifies 90 configuration studies, describes the common patterns and trends, and identifies well-covered areas and promising research challenges. This meta-analysis reveals increasing consensus on growth indicators, sharpening focus, increasing context and process specificity, and diversification. Future approaches are encouraged to

provide context-specific empirical studies, and to open new viewpoints.

Keywords: business growth models; review; company growth models; growth stages; growth configurations; growth process; small- and medium-sized enterprises; SMEs; enterprise development.

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1 Introduction

The early growth of a business can be divided into a variable number of growth stages and transitions. Numerous models have been formed to clarify the managerial challenges and priorities in the early growth of companies. This perspective can be called the 'stages of growth' perspective, the 'company life-cycle' perspective or the 'configuration' perspective. In this study, the term *configuration perspective* is used. Business growth can be studied from different perspectives. According to Davidsson and Wiklund (2006) the resource-based perspective, the motivation perspective, and the strategic adaptation perspective focus on factors leading to survival and growth while configuration studies are concerned with how growing organisations should be managed. The need for configuration studies is based on the multidimensional nature of growth. Growth indicators such as number of employees, sales, and assets show whether a company is growing or not. However, the management has to focus on multiple dimensions in a growing company. Growth configurations literature reveals that there are diverse managerial problem configurations specific to the different growth stages. In this study the term *stage* corresponds to a unique configuration of variables e.g. strategies, problems, and priorities that growing firms are likely to face (See Miller et al., 1984). Term *configuration* implies to the clusters or frameworks of common variables used for analysis of stages. In the typologies, the configurations are derived heuristically and in the taxonomies empirically. Configuration studies seek to describe what growth brings to a company, and how a growing company should be managed.

There are many company growth models derived from the configuration perspective, but the models have a variable number of attributes that limit the implementation of the models to any context. The models vary widely in type, level of empirical evidence, focus business, growth dimension, number of stages, etc. Some efforts to synthesise limited number of former studies into a compound model exist. However, the aim of this study is neither a new model nor a synthesis. This study is based on a notion that the current literature does not offer an extensive review of configuration perspective. Therefore, the overall picture of the field remains somewhat vague even when such key attributes as proper size measures or applicability of particular models to different industries are considered. Further, some central developmental steps made in this field remain unclear. The aim of this study is to fill this gap by analysing 90 configuration studies over the past 60 years. By the assessment of selected attributes in the models, this study identifies well-covered areas, highlights trends, and provides ideas for fresh research approaches. The above-mentioned can be condensed into this research question:

RQ1. What are the patterns, trends and potential blind spots among configuration studies published during the past 60 years?

This meta-analysis (See i.e. Glass, 1976) focuses on the configuration models of company growth and development. The meta-analysis focuses on analysis of a collection of research results in order to integrate some of the findings. Meta-analysis is needed when the literature of a certain type contains tens or even hundreds of studies dealing with the same area of interest (See Glass, 1976). This is the case with growth configuration studies. As configuration models are reviewed, three layers of analysis such as the identity of the studies, the descriptive attributes, and the methodology and underlying assumptions, can be presented. The key attributes related to each layer were

selected through preliminary meta-analysis (Muhos and Sanpanich, 2009). Two of these layers are used in this study to provide understanding of the key attributes among the sample of configuration studies. First in this study, 90 relevant configuration studies are identified from the literature and groups for analysis are defined. The first layer analysed provided the attributes essential for the identification of the model such as the name of the author(s) and year published. Second, the layer essential for a proper description of the models was analysed. This group of attributes includes number of stages and transition periods, size measure(s) utilised, the focus business size category(ies), focus industry(ies) studied, and the focus process(es). Based on these two levels of analysis, the common patterns and trends are described, and implications for further research provided.

