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Topic: **An analysis of the core competencies of the Case organisation Group
and the importance of dynamic capabilities to manage core
competencies**

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Management summary

The Case organisation group consists out of three business units and over the years the company developed into a first-tier supplier in the semiconductor, medical and defence industry. With the acquisition of DEF and GHI Case organisation gained economies of scale and they grew out to an important link in the supply chain of their customers. With the acquisition of DEF and GHI Case organisation also gains access to a lot more competences than they originally had. This brings Case organisation at an intersection where they have to decide which competences are core and which competences are non-core. This research has been executed in order to give a better insight in the core competence problem and also to provide some recommendations how the competences of Case organisation could be managed.

An extensive literature research was performed to get a better understanding of the main concepts of this paper: 'core competences' and 'dynamic capabilities'. The first refers to what the unique strengths of the organisation are and that could help to gain competitive advantage. The latter refers to actions that should be taken by the organisation to respond timely to changes in the business environment and to take decisions to adapt the competences of the organisation towards the changes in the environment.

To identify the core competences and dynamic capabilities of the Case organisation Group a structured methodology was created based on the literature review. This research also shows that nothing has done over the years with the competences of Case organisation. There are no managers dedicated to manage the core competences and until today Case organisation has a lot of competences of which some are core but also a few non-core competences.

The lack of follow up activities was also visible when the methodology was used to identify dynamic capabilities at Case organisation. This research shows that there are no embedded routines used by Case organisation to respond timely to changes in the business environment and that nothing has been done to adapt the (core) competences to this changing business environment. There are some routines / processes that are used to collect information about the business environment but these are not purposeful actions.

Now Case organisation has grew out to a reasonable SME it is needed to perform purposeful actions on a regular basis. Employees should be dedicated in doing this so the competence base of Case organisation is always up to date and Case organisation is capable of sustaining their current competitive advantage over their competitors.

III

At last this research also contributes in various ways to the science. It provides a comprehensive literature review on the subject of core competences and dynamic capabilities. This literature review can serve as a starting point for scholars who want to take future research on these subjects. The proposed structured methodology can also be used by scholars and practitioners to identify core competences and dynamic capabilities inside case organisations. Third this research shows that the possession of core competences will not result in a competitive advantage by itself. Core competences should be managed on a regular basis and adapted if necessary to the changing business environment. Finally this research shows that there is a relation between dynamic capabilities and core competences. Dynamic capabilities are the means by which a company can manage their competence base.

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List of abbreviations

CA	Competitive Advantage
e.g.	Exempli Gratia
Et al.	Et alii
NPI	New Product Introduction
OEM	Original Equipment Manufacturers
p.	Page
RBV	Resource-Based View
SBU	Strategic Business Unit
SCA	Sustained Competitive Advantage
VRIN/O	Valuable, Rare, Inimitable, Non-substitutable and Organisable

1. Introduction: core competences and dynamic capabilities as two important qualifiers for the competitive advantage of a firm

According to Prahalad & Hamel (1990) an organisation could be described as a large tree. “The trunk and major limbs are core products, the smaller branches are business units; the leaves flowers, and fruit are end products. The root system that provides nourishment, sustenance, and stability is the core competence”.¹ It are the core competences of a company that represent the distinguishing characteristics of a company. These core competences are build up out of the resources and capabilities of a company.

In the current fast moving business environments the environment of a company is characterised by “dispersion in the geographical and organisational sources of innovation and manufacturing”.² In this business environment a firm’s competitive advantage is based on more than possessing some unique assets and competences (resources). Firms should also be able to adapt their unique assets and competences to the changing business environment. The means by which a firm can reconfigure their competences, to answer the changing business environment, are also called dynamic capabilities.³ These dynamic capabilities are routines / processes used by an organisation to scan the business environment and to change if necessary the competence base of the organisation.

This research will provide insight in the existing literature about core competences and dynamic capabilities and will formulate a structured methodology, based on this literature review, which could be used to identify core competences and dynamic capabilities inside an organisation. This methodology will also be tested in a case study at a SME. Before presenting the theoretical framework about the two main concepts of this paper, (core) competences and dynamic capabilities, an introduction into the case organisation will be given.

¹ Prahalad & Hamel (1990), p. 82.

² Teece et al. (2007), p. 1319.

³ Teece et al. (1997), p. 516; Leiponen (1997), p. 3; Eisenhardt & Martin (2000), p. 1107; Zollo & Winter (2002), p. 340; Teece (2007), p. 1319-1320.

1.1 Introduction to Case organisation: a multi-disciplinary first-tier supplier of special components and complex assemblies

In 0000 the Case organisation was founded as a small tooling factory. In 0000 Case organisation hired its first employee Jan Janssen. On the 1st of January 0000 he continued the company.

Over the years Case organisation changed from a small tooling factory to a company with expertise in manufacturing. In 0000 there was another change in management and from then Case organisation could be characterized by its entrepreneurial vision. ‘Less is more’ became the new slogan of the company. Case organisation goes on where others stop, by showing solutions that nobody considered possible, by moving technological limits and redefining perfection.⁴

With the acquisition of *** DEF in *** and a mechanical department of *** in 0000, Case organisation became a first-tier supplier to key players in the market. Case organisation as a group is serving multiple markets, including the semiconductor, optical and medical industry. Over the years Case organisation developed into a high-tech, system supplier with the ability to build complex mechatronic systems for its Original Equipment Manufacturer (OEM) customers. Special components, one of the most valuable parts of these complex systems, became Case organisation’s specialty. Since Case organisation does not produce and sell an own product but mostly semi-finished products, therefore they depend strongly on the demand of their customers.⁵

Case organisation ABC

Case organisation (ABC) represents the foundation of the Case organisation Group. Case organisation ABC is producing fine products up to a tolerance of one micron and is also assembling complex modules. ABC could be characterised by its entrepreneurial vision: they invest in their customers and accept challenges from their customers.

Where most companies specialise in only a few machining capabilities, Case organisation ABC possesses a lot of machining capabilities under one roof. Therefore they are able to perform many stages of the production process in-house.

⁴ ‘Less is more’ (21-11-12), www.case-organisation-groep.com; Introductieboekje Case organisation (2010); Jaarverslag Case organisation B.V. 2011.

⁵ Introductieboekje Case organisation (2010); Jaarverslag Case organisation B.V. 2011.

Case organisation DEF

Case organisation DEF (DEF) is a former business unit of ***. In *** they were taken over by Case organisation ABC. DEF is specialised in the production of tooling for the manufacturing of ***. In addition to the delivery and maintenance of this complex tooling, Case organisation DEF also serves several OEMs throughout Europe.

DEF is able to machine exotic materials, like platinum, ceramics and hard alloys.

Because of the fact DEF is mainly active in the razor-systems industry they have experience with special machining. Actually they have more trouble working with materials on a less precise tolerance. One of the distinctive capabilities of DEF is that they, just like ABC, have a lot of machining capabilities under one roof: grinding, milling, sparking and turning are some examples of these capabilities. DEF also has excellent measurement skills; they not only can measure their own special products, but are also measuring products of competitors for their customers.

Case organisation (GHI)

GHI was a business unit of ***, a large player in the *** industry and was taken over by the Case organisation Group in ***. Because of their history they are specialised in producing goods for the industry, and in particular for installations. In the time GHI was a business unit of they not only produced components of installations but also assembled those installations. As a result Case organisation GHI is specialised in assembling mechatronic modules and the producing of light-weight components, an important condition in the industry.

Because GHI is building complete modules they possess a lot of different technologies that are used for the assembly of those complete modules.⁶

1.2 Problem statement: ‘what are the core competences of Case organisation and how do dynamic capabilities contribute to the realisation of these core competences?’

The aim of this research is to analyse the core competences of the Case organisation Group and the possible use of dynamic capabilities to manage these competences. Core competence is a widely used term in strategic management and human resource

⁶ www.case-organisation-groep.com (21-11-2012 / 01-03-2013).

management.⁷ Since core competences can be a source of competitive advantage it is interesting for an organisation to be aware of these competences.

According empirical findings dynamic capabilities indirectly influence organisational performance.⁸ These dynamic capabilities are not a source of competitive advantage by themselves, but because they are used to combine and renew firm-specific competences they are important tools for improving firm performance.⁹

Based on the above two concepts the problem statement of this thesis is:

What are the core competences of Case organisation and how do dynamic capabilities contribute to the realisation of these core competences?

The problem statement will be answered using several research questions. These research questions will be discussed below.

Research questions

The focus in this research is on core competences and dynamic capabilities. The definition of these two concepts can simply be described. More interesting is their contribution to the competitive advantage of a company. The first research question of this paper therefore is:

How do core competences contribute to a company's competitive advantage?

In order to analyse the distinguishing characteristics of the Case organisation Group several methods for identifying core competences will be discussed in order to come up with a structured methodology for identifying a company's key cornerstones. The second question will help in order to come up with such a structured method.

How could core competences be identified within a company?

⁷ Chen & Chang (2011), p. 5738.

⁸ Protogerou et al. (2005), p. 2.

⁹ Protogerou et al. (2011), p. 638-639.

The structured methodology for identifying core competences that was formulated based on theoretical insights will be applied to the case organisation in order to identify the core competences of the Case organisation Group. Therefore the third research question will be:

What are the core competences of the Case organisation Group?

Now the first concept of this thesis is clarified, the focus can be on dynamic capabilities and their relationship with core competences. Since there is little empirical research available about dynamic capabilities, theoretical research will be used to map the relationship between core competences and dynamic capabilities:

What is the contribution of dynamic capabilities in managing a company's core competences?

In order to see if there is a relationship between the core competences of the case organisation and the possible dynamic capabilities that are present inside the case organisation again a structured methodology will be formulated to identify dynamic capabilities inside an organisation. This methodology then will be used to identify possible dynamic capabilities inside the Case organisation Group:

Are dynamic capabilities used within the Case organisation Group and what is their relation with the core competences of the Case organisation Group?

Table 1 below gives a structured overview of the problem statement (PS) and research questions (RQ).

PS.	What are the core competences of Case organisation and how do dynamic capabilities contribute to the realisation of these core competences?
RQ 1.	How do core competences contribute to a company's competitive advantage?

RQ 2.	How could core competences be identified within a company?
RQ 3.	What are the core competencies of the Case organisation Group?
RQ 4.	What could be the contribution of dynamic capabilities in managing a company's core competences?
RQ 5.	Are dynamic capabilities used within the Case organisation Group and what is their relation with the core competences of the Case organisation Group?

Table 1: Overview of the problem statement and research questions

1.3 Thesis structure: a theoretical framework as the solid foundation to analyse the core competences and dynamic capabilities of Case organisation

So far the outline of Case organisation has been given. Also the problem statement and the corresponding research questions have been discussed. In the next sections answers to these research questions will be provided by an in-depth analysis of the two keywords of this article: core competences and dynamic capabilities.

In the section that follows on this theoretical part the research methodology will be discussed. What data collection methods have been used to collect the necessary information for the empirical part of this study?

In the chapter with the results of this research the core competences of the Case organisation Group and the possible use of dynamic capabilities to manage these competences will be discussed here.

This paper will end with some conclusions and managerial implications. Also limitations of this research and suggestions for further research will be presented in this last section.

Figure 2 below represents an overview of the structure of this thesis and the stages of research.

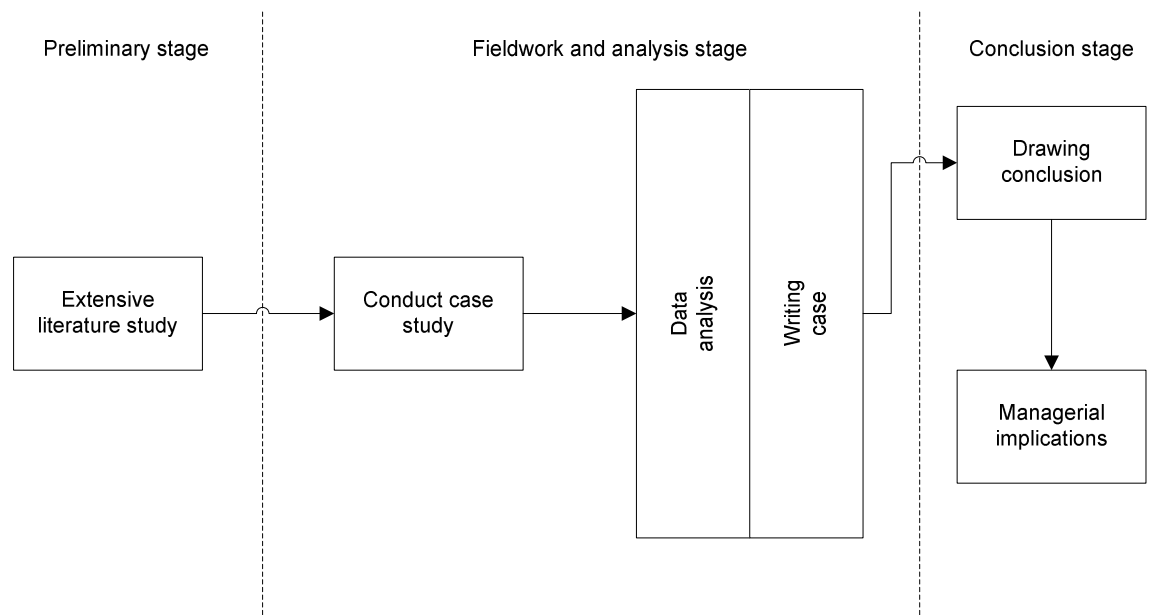


Figure 1: Research stages. Source: based on Noor (2008), p. 1603

2. Core competences as the starting point for sustained competitive advantage

2.1 Defining a business strategy: from an outside-in approach towards an inside-out approach

The focus in this chapter is on core competences: where does it come from and what does it stand for. The current external environment of most organisations is characterised by high competitiveness. In order to attain competitive advantage organisations need to respond quickly to changes in the environment or a change in customer demand.¹⁰

It is only since the 1960's that it was common for organisations to address explicitly the question of what their strategy should be. From then on, strategy has been studied, taught, and discussed by researchers.¹¹ Several theories have been developed about how a company should build a specific strategy to develop competitive advantage. A firm's strategy is about affecting the overall activities of an organisation in ways to make the organisation a winner. Strategy is the key to survival in fierce competition.¹² Strategy can be considered as the engine to achieve competitive advantage.

There is not much consensus in literature about how to build a firm's strategy. Should the focus be on the external environment of a company or on the internal strengths of the company? There is agreement that a company should match its internal strengths with external opportunities but the way to do this has changed over the years. Whereas three decades ago the general tendency was that organisations should adapt to external opportunities, nowadays there should be an inside-out approach. Organisations should build on their own strengths to build competitive advantage.

The dominant views in literature are the market-based view and the resource-based view. The core competence view, central in this research, is derived from the resource-based view. These three insights will be discussed in this chapter and the core competence view, as the cornerstone for defining a business strategy, will be elaborated thoroughly.