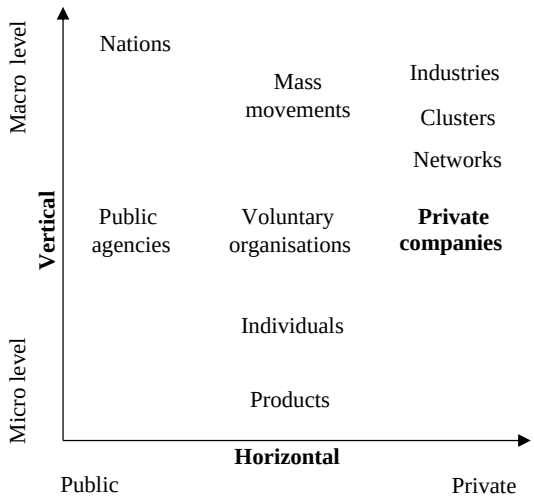
The sample of configuration studies was collected during the three first quarters of the year 2008 in University of Oulu, and the qualitative and quantitative analysis of the sample was carried out during the third and fourth quarters in Kasetsart University as part of the Duo-Thailand Fellowship Program. The main findings were concluded during the winter 2008 – 2009. This study is addressed to the persons interested in the process perspective on company growth and development.

2 Defining the unit of analysis and the three episodes

The configuration models related to private, profit-seeking companies are at the focus of this study. Originally, the population was limited to the past 60 years in order to provide comparable episodes including sufficient number of units and to avoid problems of access into earlier published studies. Preliminary analyses showed that configuration studies published earlier than 1948 are relatively rare in the literature. At the beginning of the analysis, the preliminary sample consisted of 120 configuration studies from the

1940s until today. The preliminary sample included studies not primarily focusing on company growth. The preliminary sample is presented in a two-dimensional framework (Figure 1). To provide more representative sample of the unit of observation, some categories were excluded from the preliminary sample. The vertical analysis led to the exclusion of studies focusing on macro and micro processes. Excluded macro categories were growth of nations, mass movements, industries, clusters, and networks. Excluded micro processes were development of individuals in the organisation and the product development/life-cycle. The horizontal analysis led to the exclusion of models related to public, non-profit, and voluntary organisations.

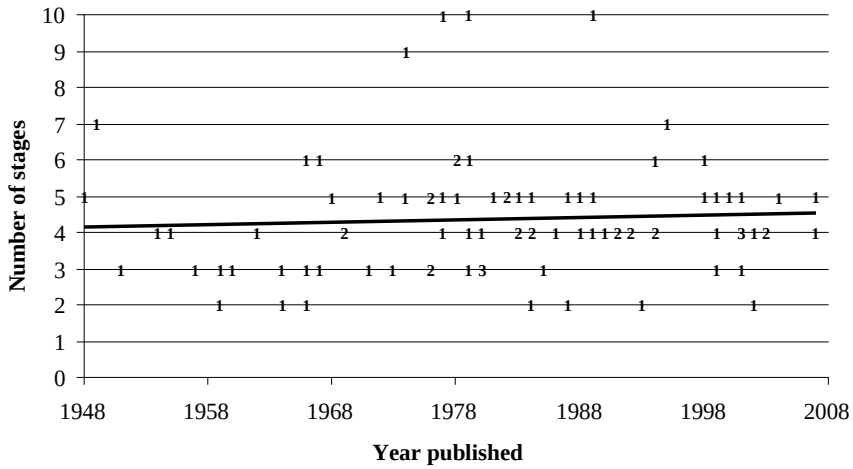
Figure 1. Defining the unit of analysis



The 90 reviewed configuration models analysed in this study are presented as a list in appendix 1. Of the studies analysed, 69% are journal articles, 27% are books or book contributions, and the rest are conference proceedings, research reports and available unpublished studies. Of the studies, 68% are addressed to the academic audience and 10% are addressed to the pragmatic audience. Twenty percent of the studies consider

both equally. As presented in the introduction, the first layer of analysis includes the attributes essential to the identification of the model such as names of authors and years published. This level of analysis is presented in Appendix 1. An overview of the studied configuration models is presented in Figure 2.

Figure 2 The sample – 90 configuration studies



n = a number of studies proposing the same number of stages in particular year

The meta-analysis of the attributes is provided in this study both through the entire sample and through three groups of analysis. The analysis of the sample as a whole provides an overview of studies and the separate analyses of three groups seek to detect commonalities and trends. The groups are presented in Appendix 1. The trends in the configuration perspective were studied in three 20-year periods starting from 1948. The first group, early studies, consists of the studies published between years 1948 and 1968. The second group, central studies, consists of the studies published between years 1969 and 1988. The third group, recent studies, consists of the studies published between years 1989 and 2008. In the first group 18 studies were found, in the second group 41 studies

were found, and 31 studies were found in the third one. The groups were made to provide a comparison and clarify the general trends in the configuration school of thought.

3 The meta-analysis of the selected studies

This chapter focuses on the second layer of analysis including the number of stages and transition periods, size measure(s) utilised, the focus business size category(ies), focus industry(ies) studied, and the focus process(es).

3.1 Number of stages and transitions

A growing company has to deal with both stages and transitions. The term stage corresponds to the configuration of variables that a growing company is likely to face and the term transition corresponds to the reconfiguration of these variables (Hanks and Chandler, 1994; Galbraith, 1982).

A vast majority, 78% of the models, propose three, four, or five stages. As the majority of the studies do not explicitly label the transition periods, some interpretation is needed. Of the models, 71% propose two, three, or four transitions. The proposed number of stages and transitions varies widely. The overall trend during the latest 50 years is around 4 – 5 stages and around 3 – 4 transitions. The later models suggest a slightly larger number than the earlier ones. The proposed number of stages has changed when the three episodes are compared. In the early studies the three-stage approaches are most popular (39% of the sample). Both two- and four-stage approaches are represented by less than 17%. Among the central studies, the largest number, 31% of the sample, proposes five stages. Anyhow, both three-stage approaches and four-stage approaches are relatively popular (22 – 27%). Among the recent studies the majority of models propose

four stages (52%). The five-stage approach is represented by 22% of the studies while the others are represented by less than 7%. The majority of the models propose from two to four transitions. The largest number of early models propose two transitions (28% of the studies), the largest number central models proposes four transitions (29% of the studies), and the majority of the recent studies propose three transitions (55% of the studies).

The number of stages and transitions proposed vary widely – stages from 2-10 and transitions from 0-11. Some of the early studies chose a distant focus, and searched for the differences in configurations of two extremes – the small and the large company. Some central and recent studies chose to focus on the few earliest stages only. The early and the later studies with small numbers of stages select a different distance of analysis than the "mainstream" studies. The models proposing large numbers of stages were analysed as well. The main reason for the large number of stages is wide focus. The focus was widened by adding stages before the establishment of a company as well as the stages of decline or stages of mature organisation. Some of the models chose a closer focus leading to the recognition of micro stages inside the mainstream stages. Further, an analysis of especially small and large numbers of transitions was conducted revealing similar reasons. Both distance and width of analysis affects the number of stages and transitions. However, this analysis is made, not to propose a static number of stages and transitions, but to reveal the natural diversity among configuration studies.

Two main trends can be found. *First*, the number of stages and transitions proposed seems to increase through the six decades analysed. As the configuration perspective evolves, the picture sharpens, and brings more details to the framework. Further, the focus business has an effect on the number of stages proposed. *Second*, the variance in the proposed number of stages and transitions decreases through the period analysed. The majority of the recent studies propose four stages and three transitions. The reason behind seems to be the rise of empirically tested typologies and taxonomies in the eighties. Many

empirical studies presented since 80s support a four-stage approach, which may have influenced the choices made in the conceptual studies.

3.2 The measurement of size

As growth of companies is heterogeneous in nature (See i.e. Davidsson *et al.*, 2005) so is the measurement of size among configuration studies. Numerous measures have been used to indicate growth including e.g. number of employees, revenue, assets, price per share, product variety, level of operational integration, etc. The diversity of measures used in organisational growth studies severely implies the ability of scholars to accumulate and compare results (Weinzimmer *et al.*, 1998).

The size measures found in the configuration literature were divided into qualitative and quantitative measures. Quantitative measures represent a vast majority in the total sample of studies. Of the studies, 92% use only quantitative measure (s), 11% use both qualitative and quantitative, and 7% use qualitative measures only. Among the early studies, all but one study use quantitative measures only. Among the central and the recent studies 12 – 13% use both quantitative and qualitative measures and 9 – 10% use qualitative measures only. However, across the range of studies quantitative studies represent the vast majority of the studies, 94% in the early studies, 78% in the central studies, and 77 % in the recent studies.