¹⁰ Gebauer (2011), p. 1239; Agha et al. (2012), p. 192.

¹¹ Kay (1993), p. 6.

¹² Drejer (2002), p. 17.

There are researchers who consider the dynamic capability approach as an isolated approach for defining a business strategy.¹³ In this thesis however dynamic capabilities and core competences are seen as two interacting mechanisms. In the next chapter more information about the dynamic capability concept will be provided.

In this chapter the words competitive advantage and sustained competitive advantage are repeatedly mentioned. Before explaining the whereabouts of core competences these two concepts will be explained below:

Competitive advantage

Competitive advantage (CA) occurs when a resource or capability (or set of resources and capabilities) creates relatively more value than comparable resources and capabilities of competing organizations.¹⁴

Sustained competitive advantage

A long term competitive advantage that could not be easily duplicated or outperformed by the competitors gives a firm sustained competitive advantage (SCA).¹⁵

2.1.1 Porter and his competitive forces approach: exploit industry's structural characteristics to create product market positions

In his 1980 publication Porter mentioned five competitive forces that are the determinants of business profit. These are not only competitors who could be a danger for the profit of an organisation, but also customers, suppliers, potential entrants and substitute products. These five competitive forces are represented in his famous Five Forces Model and these are the forces that create rivalry within industries.¹⁶

¹³ Hafeez et al. (2002), p. 29.

¹⁴ Barney (1991), p. 102; Helfat et al. (2007), p. 121.

¹⁵ Barney (1991), p. 102; Helfat et al. (2007), p. 121.

¹⁶ Porter (1980), p. 186 - 187 ; Porter (2008), p. 79.

According to this Five Forces Model of Porter a company should look at the strongest competitive forces, because these forces determine the profitability of an industry. This also means that those strongest forces are the most important when the company is formulating a strategy.¹⁷ The operations strategy of a company is following the directions set by an industry's market, and that is where the name, market-based view, is coming from.¹⁸ For instance, if the threat of new entrants is the strongest force, incumbent firms can choose for a low-price strategy. When incumbent firms keep low profit ratios on their products, it is less attractive for new entrants to enter the market.

"The market-based view considers operations as a perfectly adjustable system focused to successfully follow the rules dictated by markets".¹⁹ Porter's competitive forces approach views strategy as creating product market positions, which are based on industry's structural characteristics.²⁰

Critics however mention that the competitive forces view provides little insight about the process by which a firm's strategy can contribute to the future of the firm. It is a useful theory to explain a firm's current competitive advantage, but not for defining a strategy about how to create competitive advantage in the future.²¹ In Porter's view the focus was on structure-performance-paradigms and determinants of firm performance could be found outside the firm. The Resource-Based View (RBV) was against this view and explicitly looks for the internal sources of sustained competitive advantage and tries to explain why firms in the same industry might differ in performance. In the next section of this chapter the RBV will be explained more thoroughly. The RBV is not replacing the outside-in approach but actually complements it.²² The RBV wonders why firms in the same industry differ in profitability.

¹⁷ Porter (2008), p. 80.

¹⁸ Gagnon (1999), p. 125.

¹⁹ Gagnon (1999), p. 125-126.

²⁰ Fowler et al. (2000), p. 358.

²¹ Fowler et al. (2000), p. 357.

²² Kraaijenbrink et al. (2010), p. 350.

2.1.2 The Resource-Based View: resources as the starting point for sustained competitive advantage

Using the Five Forces Model of Porter, Wernerfelt used another approach to look at firms. He looked at firms in terms of their resources as a starting point for defining a business strategy instead of looking at firms in terms of their products. Wernerfelt argued that the resource-perspective would throw a different light upon strategic options for businesses.²³

In his 1986 article Barney argued that the environmental analysis (e.g. Porter, 1980 / 1985) is a publicly available method for analysing the firm's environment and that firms who are using this methodology to collect information about the same environment will get the same information.²⁴ This means that those firms will draw conclusions about potential strategies on the same information and therefore the strategies will probably show many similarities. Barney proposes that firms should turn inwards and analyse information about the assets a firm already controls. If these assets could be used for implementing potential valuable product market strategies and if competing firms do not control similar assets they can be a source of competitive advantage.²⁵ This insight is just one of many that argue that resources can be a source of sustained competitive advantage for firms and the RBV is a dominant theory in literature.²⁶ The underlying assumption on which the RBV of the firm is based is that resources are heterogeneous across organisations and that this heterogeneity can sustain over time.²⁷

Researchers no longer considered external forces as the source for competitive advantage but started viewing a firm's resources as a way to achieve sustained competitive advantage.²⁸ Resources are potential sources of competitive advantage if they possess four characteristics: valuable, rare, inimitable and non-substitutable (VRIN).²⁹ Except these VRIN characteristics there should also be an appropriate organisation in place.³⁰

²³ Wernerfelt (1984, p. 179).

²⁴ Barney (1986), p. 1238.

²⁵ Barney (1986), p. 1239; Dierickx & Cool (1989), p. 1509-1510; Grant (1991), p. 133.

²⁶ Newbert (2007), p. 121.

²⁷ Ambrosini & Bowman (2009), p. 29.

²⁸ Barney (1991), p. 105; Srivastava (2005), p.50.

²⁹ Barney (1991), p. 105-106.

³⁰ Barney (1995), p. 56.

Valuable	The resource should contribute to a firm's efficiency or effectiveness
Rare	The resource is not widely held by competitors
Inimitable	The resource cannot be easily replicated by competitors
Non-substitutable	Other resources cannot easily fulfil the same function

Table 2: VRIN resources. Source: based on Barney (1991), p. 105-106; Priem & Butler (2001), p.25.

The characteristics mentioned above are necessary, but not sufficient conditions for sustained competitive advantage.³¹ If a resource possesses the first two characteristics (valuable & rare) it can be a source of competitive advantage. When the resource also possesses the other two characteristics (inimitable & non-substitutable) it can even provide the firm a sustained competitive advantage. In theory the core competences of a firm also should be valuable, rare, inimitable and non-substitutable. Therefore these VRIN characteristics will be used as a last test to see if the identified competences of Case organisation are really core competences and can result in sustained competitive advantage or that they are just minor competences.

Although the RBV is a dominant theory in literature there is also some criticism. Already in 2001 there were researchers who doubted the usefulness of the RBV as a theory of strategy and organisation.³² This is also one of the major criticisms mentioned by Kraaijenbrink et al.³³ Except this major criticism of the RBV Kraaijenbrink et al. also mention two other major criticisms:

VRIN/O is neither necessary nor sufficient for SCA

The VRIN/O criteria are not always necessary and not always sufficient to explain the SCA of a firm. The not sufficient criticism is based on the lack of empirical support for the RBV. Empirical research has generated only modest support, so this means other factors must be considered when explaining the SCA of a firm. Another criticism is that the RBV is too focused on the value of an individual resource instead of the fact that synergy between resources of a firm also can contribute to SCA. Kraaijenbrink et al. also highlight

³¹ Priem & Butler (2001), p.25.

³² Priem & Butler (2001a), p. 34; Priem & Butler (2001b), p. 64.

³³ Kraaijenbrink et al. (2010), p. 356.

the criticism that the RBV does not sufficiently recognize the role of individual judgments and mental models of entrepreneurs and managers.³⁴

The definition of resource is unworkable

The definition of a resource is all inclusive. Over the years many definitions of resource as a concept were given. But this leads to the fact that everything that is strategically useful for a firm could be called a resource. This means that everything that could cause SCA is in definition a resource. The RBV also does not make a distinction between resources that are inputs to the firm and the resources that enable organisations to handle those resources. These last types of resources are also called capabilities, and these capabilities will be discussed in the next chapter. Last but not least despite of the fact that the RBV recognises different types of resources (physical capital, human capital and organisational capital) it treats them in the same way.³⁵

Kraaijenbrink et al. concluded that the RBV could be a central theory of SCA but only if they reconsider the fundamentals of the RBV (resource and value). The main difference between the RBV and the core competences view is that this last view is more applicable as a central theory of SCA because it does look at synergy between the resources of a firm. The core competences view also add up on the RBV because they are not calling everything a resource like the RBV does. In the next section of this paper the core competences view will be explained thoroughly. This will show that the core competence view can counter the major critiques mentioned by Kraaijenbrink et al. (2010)

³⁴ Kraaijenbrink et al. (2010), p. 356.

³⁵ Kraaijenbrink et al. (2010), p. 358-359.

2.2 Core competences: a continuation of the RBV but with the emphasis on the identification of the specific assets of a firm that provide differentiation from competitors

The concept of core competences evolved from the RBV of the firm that emphasised that SCA of a firm rests on the firm's possession of VRIN resources. In their influential article in the Harvard Business Review, Prahalad & Hamel argue that competitive advantage is not caused by unique resources but by the core competences of a firm. According Prahalad & Hamel the core competences are the collective learning in the organisation; the ability to coordinate diverse production skills and integrate multiple streams of technologies.³⁶ In the long run competitive advantage is derived in the ability of the management to transfer the diverse production skills and corporate wide technologies in competences that create (radical) new products.³⁷

Other researchers have elaborated further on this definition of Prahalad & Hamel and described a core competence as: something that allows a firm to satisfy a key-success factor of its business better than its competitors³⁸; "skills and areas of knowledge that are shared across business units and result from the integration and harmonisation of strategic business unit (SBU) competences"³⁹; "those capabilities that permit the firm to make the best response to market opportunities"⁴⁰ or a dynamic learned resource⁴¹. The definitions just mentioned are one of many that are available in literature. Besides these several definitions there is also no consensus about the concept core competences. Researchers call them core capabilities⁴²; distinctive competences⁴³; firm-specific competence⁴⁴ and many more concepts, to describe more or less the same.

There seems to be no unified explanation of what a core competence is, but there is one thing researchers agree about and that is that core competences can be a source of

³⁶ Prahalad & Hamel (1990), p. 82; Prahalad (1993), p. 45.

³⁷ Prahalad & Hamel (1990), p. 81; Tampoe (1994), p. 69.

³⁸ Very (1993), p. 87.

³⁹ Javidan (1998), p. 62.

⁴⁰ Kogut & Kulatilaka (2001), p. 744.

⁴¹ Srivastava (2005), p. 49.

⁴² Leonard-Barton (1992), p. 111.

⁴³ Snow & Hrebiniak (1980), p. 317; Hitt & Ireland (1985), p. 274.

⁴⁴ Pavitt (1991), p. 42-43.

competitive advantage for companies. In this paper the term core competence will be used with the following definition:

‘A core competence is a configuration of fundamental aspects of a company, like resources, skills, knowledge and abilities and form the basis for firm-specific competitive advantage’.

In summary this means that, starting with firm’s resources, these resources result in capabilities. Some capabilities add more value to the business objectives of a firm and thus this result in a list of key capabilities. These key capabilities or competences of the firm or SBU will result in core competences that set the company apart from its competitors.

Figure two below shows a simplified representation of how the core competences of a company are built up

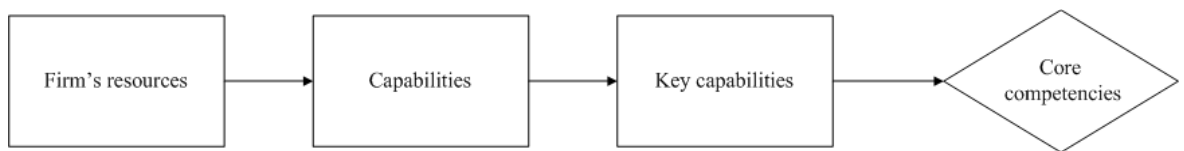


Figure 2: Simplified architecture of the core competencies of a firm

Since the 1990s the core competence concept is still an influential management concept; however it is in its downswing.⁴⁵ The products and services of an organisation are based on the core competences of the firm. These core competences are not diminishing over time unlike the physical assets of a company.⁴⁶ A critique on the RBV was that it has not adequately explained how and why firms have CA in situations of rapid and unpredictable change.⁴⁷

Core competences give an organisation the ability to differentiate themselves from competitors and can be used to react on changes in the external environment of an organisation. As such these core competences are at the basis of unique value creating strategies that address specific markets and customers in distinctive ways, and so lead to competitive advantage. To generate new value-creating strategies these competences have to be managed and nurtured. Core competences are developed from organisational learning

⁴⁵ Rigby & Bilodeau (2009), p. 3; Nicolai & Dautwiz (2010), p. 877.

⁴⁶ Prahalad & Hamel (1990), p. 82.

⁴⁷ Eisenhardt & Martin (2000), p. 1106.

and to be effective these competences cannot remain static; competences must be continually evolving and changing via continuous organisational learning.⁴⁸

These processes of organisational learning concepts can also be found in dynamic capabilities. Dynamic capabilities are the organisational and strategic routines by which managers can manage those competences. This means that the dynamic capabilities are the drivers behind the creation, evolution, and recombination of (core) competences into new sources of competitive advantage.⁴⁹ This dynamic capabilities concept however will be discussed further in the next chapter.

2.3 A core competence as a double edged sword: the danger of a core competence becoming a core rigidity

In the above sections the bright side of core competences has been discussed. However the core competences view is not just a solid basis for a company to achieve sustained competitive advantage. Managers stand for the difficult task to find a balance between the need to leverage competences for today and the requirement to build competences for tomorrow.⁵⁰

Core competences differentiate a company strategically and central in the core competence view is that the firm matters. Core competences can't be considered as static because managers should be able to manage a company's core competences in today's fluctuating markets. Competence building and competence leveraging are two important concepts here. Competence building is a process whereby a company faces changes in its existing stock of competences, including new abilities to co-ordinate and deploy new or existing competences in such a way that it helps the company to achieve its goals. Competence leveraging is the applying of the existing competences of a firm to current or new market opportunities in such a way that there is no need for the accumulation of new or modified competences.⁵¹

This means that an important issue of the strategic management is to address when and how a firm should renew a core competence. This does not mean that core competences should be completely abandoned but small changes in the reconfigurations of core

⁴⁸ Prahalad & Hamel (1990), p.82; Lei et al. (1996), p. 550.

⁴⁹ Eisenhardt & Martin (2000), p. 1107.

⁵⁰ O'Driscoll et al. (2001), p. 73.

⁵¹ Sanchez et al. (1996), p. 8.

competences might sometimes be enough to meet the changing markets. However when a company is focused too much on its current core competences these competences can become rigidities. Configurations of competences that served the company well in the past, may be still appropriate for some projects, but also could inhibit innovative progress and thus become a competence ‘trap’.⁵² Practice that leads to success in the past does not necessary lead to future successes.