In the sample, there are three quantitative measures above others; number of employees (77%), sales (50%), and assets (14%). Of the studies, 93% use one or more of these three main indicators. Multiple measurements by two or more of these indicators are used in 40% of the studies. Each of the other quantitative measures was found in less than 10% of the sample. The measures mentioned in more than one study are number of horizontal units (such as divisions, units, plants and machines), number of layers in the

organisation, profits, market share, and budget. In the early studies, 78% of the studies mention the number of employees and in the central studies 80%. In the early period the proportion of studies mentioning sales is 39% and in the central 44%. Finally, the proportion of studies mentioning assets is 17% in both groups of analysis. In the recent studies the proportion of both the studies mentioning sales and the studies mentioning number of employees is on a similar level (65% and 71%), and the proportion of the studies mentioning assets is under 10%. In the sample, few qualitative measures of growth are mentioned by more than one study. These are the complexity of structure, level of formalisation, level of centralisation, level of competence and level of knowledge. Interest in the utilisation of a multiple measure study shows a steady increase throughout the sample. When both qualitative and quantitative measures are considered, 49% of the sampled literature seemed to propose utilisation of two or more growth indicators.

In conclusion, the configuration studies mention some qualitative growth measures, though to this day the vast majority of the studies primarily mention the quantitative measures. When the growth of a company is evaluated, the quantitative measures should be shown. The three main growth indicators should be considered first: the number of employees, sales, and assets. The sales and number of employees are clearly the most popular. The analysis reveals other indicators to be considered, such as number of horizontal units, number of layers, and complexity of structure. Multiple measure approaches can be recommended.

3.3 Focus business size

Variance in business size focus leads to confusion in comparative analyses of different configuration studies – especially when the size focus is not clearly stated. The definition

of Small- and Medium-sized Enterprise (SMEs) is different in the European Union (EU) and United States (US) contexts. The difference between these definitions needs to be taken into account when the SME growth related literature is analysed. In the US context there is no widely accepted common definition for the SME (or SMB – Small- and Medium-sized Businesses) – in many cases the SME is considered as a company having less than 500 employees. The definition is dependent on, for example, the industry context. In the European context, the SME is a company having less than 250 employees. In this study, the European definition is utilised. In the EU medium sized firms are those employing 50 – 249 persons, small those employing 10 – 49, and micro those employing 0 – 9 (Storey, 2003).

Many models contribute to all four size categories. Of the sample studies, 86% include the micro company viewpoint, 96% the small company viewpoint, 90% the medium company viewpoint, and 59% the large company viewpoint. The studies seem to focus on large companies less often than on other size categories. A large majority (more than 86%) of the models contribute to all three size categories inside the SME category. The focus business size has gradually changed during the three groups of analysis. The biggest change can be seen in the group of studies more focus on large companies. In the early models the proportion is 72%, in the central studies 61%, and in the recent studies 48 %. The second noteworthy change is in the studies extending focus on the micro companies. Among the early studies, the proportion is about 15% smaller than in the two later groups. The change is not dramatic, but it illustrates the gradual shift from a focus on large to a focus on micro companies. The changes inside the groups of studies focusing on small and medium categories are not significant (less than 10 % through the three episodes). The rise of interest in the growth of SMEs seems to have begun in the early seventies. The size focus varies from narrow to wide depending on the number of categories the study contributes. Of the studies, 89% have a wide business size focus

including three or four size categories. Studies with a narrow size focus are rare. The narrow size focus is needed for analysing the micro levels of growth and development.

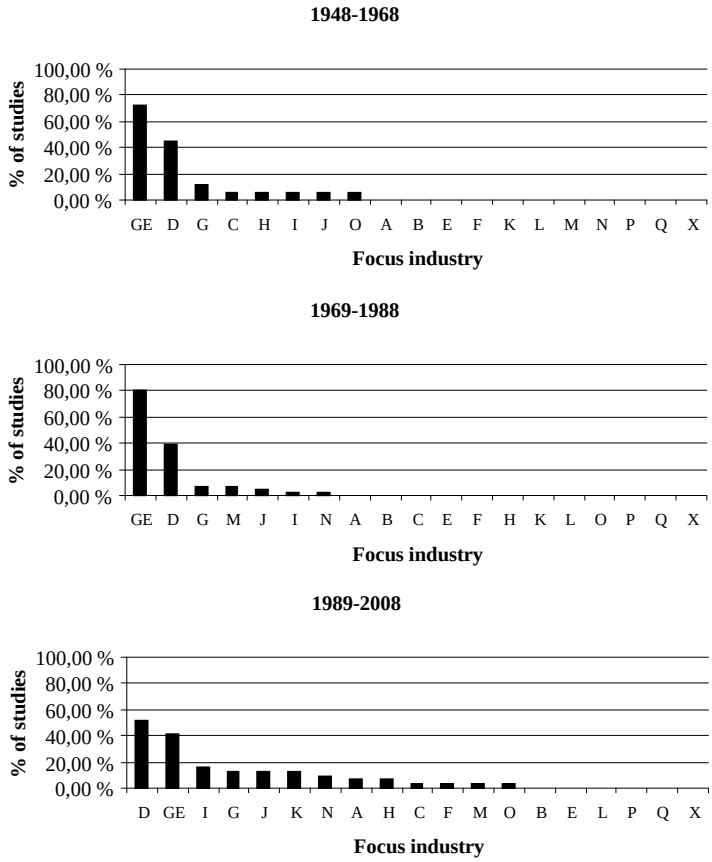
In conclusion, many of the models seek to contribute generally in all four company size categories. However, the studies seem to focus on large companies less often than on other size categories. The vast majority of the models contribute to all three size categories inside the SME category. The focus business size has changed during the years when the three groups of analysis are compared. The trend leads towards decreasing number of studies focusing on the large companies. This reflects the rise of the interest in SME studies since the early 70s. The focus of the vast majority of the models is relatively wide (three or four size categories).

3.4 Focus Industries

The analysis of the focus industries was conducted following the Standard Industrial Classification (Statistics Finland, 2002). The focus businesses of each study were analysed based on the definitions in the Standard Industrial Classification 2002 (SIC2002). Some of the studies are not addressed to a specific industry – that is why a "general" (GE) universal category was added. However, the industries defined in the SIC are agriculture, hunting and forestry (A), fishing (B), mining and quarrying (C), manufacturing (D), electricity, gas and water supply (E), construction (F), wholesale and retail trade (G), hotels and restaurants (H), transport, storage and communication (I), financial intermediation (J), real estate, renting and business activities (K), public administration and defence (L), education (M), health and social work (N), other community, social and personal service activities (O), private households employing domestic staff and undifferentiated production activities of households for own use (P), extra-territorial organizations and bodies (Q), and industry unknown (X).

Of the sample, 66% have a universal focus, but mention one or more specific industries. Of the studies clearly defining one or more focus business 44% are focused on manufacturing. One or more other industries are only in the focus of less than 10% of the studies analysed. The industries that are at the focus of more than four studies are G, I, J, K, M, and N. The industries at the focus of less than four studies are A, C, H, O, and F. Industries B, E, L, P, Q, and X are not at the focus of the studies analysed. The percentages of the universal and industry-specific studies in the early, central, and recent groups of analysis are presented in figure 3. The proportion of the studies focusing on the manufacturing sector is similar through the three groups of analysis (early 44%, central 39%, recent 52%), though rising in the third one. In the first two groups the proportion of general studies is similar (72% – 80%). However, the amount of general studies dramatically reduced in the recent studies where the proportion of general studies is only 41%. The early and central studies are equally concentrated on industry-specific studies. Among the recent studies, the proportion of industry-specific studies dramatically increased. The most common focus industries among industry-specific studies throughout the entire period of analysis are D, G, I, and J.

Figure 3 The focus industries – analysed in relative terms



When the group of early and central studies is compared with the recent studies, some conclusions can be drawn. The main trend leads from general studies to industry context-specific studies, and the industry base among the recent studies is remarkably wider than in the two earlier ones. The universal models of company growth have faced criticism in terms of applicability across different industries. The uniqueness of industries leads to industry-specific configuration studies. The industries continue to diversify and new challenges arise in terms of the applicability of the earlier studies to the most recent industrial contexts. The current trend seems to lead towards in-depth studies in the industries earlier addressed and studies focusing on new industrial contexts.