This means that a core competence could be seen as a double-edged sword: “neglect it and you forgo an important source of competitive advantage; hold on to it too long and you incur a strategic opportunity cost”.⁵³

Managers are usually responsible for managing the (core) competences of the organisation. They often don’t see what is changing or do not respond in time to such changes. One of the reasons is that however data with reference to the changing environment is available, managers choose to ignore this data.⁵⁴

Over time there are many examples of companies who suffered a great loss in market share or sales because of mismanagement. Ignoring the change in a company’s environment can have large consequences. As noted above managers play an important role in the process of managing a company’s (core) competences. They have to search and review threats and opportunities in their environment continuously to make sure their (core) competences stay up-to-date. The theory of competence-based competition has drawn a considerable amount of attention from both academics and managers. To fully exploit the business opportunities and resist environmental threats it is essential that firms should understand the portfolio of their competences.⁵⁵ In order to maintain, nurture and further develop a company’s key assets and associated competences they should consider outsourcing decisions or the formation of strategic alliances.⁵⁶ Search, selection and reconfiguring are critical aspects of dynamic capabilities so this means that in dynamic markets dynamic capabilities can contribute in managing a company’s competences. The role of dynamic capabilities, their definition and relationship with core competences will be discussed in the next chapter.

⁵² Leonard-Barton (1992), p. 118.

⁵³ See Boisot et al. (1997), p 67 cited according to O’Driscoll et al. (2001), p. 75.

⁵⁴ Helfat et al. (2007), p. 49.

⁵⁵ Hafeez et al. (2007), p. 3592.

⁵⁶ Hafeez et al. (2007), p. 3607.

2.4 Conclusion: the contribution of core competences to a company's competitive advantage

Based on the previous literature review it is now possible to provide an answer to the first research question: *how do core competences contribute to a company's competitive advantage?*

So far the change in business strategy, from an outside-in approach towards an inside-out approach has been discussed. The RBV looked at firms in terms of their resources that should be valuable, rare, inimitable and not easy to substitute. These resources were heterogeneous across organisations and this heterogeneity could sustain over time.

The core competence literature, as a continuation of the RBV, did not look at organisations in terms of their unique resources but emphasised that combinations of those resources of organisations were responsible for an organisation's competitive advantage. Discussing the core-competence literature, central in this research, showed that until today there seems no one unified definition about the concept. However it seems like all the researchers are talking about the similar thing, they use different conceptions and explanations of the concept. All these explanations do have one thing in common and that is that core competences are those distinctive characteristics of a company that ensure a high level of productivity for the company itself and bring value to the end customer.

It is obvious that awareness of their core competences can help organisations in achieving and sustaining competitive advantage. The most difficult part however is the identification of the core competences itself. All the different opinions about the core competence concept do not help managers to identify their company's core competences. Some researchers view core competences as combinations of purely organisational capabilities, while others also think that the individual capabilities of a company play an important role and core competences are a combination of organisational and individual capabilities.⁵⁷ Another problem is that there is still no unified methodology for identifying the unique combinations of a company's fundamental aspects.

Referring however to the title of this section and the already discussed core competence literature we can conclude that there is enough evidence that core competences can improve competitive advantage and organisational performance.⁵⁸ Managers however cannot lean back after determining their company's core competences, because in the

⁵⁷ Chen & Chang (2011), p. 5743.

⁵⁸ Agha et al. (2012), p. 198.

current dynamic business environments these competences have to be managed from time to time to respond to actual changes in the business environment. Staring blind on the current core competences can result in a loss of competitive advantage or organisational performance.

3 Environmental dynamism and the need for continuous development of a firm's core competences

3.1 Environmental dynamism: changing environments and their influence on (sustained) competitive advantage

By environmental dynamism researchers refer to the amount of uncertainty that results from the external environment of a company.⁵⁹ Since the 1990s companies are struggling on a continuous basis with the competitive environment they are operating in. Changing customer demands and (fast) changing technologies force companies to continuously adapt, renew, reconfigure and re-create their resources and capabilities to survive among competitors.⁶⁰ Environmental dynamism is an important factor because of its influence on the relationship between a variety of firm-level constructs and firm performance.⁶¹ This means that environmental dynamism does have an effect on the performance of a firm.

It is not only the external environment that needs attention to sustain organisational performance but also the internal environment of a firm does influence a firm's performance.

In static competitive environments a firm's internal resources would be sufficient to maintain a competitive position. However in the new global economy those in-house capabilities are not enough for a firm to compete with the best.⁶² Firms need unique and hard to imitate dynamic capabilities. These capabilities enable a firm to continuously renew, reallocate, rejuvenate, and redefine their valuable resources synchronously with environmental changes.⁶³ Dynamic capabilities are supported by specialisation, decentralisation, responsiveness, lack of formalisation (to some degree) and flexibility.

Because organisational structures could be changed if necessary the focus in this paper is on the contribution of dynamic capabilities to manage the firm's unique and important assets. As discussed in the previous chapter these assets, or configurations of these assets, can form the (core) competences of an organisation.

In this chapter the influence of dynamic capabilities on core competences and thus on the competitiveness of an organisation is central. What are dynamic capabilities; where could

⁵⁹ Baum & Wally (2003), p. 1110.

⁶⁰ Wang & Ahmed (2007), p. 31.

⁶¹ Garg et al. (2003), p. 727.

⁶² Onyeiwu (2003), p.58.

⁶³ Teece (2007), p. 1319; Ketkar & Sett (2010), p. 1175.

they be used for and what is the relationship between dynamic capabilities and core competences are all questions that will be answered in this chapter.

3.2 Dynamic capabilities as the enablers for a company to respond to changes in the business environment

The RBV and the core competence view as an operationalisation of the RBV consider resources as heterogeneous across organisations. The RBV theory explains how firms can achieve (sustained) competitive advantage in equilibrium.⁶⁴ The RBV however is a static view. The theory points to the value of VRIN resources, but does not specifically address how these resources could be changed or adapted to the changing environment.⁶⁵

In the influential 1997 article of Teece et al. they purpose an approach that is “especially relevant in the Schumpeterian world of innovation-based competition, price/performance rivalry, increasing returns, and the creative destruction of existing competences”.⁶⁶ In order to adapt to the rapidly changing environment firms should use dynamic capabilities that have the ability to integrate, build, and reconfigure internal and external competences.⁶⁷ Over the years several other definitions of dynamic capabilities have been given. Some examples are:

- “The firm’s processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources – to match and even create market change.”⁶⁸
- “A dynamic capability is a learned and stable pattern of collective activity through which the organisation systematically generates and modifies its operating routines in pursuit of improved effectiveness.”⁶⁹
- “The abilities to reconfigure a firm’s resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s).”⁷⁰

⁶⁴ Ambrosini & Bowman (2009), p. 29; Lockett et al. (2009), p. 11.

⁶⁵ Priem & Butler (2001a), p. 33; Ambrosini & Bowman (2009), p. 11.

⁶⁶ Teece et al. (1997), p. 509.

⁶⁷ Teece et al. (1997), p. 516.

⁶⁸ Eisenhardt & Martin (2000), p. 1107.

⁶⁹ Zollo & Winter (2002), p. 340.

⁷⁰ Zahra et al. (2006), p. 918.

- “The capacity of an organisation to purposefully create, extend, or modify its resource base.”⁷¹
- “Dynamic capabilities directly impact the resource base of the firm, which in turn is the source of the firm’s competitive advantage”.⁷²

The above definitions show that there is agreement in literature about the dynamic capability construct. These definitions and the definition of Teece et al. (1997) reflect that dynamic capabilities are purposeful organisational processes and that their role is to change the resource base of the organisation. This means that dynamic capabilities “are the potential of a firm to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base”.⁷³

As shown above a dynamic capability is not a capability in the RBV sense, a dynamic capability is not a resource. Capabilities in the dynamic capability view are processes that alter the resource base.⁷⁴

The term dynamic in dynamic capability refers to how the resource base is changed in a dynamic environment by the use of dynamic capabilities. It does not refer to environmental dynamism, because dynamic capabilities can be both used in relatively stable environments and in rapid changing environments.⁷⁵ Dynamic refers to the fact that the capabilities are the tools to change or renew the resources.