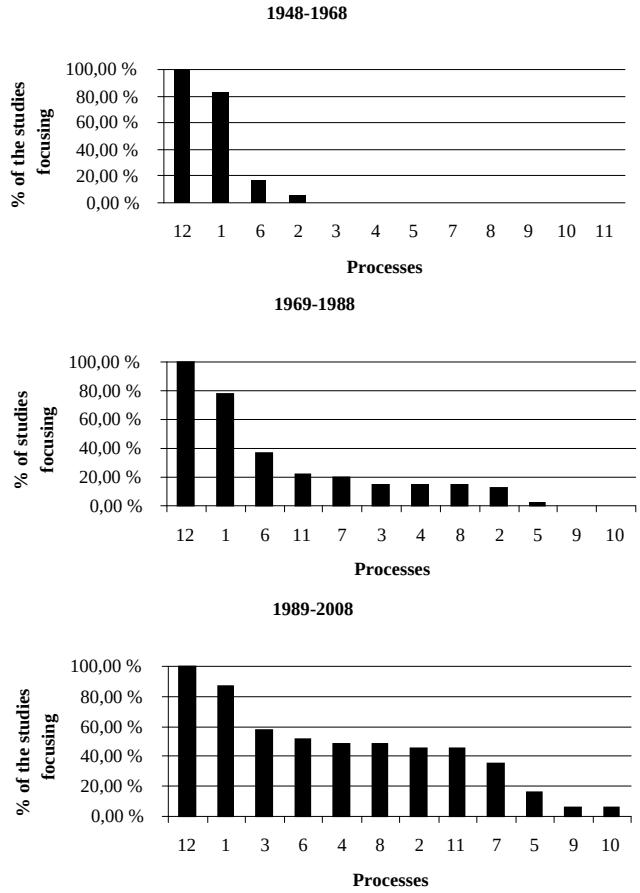
3.5 Focus processes

A basic assumption of a configuration viewpoint is that growth is a process. The configuration research focuses on affects of growth to an organisation and its processes. Therefore it is important to clarify, to what extent the affects of growth to the processes has been studied. At the beginning of this study, it was not clear to what extent the processes of company had been included into the configuration research. The analysis of the focus processes is based on widely known American Productivity & Quality Center Process Classification Framework (APQC PCF) (See. APQC, 2008). APQC PCF consists of *5 operating processes*: development of vision and strategy (1), design and development of products and services (2), marketing and selling products and services (3), delivery of products and services (4), and management of customer service (5), and *7 management and support processes*; development of human capital (6), management of information technology (7), management of financial resources (8), acquiring, constructing, and managing property (9), management of environmental health and safety (10), management of external relationships (11), and management of knowledge, improvement and change (12). Each main process is divided into sub-processes. Each configuration study was analysed to identify the primary process areas.

Growth is a change process occurring over time (See i.e. Weinzimmer *et al.*, 1998). In fact, every configuration study analysed included the change viewpoint – in the APQC PCF, the change process is one part of process number 12. The second relatively important process that was considered in the majority of these studies is process number 1 in APQC PCF, on which more than 80% of the studies focus. The studies relatively frequently focused on the processes 6, 3, 11, 8, 4, 2, and 7. Only a few studies focused on the rest of the processes 5, 10, and 9. The focus processes inside early, central and recent groups of analysis are compared in Figure 4. In the early studies, the focus is on just four

processes 1, 2, 6, and 12. In the central studies, the focus of the configuration models is broadened to ten of the main processes presented in the APQC PCF. Only two processes are not covered. The group of recent studies covers all the processes of APQC PCF. Figure 4 shows how the configuration viewpoint has evolved. The relatively general viewpoints in the early studies form a basis for a more detailed analysis in central and recent studies. The central studies start to focus on the 'operating' processes and the later studies go deeper into that. A similar phenomenon shows up when the 'management and support service' processes are analysed.

Figure 4 Focus processes – analysed in relative terms



As the analysis of configuration studies progresses through these six decades, every key process area is covered. This reveals the trend of diversification among the configuration models. However, two processes have attracted the interest of configuration research: the ‘development of vision and strategy’ and the ‘management of knowledge, improvement and change’. These processes seem to remain at the focus of the configuration viewpoint throughout the six decades of studies. It is interesting to see how configuration studies shift to other focus processes as the field matures internally. The diversification of the field opens new viewpoints and provides a sharper picture of each

process area across the stages of development. The configuration viewpoint is affected by one external trend – the development of the process research.

4 Discussion

Growth is a multidimensional and heterogeneous phenomenon – the effects of growth must be managed in companies. The configuration perspective offers tools for managing growth inside companies and supporting the growth of companies. This study searches for patterns, trends, and potential blind spots of configuration research, through a review of six decades of literature. Further, this study proposes some implications for future research. Business growth appears in many forms such as organic growth and growth through vertical integration such as acquisition, and strategic alliances. As Davidsson and Wiklund (2006) have noted, these two types of growth should be separated. In this analysis, the focus is on the organic growth models. For this meta-analysis, the sample was selected from the broad availability of configuration literature. The sample is divided into three periods for analysis. The sample and three periods of analysis are presented in Chapter 2 and in Appendix 1. In the meta-analysis described in Chapter 3, both quantitative and qualitative methodologies are used. The selected studies are analysed through five key attributes; number of stages and transitions, size measures, business size focus, industry focus, and focus processes. The key findings are condensed in the following answer to the research question:

The number of stages and transitions proposed seems to increase throughout the six decades analysed. As the configuration perspective evolves, the picture sharpens, and brings more details to be added to the framework leading to an increasing number of stages. On the other hand, the focus business may have an affect on the number of stages

proposed. The variance in the proposed number of stages and transitions decreased – though it remains relatively high throughout the period analysed. Among the recent studies, the majority of the studies propose four stages and three transitions. The reason for the increasing number of studies proposing a similar number of stages seems to be the rise of empirically tested typologies and taxonomies in the eighties. Many of the empirical studies presented in 80s, as well as among the recent studies, support a four-stage approach, which may also influence the choices made in the typologies. The configuration studies mention some qualitative *growth measures*, but to this day, the vast majority of the studies mention primarily quantitative measures. The three main growth indicators are number of employees, sales, and assets. The sales and number of employees are clearly the most popular. The analysis also reveals many other quantitative indicators and qualitative indicators. When the *focus size categories* micro, small, medium, and large (according to EU definition) are analysed, the models seem to contribute in all four categories. However, the studies focus on large companies less often than on other size categories. The vast majority of the models contribute to all three size categories inside the SME category. The biggest change can be seen in the decreasing group of studies focusing on large companies. This reflects the rise of the interest in SME studies since the early 70s. The main shift in the analysis of the *focus industries* is from universal studies to industry context-specific studies. Further, the industry base among the recent context-specific studies is remarkably wider than in the two earlier ones. The industries diversify and new challenges arise in terms of the applicability of the earlier studies to the most recent industrial contexts. The current trend seems to lead towards in-depth studies in the industries earlier addressed and studies focusing on new industrial contexts. The analysis of the *key processes* covered by the studies reveals the trend of diversification among the configuration models. In the early studies, only a few key processes are covered, while the recent models cover the key processes of APQC PCF.

However, two processes have attracted the interest of configuration research: the Development of vision and strategy and the Management of knowledge, improvement and change. These are the first and the last processes mentioned in the APQC PCF, and further the fundamental processes in configuration studies. It is interesting to see how configuration studies shift to other focus processes as the field matures internally. The diversification of the field opens new viewpoints and provides a sharper picture of each process area across the stages of development. At the same time it must be addressed, that the development of the configuration viewpoint is affected by the development of the process viewpoint – this is an external trend still affecting configuration studies.

There are several limitations associated with this study mentioned in the following: To some extent, this study is interpretative and some subjectivity must be accepted. This study is meta-analytical in nature and in this sense does not contain any preliminary or secondary data. The data of this study consists of company-focused configuration studies collected during the six previous decades. One challenge in the meta-analysis of the configuration viewpoint is that the original data is in many cases missing from studies. Further, only a certain proportion of the studies have empirical evidence and a smaller proportion can be considered as taxonomies. In this study, the empirical studies have not been separated from the conceptual ones. In the preliminary analysis, 51% of the studies of the sample have presented both theoretical and empirical contexts, 37% of the studies present the theoretical context only, 1% of the studies present the empirical context only and 11% seem to lack both. In following analyses, the results of the empirical studies could be compared with the conceptual ones to see if there is more consistency among the studies addressing both theoretical and empirical context than among the rest of the studies. This study is limited to configuration studies published between 1948 and 2008. There are configuration studies published earlier, but these are not within the focus of this study. There may be configuration studies that are not mentioned in this study, but a

reasonable proportion of the widely accepted configuration studies published during the last six decades are included in this analysis.

5 Implications for future research

This study is primarily addressed to an academic audience. The review provided functions as a gateway to the broad configuration of literature. The analysis reveals the diversity within the configuration perspective – and encourages opening new viewpoints by empirically based and context-specific studies.