Another important fact is that literature is divided about the relationship between dynamic capabilities and competitive advantage.⁷⁶ Some researchers state there is a specific link between dynamic capabilities and competitive advantage⁷⁷, whilst others argue that there is no direct link between dynamic capabilities and competitive advantage.⁷⁸

⁷¹ Helfat et al. (2007), p. 4.

⁷² Ambrosini & Bowman (2009), p. 43.

⁷³ Barreto (2010), p. 271.

⁷⁴ Ambrosini & Bowman (2009), p. 35.

⁷⁵ Eisenhardt & Martin (2000), p. 1110; Zollo & Winter (2002), p. 340; Protogerou et al. (2011), p. 639.

⁷⁶ Cepeda & Vera (2007), p. 426.

⁷⁷ Teece et al. (1997), p. 515; Lee et al. (2002), p. 734.

⁷⁸ Zott (2003), p. 98; Bowman & Ambrosini (2003), p. 293; Helfat et al. (2007), p. 14; Protogerou et al. (2011), p. 639.

Because dynamic capabilities are directly linked with a firm's resources and it's the resources that can lead to (sustainable) competitive advantage this paper considers the link between dynamic capabilities and competitive advantage as indirect. This means that dynamic capabilities are tools that a company can use to react on changes in the business environment.

Nowadays the dynamic capabilities concept is over twenty years old.⁷⁹ However the dynamic capability field advanced considerably there are still priorities that could be set for the future. The field needs clarification of some of the concepts that are still open for different interpretations.⁸⁰ There should be more research to see how valuable dynamic capabilities exactly are for sustaining competitive advantage. Another question here is what could be the influence of environmental contingencies.⁸¹

3.3 Operational and dynamic capabilities: inconsistencies, overlapping definitions and outright contradictions

The literature in the field of dynamic capabilities is "riddled with inconsistencies, overlapping definitions, and outright contradictions".⁸² One of the main sources of confusion is the fact that researchers disagree about dynamic capabilities. Some researchers consider dynamic capabilities as the key to competitive advantage while others even doubt if there are such things as dynamic capabilities. There is also a group of researchers who think that there is not a direct link between dynamic capabilities and competitive advantage.⁸³ The discussion whether dynamic capabilities does or does not have a direct impact on firm performance is still open.⁸⁴ Recent empirical evidence however suggests that there is an indirect link between dynamic capabilities and firm performance.⁸⁵

⁷⁹ Hafeez et al. (2002), p. 29.

⁸⁰ Ambrosini & Bowman (2009), p. 46.

⁸¹ Ambrosini & Bowman (2009), p. 46; Barreto (2010), p. 277.

⁸² Zahra et al. (2006), p. 917.

⁸³ Winter (2003), p. 991; Zahra et al. (2006), p. 921.

⁸⁴ Helfat et al. (2007), p. 113; Helfat & Winter (2011), p. 1243.

⁸⁵ Protogerou et al. (2011), p. 639.

Operational capabilities

The indirect link between firm performance and dynamic capabilities can be explained because of the fact that researchers differentiate operational and dynamic capabilities. In 1994 it was Collis who was one of the first researchers that mentioned lower order capabilities.⁸⁶

Besides this definition of Collis also other researchers mentioned the difference between operational and dynamic capabilities. However they used terms like ‘ordinary’ or ‘zero-level’ capabilities or substantive capabilities to describe operational capabilities.⁸⁷ All these definitions are more or less mentioning to the same thing, namely: the means by which an organisation is ‘earning its living’.⁸⁸ Operational capabilities enable a company to perform activities on an on-going basis by using the same techniques to support existing products and services for their customers.

Dynamic capabilities and the difference with operational capabilities

As mentioned before, dynamic capabilities are organisational processes with the potential to solve problems and to make timely decisions to change its resource base. Dynamic capabilities build, integrate, or reconfigure operational capabilities. They do not directly affect output, but indirect contribute to the output of the organisation because of their impact on operational capabilities.⁸⁹

It is the nature of these capabilities that differentiate operational and dynamic capabilities. Operational capabilities are non-dynamic and are directed towards maintaining the status quo.⁹⁰ Dynamic capabilities on the other hand are directed towards altering how a firm earns its living. Dynamic capabilities often have specific purposes and support specific activities within a particular context and “are not a generic capacity to undertake change”.⁹¹

⁸⁶ Collis (1994), p. 194.

⁸⁷ Winter (2003), p. 991-992; Zahra et al. (2006), p. 921.

⁸⁸ Cepeda & Vera (2007), p. 426.

⁸⁹ Helfat & Peteraf (2003), p. 999.

⁹⁰ Helfat & Winter (2011), p. 1244.

⁹¹ Helfat & Winter (2011), p. 1245.

This means that dynamic and operational capabilities differ in their purposes and intended outcomes but up to today the line between dynamic and operational capabilities is “unavoidable blurry”.⁹²

3.4 Sensing, seizing and reconfiguring capabilities: the three general clusters of dynamic capabilities

According Teece, dynamic capabilities can be disaggregated into three categories: sensing, seizing and reconfiguring capabilities.⁹³

Nowadays researchers still refer to these three categories, however sometimes they use other concepts to describe less or more the same.⁹⁴

Sensing capabilities

The competitive environments with changing customer needs and the come and go of technologies are a source of threats and opportunities for both incumbent and new entrants in those business environments.⁹⁵ The dynamic environment and potential threat of new entrants constitute a risk to the incumbent firms. While some emerging market trajectories could be easily recognised others are difficult to distinguish.

It is important for a company to respond to the dynamics of its environment and this could mean that a company should reconfigure and transform to stay competitive. “The ability of a firm to calibrate the requirements for change and to effectuate the necessary adjustments depends on the ability to scan the environment, to evaluate markets and competitors, and to quickly accomplish reconfiguration ahead of competition”.⁹⁶

Before the firm can accomplish reconfiguration it is important that they gather information about the business environment. This *sensing* capacity is the ability of a company to scan and search the business environment for potential opportunities and threats.⁹⁷ Spotting

⁹² Helfat & Winter (2011), p. 1249.

⁹³ Teece (2007), p. 1319.

⁹⁴ Pavlou & El Sawy (2011), p. 243.

⁹⁵ Teece (2007), p. 1322.

⁹⁶ Teece et al. (1997), p. 521.

⁹⁷ Pavlou & El Sawy (2011), p. 243.

opportunities, identifying opportunities for research and development and identifying customer needs are sensing activities.⁹⁸

Some empirical examples of sensing capabilities are: (1) Down-stream-analysis of customer's service needs, (2) on-going competitor benchmarking and analysis, and (3) online staff following technological developments and new trends.⁹⁹

Seizing capabilities

After new opportunities are sensed, these sensed opportunities must be exploited and eventual threats should be fended off. In this stage it is important for firms to mobilise the necessary resources to address an opportunity and to capture value from doing so.¹⁰⁰

Addressing the sensed opportunities by for example new products, processes or services requires investments in development and commercialisation activity. The big issue here is not when, where, and how much a company should invest, but the company should select or create a particular business model that defines its commercialisation strategy and investments priorities.¹⁰¹

In the process of selecting or creating a particular business model, path-dependent routines, assets, and strategies could hinder the potential new business. Successes in the past led to the establishment of 'best-practice' processes, procedures, and/or incentives to manage the existing business. To overcome the 'path-dependent risk' of staring blind on existing routines, rules, and strategies in the process of creating new business a company depends on the quality of the enterprise's routines, decision rules, strategies, and leadership around evaluating new investment opportunities.¹⁰²

Delineating the business model, selecting decision-making protocols and committing (financial) resources to investment opportunities are practical examples of seizing capabilities.¹⁰³

⁹⁸ Katkalo et al. (2010), p. 1180.

⁹⁹ Ellonen et al. (2009), p. 760; Ellonen et al. (2009), p. 760; Gebauer (2011), p. 1242.

¹⁰⁰ Teece (2012), p. 1396.

¹⁰¹ Teece (2007), p. 1326-1327.

¹⁰² Teece (2007), p. 1328.

¹⁰³ Teece (2007), p. 1335; Ellonen et al. (2009), p. 760.

Reconfiguring capabilities

Reconfiguring capabilities enable the company to realign the operational capabilities with the sensed and seized opportunities. Sensing and seizing capabilities can lead to a boost of a firm's size and profitability. This boost in size and profitability will lead to the augmentation of a firm's resources and assets. A key to sustained profitable growth is the ability of a firm to recombine and to reconfigure assets and organisational structures as the firm grows, and as markets and technologies change.¹⁰⁴

Knowledge management and co-specialisation are two examples of dynamic capabilities. Internal training and teaching for example is a practical example of knowledge management as a dynamic capability. Co-specialisation means that over time a firm's assets become valuable in combination. Co-specialised assets are more valuable in combination than in isolation. A combination of physical assets, human resources and tacit knowledge is an example of a co-specialised asset. This combining of valuable assets is another practical example of a reconfiguring capability.¹⁰⁵

3.5 Managing your core competences: dynamic capabilities as the next step for companies when they are aware of their competences

In this section an answer to the fourth research question will be provided: *what could be the contribution of dynamic capabilities in managing a company's core competences?*

Most companies are not aware of their core competences. Their competences are not only hidden for their competitors but also for the company itself. This is because most managers have grown-up with the organisation and taken its core competences for granted.¹⁰⁶ But when a company is aware of its core competences they are not done yet. As mentioned before managers should be aware of the fact that trusting on their core competencies can lead to the so-called 'competency trap'.¹⁰⁷ Generally spoken there are three actions managers should consider when monitoring their core competences: nurture, abandon and deploy. Successful firms not only know how to deploy their core competencies but are also aware of the dynamic nature of this resource.¹⁰⁸

¹⁰⁴ Teece (2007), p. 1335.

¹⁰⁵ Ellonen et al. (2009), p. 761.

¹⁰⁶ Tampoe (1994), p. 69.

¹⁰⁷ O'Driscoll et al. (2001), p. 75.

¹⁰⁸ Srivastava (2005), p. 58

Nurture

A company should nurture its core competencies for its own success. Competencies can erode with time and therefore need to be constantly monitored. This does not mean that core competencies should be upgraded all the time. Organisations should spend their resources wisely on nurturing their core competences and not their non-core competences. By this they can take the right actions needed when there are external threats or opportunities that could alter the competence base.

Deploy

Over time it points out that organisations are always trying to imitate the actions of other successful organisations in their business environment. If organisations are not renewing their competences on a continuous basis other organisations will imitate and make a company's competences useless. This means that managers should do whatever is necessary to upgrade the core competencies of their organisation. This means that an organisation should invest time and resources to develop their core competences. This could be done through internal development, market procurement, inter-firm collaboration or mergers and acquisition.¹⁰⁹

Abandon

The dynamic nature of competences suggests that some of them may become obsolete with time. Due to changes in the business environment current core competencies of a company could be not relevant any more. Wasting resources to competences that are not core anymore could damage the competitive advantage of a company. However abandon a core competency without sufficient thought could be even more damaging to a company because building a core competence again from scratch will not only be a very costly proposition but may also be impossible to achieve.¹¹⁰ It could be said that organisation should dedicate managers to their core competencies who are busy evaluating the competencies through time.

¹⁰⁹ Srivastava (2005), p. 59.

¹¹⁰ Srivastava (2005), p. 59.

According to the discussed literature in the previous section dynamic capabilities are purposeful actions taken inside the company to scan the environment for new opportunities and threats, to translate these opportunities and threats into business models and eventually realign the company's resources and assets.

Dynamic capabilities, when they are well developed, enable firms to achieve coordination and benefit from complementarities. In the dynamic capabilities theory, management plays a distinctive role in selecting and/or developing routines, making investment choices, and in orchestrating non-tradable assets to achieve efficiencies and appropriate returns from innovation.¹¹¹ Developing decision-making skills and organisational processes to sense and seize opportunities is an essential managerial function.¹¹² These processes are also called asset orchestration processes. The combination of tacit knowledge with physical assets creates unique value for a company. Asset orchestration is explicitly addressing the role of managers to search, select and reconfigure these valuable combinations of tangible and intangible assets.¹¹³

Now it is clear that follow-up activities are needed inside a company when they are aware of their core competences the relationship between core competences and dynamic capabilities become clear. Managers should scan the business environment for opportunities and threats, translate these opportunities into business models and finally take actions that are necessary to reconfigure the current resources of the company. They have to nurture, deploy or abandon current core competencies in favour of new or changed competences. These actions, taken by managers inside the organisation, are equal to the dynamic capabilities of an organisation: the embedded routines that are used by the organisation to 'sense' the environment; 'seize' opportunities and threats; and 'reconfigure' the current resources. Dynamic capabilities in this view could be seen as the follow-up activities that are needed to manage a company's core competencies and for optimizing the strategic course of the company's future.¹¹⁴

¹¹¹ Augier & Teece (2009), p. 417.

¹¹² Augier & Teece (2009), p. 416.

¹¹³ Sirmon et al. (2011), p. 1390.

¹¹⁴ López (2005), p. 668.

4 Research methodology

4.1 Aim of this research: a descriptive case study with a small medium enterprise as subject of study

Generally spoken there are three, most common, aDEFof research: explanatory, explorative and descriptive research.¹¹⁵

Explanatory research is a way to explain the relationship between variables.¹¹⁶ A researcher wants to know why people, for instance, are planning to vote for Barack Obama in the elections of the United States of America. Explorative research is aimed to map (causal) relations between variables. Explorative research is done to explore a topic and if necessary come up with a new theory or an improved hypothesis.¹¹⁷ This kind of research is one of the most common forms of research conducted and often occurs when a researcher examines a new interest of when the subject of study itself is relatively new.¹¹⁸

The main aim of descriptive research is to describe situations and events.¹¹⁹ Descriptive studies are aimed at finding out 'what is'; so observational and survey methods are frequently used to collect descriptive data. The aim of this research is to describe the current core competences of the Case organisation Group and also to describe the current state of dynamic capabilities usage inside the Case organisation Group.

Descriptive research can be either qualitative or quantitative. The type of research of this master thesis is a qualitative field research. Qualitative research enables a researcher to go there where the action is and observe this action.¹²⁰ There are many different qualitative field research paradigms and a case study is one of them. A case study is an in-depth examination of a single example of a phenomenon, where the investigator has little control over events.¹²¹

¹¹⁵ Babbie (2007), p. 87-90.

¹¹⁶ Poulter (2006), p. 331; Babbie (2007), p. 89-90.