The *number of stages and transitions* section shows that the correct number of stages should not be proposed – this is, because the distance, the width, and the location of the viewpoint affect the number of stages and transitions. Different numbers of micro and macro stages can be found in the growth process. The *size measurement* section pointed out three main growth indicators. The multiple measurements utilising two or three of these main indicators can be recommended. The other quantitative and qualitative growth indicators could be utilised when a broader viewpoint of company growth is needed. The analysis of *focus business size* reveals a need for more selective studies. In-depth studies of configurations inside just one or two company size categories may provide new knowledge about the processes and sub-processes specific to that category. *Industry-specific* approaches can provide powerful tools for growth management in specific industry contexts. These businesses have found only partial support from universal frameworks. This encourages the opening of new industrial contexts from the configuration viewpoint, and deeper analysis of the earlier known contexts. These approaches provide support that is more accurate for companies at different stages in different industrial (traditional and new) contexts. A detailed description of the configurations provides possibilities to manage growth *process by process*. This not only

allows the big picture to be seen, but also facilitates the study of company growth in a focused manner. Each process area requires specific attention while a company moves forward. For the public and private sector interested in growth and development of companies, this approach provides a detailed understanding of the stage configurations inside the processes – this leads to accurate support for the early development of processes in the companies.

The meta-analysis presented here is a starting point rather than the end in itself. This study focuses on the analysis of several key attributes on a descriptive level. The in-depth analysis of methodologies and underlying assumptions among configuration studies started during this study and is intended to be published later on.

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Appendix 1

The sample of studies

The early studies (1948 – 1968)	The central studies (1969 – 1988)	The recent studies (1989 – 2008)
1. Whyte 1948 2. Fayol 1949 3. Davis 1951 4. Drucker 1954 5. Newman and Logan 1955 6. Herbst 1957 7. Moore 1959 8. Haire 1959 9. Filley 1960 10. Chandler 1962 11. Christenson and Scott 1964 12. Collins et al. 1964 13. Blake et al. 1966 14. Katz and Kahn 1966 15. Starbuck 1966 16 Buchele 1967 17. Lippitt and Schmidt 1967 18. Cannon 1968	1. Steinmetz 1969 2. Rhenman 1973 3. Scott 1971 4. Greiner 1972 5. Mintzberg 1973 6. Kroeger 1974 7. Torbert 1974 8. Stanworth and Curran 1976 9. McGuire 1976 10. Thompson 1976 11. Abernathy 1976 12. Hosmer et al. 1977 13. Normann 1977 14. Parks 1977a, Parks 1977b 15. Gervais 1978 16. Lavoie and Culbert 1978 17. Robidoux and Dell'Aniello 1978 18. Adizes 1979 19. Minzberg 1979 20. Cooper 1979 21. Kimberly 1979 22. Schollhammer and Kurifoff 1979 23. Filley and Aldag 1980 24. Scanlan 1980 25. Aplin and Cosier 1980 26. Naoum 1981 27. Galbraith 1982 28. Perry 1982 29. Churchill and Lewis 1983 30. Quinn and Cameron 1983 31. Tyebjee et al. 1983 32. Mintzberg 1984 33. Miller et al. 1984, Miller and Friesen 1984 34. Vargas 1984 35. Van de Ven, A.H. et al. 1984 36. Smith et al. 1985 37. Flamholtz 1986 38. Olson 1987 39. Scott and Bruce 1987 40. Baird and Meshoulam 1988 41. Kazanjian 1988	1. Hasenfeld and Schmid 1989 2. Kazanjian and Drazin 1989 3. Adizes 1989 4. Kazanjian and Drazin 1990 5. McCann 1991 6. Hanks et al. 1991 7. Dodge and Robbins 1992 8. Hanks et al. 1993, Hanks and Chandler 1992 9. Terpstra and Olson 1993 10. Hanks and Chandler 1994 11. Dodge et al. 1994 12. Eggers et al. 1994 13. Flamholtz 1995 14. Garnsey 1998 15. Gudmundsson 1998 16. Poutziouris et al. 1999 17. Gartner and Brush 1999 18. Mitra and Pingali 1999 19. Shim et al. 2000 20. Abetti 2001 21. Beverland and Lockshin 2001 22. Jawahar and McLaughlin 2001 23. Hite and Hesterly 2001 24. Kuratko and Hodgetts 2001 25. Ndonzuau et al. 2002 26. Swiercz and Lydon 2002 27. Kaulio 2003 28. Rutherford et al. 2003 29. Zadek 2004 30. Garengo and Bernardi 2007 31. Stam 2007