¹¹⁷ Babbie (2007), p. 88.

¹¹⁸ Babbie (2007), p.88.

¹¹⁹ Sandelowski (2000), p. 336; Babbie (2007), p. 89.

¹²⁰ Babbie (2007), p.285.

¹²¹ McCutcheon & Meredith (1993), p. 240; Babbie (2007), p. 298.

A case study gives the researcher the opportunity to gather his or her required information in lots of different ways. Interviews, observations, and focus groups, are just a few examples of ways to conduct qualitative field research.¹²² The use of different methods of data collection is an example of the use of methodological triangulation. Triangulation is a way to create a higher degree of validity in a study. Methodological triangulation is the use of multiple qualitative or quantitative methods to study a certain subject.¹²³ In this research multiple qualitative methods were used in order to improve the validity of the eventual results of the research.

4.2 Data collection methods

Now the aim of this research has been discussed, in this section the used methods for data collection will be highlighted. The findings of these data collection methods will be discussed in chapter five.

Interviews

The most common used interview formats for gathering data are: unstructured interviews, structured interviews and semi-structured interviews. This last kind of interview is often used to collect quantitative data.¹²⁴ In this research semi-structured interviews were one of the data collection sources.

In a qualitative interview there is interaction between the interviewer and the respondent and the interviewer sets a direction for the conversation. The interviewer starts with open-ended questions, and other questions emerge from the dialogue between the respondent and the interviewer.¹²⁵ Semi-structured interviews were held with employees in all layers of the case organisation to get a, as complete as possible, idea of the key success factors of the Case organisation Group but also the weak points. The structure of the interviews as well as the analysing and reporting was determined with the use of the stages based on the work of Steinar Kvale (1996).

¹²² McCutcheon & Meredith (1993), p. 241; Babbie (2007), p. 305-308.

¹²³ Guion (2002), p. 2.

¹²⁴ DiCicco-Bloom & Crabtree (2006), p. 314.

¹²⁵ DiCicco-Bloom & Crabtree (2006), p. 315; Babbie (2007), p. 306.

Focus Group

Collecting data in the form of a group discussion about a specific topic, determined by the researcher is a common explanation of the term focus group.¹²⁶ Focus group ABC, as a qualitative technique, are often combined with individual interviews because of the more depth of the individual interview and the more breadth of the focus group.¹²⁷ In this research a focus group was used to discuss the outcomes of the interviews and to make up a list of core competences of the Case organisation Group. Most respondents of the interviews participated in the focus group and also a few senior management employees joined the focus group.

Questionnaire

The last method used for the collection of data in this research was a questionnaire. A questionnaire is a document with questions or statements and these questions can be asked by an interviewer or written down and handed out to respondents for completion.¹²⁸ In this research open-ended questions were used on this questionnaire in order to get the opinion of the respondent without already setting the direction for a possible answer as is done with closed-ended questions.

The questionnaire will be send to some of the larger customers of the Case organisation Group in order to get their opinion about Case organisation. How do they think about the Case organisation Group and what are the strong points. This questionnaire is used to check the results of the interviews and focus group to see if there is consensus about Case organisation's good and weak points between Case organisation itself and its customers.

4.3 The formulation of a structured methodology for identifying core competences

In this section an answer will be provided to the second research question *how could core competences be identified within a company?*

As resulted from the theoretical foundation core competences could be seen as the key cornerstones of a company and therefore they should be carefully nurtured and developed. Based on the methodology of Hafeez et al. (2002), the process for identifying the core competences of Case organisation has been divided into four phases. To collect the

¹²⁶ Kitzinger (1994), p. 103; Morgan (1996), p. 130; Babbie (2007), p. 308.

¹²⁷ Morgan (1996), p. 134; Massey (2011), p. 21.

¹²⁸ Babbie (2007), p. 245.

necessary information for each phase, several different methods of data collection have been used:

- Phase one: identification of the key capabilities of Case organisation
- Phase two: examining and evaluating the identified key capabilities in more detail
- Phase three: discussing the key capabilities and determining the core competences
- Phase four: validating the core competences

These four phases will be described step-by-step below. The results of these four phases will be discussed in the next chapter.

4.4 The four research phases used to identify the core competences of Case organisation

Phase one: identification of the key capabilities of Case organisation

The first and maybe most important step in this research was the determination of the key capabilities of Case organisation. The key capabilities are the market winners of the company. Semi-structured interviews were used in order to develop a complete picture of the existing resources and capabilities of Case organisation. Core competences are based on resources and capabilities that are, in most cases, embedded for a long time inside the organisation. These resources and capabilities could be spread throughout the organisation. To collect useful information it was therefore important that most of the respondents were working for a long time inside the organisation and the focus should be on respondents from all layers inside the organisation.

Based on these criteria a list was made up together with the HRM manager of twenty potential respondents for this research. These respondents then were asked to participate in the research. 60% responded positively so this resulted in a total of twelve respondents, whereof three respondents from Case organisation ABC, three from Case organisation GHI and three from Case organisation DEF. Three other respondents were in the senior management and had experience with all the three business units:

Function:	Business Unit	Working experience
CEO	ABC/DEF/GHI	>15 years
Director Innovation	ABC/DEF/GHI	>15 years
CCO	ABC/DEF/GHI	>15 years
Director Operations	ABC	<5 years
Production engineer	ABC	>10 years
Account manager	ABC	<5 years
Director	DEF	>5 years
Innovation manager	DEF	>10 years
Team manager production	DEF	>10 years
Project manager	GHI	>10 years
Manager engineering	GHI	>10 years
Manager composites	GHI	>10 years

Table 3: Overview of selected respondents for the interviews

As could be seen in table three above most of the respondents have over ten years of working experience inside the Case organisation Group. However Case organisation DEF and GHI were taken over less then six years ago some of the respondents were already working there. All the respondents were working in key areas such as sales, logistics, production and engineering. The interviews were tape-recorded and last about sixty to seventy minutes. Also anonymity was assured.

The questions were based on the literature of Trott et al. (2009), Hafeez et al. (2002) and Javidan (1998).¹²⁹ Hafeez et al. (2002) and Javidan (1998) both described a theoretical approach how core competences inside an organisation could be identified while Trott et al. (2009) did an empirical research to identify core competences inside a case organisation. Similarities were found between the two theoretical approaches and the empirical research. Based on these similarities interview questions were designed with an explorative character and to cover different objectives. An example of the interview protocol can be found in Appendix I.¹³⁰

¹²⁹ Javidan (1998); Hafeez et al.(2002); Trott et al. (2009)

¹³⁰ See Appendix I, p. 45.

The transcripts of the interviews were used to set-up a list of the attributes that contributed to the distinctive power of Case organisation. Before this list was used in the second phase of the research it was sent to the senior management to see if the list was complete.

Phase two: Ranking the company's capabilities

The second step in identifying the core competences of Case organisation was to rank the several capabilities. Some capabilities play a more important role than others do in realising the business objectives of a firm. By ranking these capabilities it is possible to distinguish the most important competences that are the input for phase three of the research. The template for the ranking exercise was based on the methodology of Hafeez et al. (2012).¹³¹

The respondents were asked to score each capability on a scale of 1 to 5, where 1 represents not important and 5 represents the capability as very important to remain attractive to both existing and potential new customers. The CEO, CCO and director innovations were asked to rate the capabilities of the three business units. This is because they all have more than ten years of experience within the three business units. The other respondents were asked to rate only the capabilities of their own business unit. To make sure that the respondents do not rate each capability as average they were allowed to use the score of three only twice.

Phase three: Discussion of the most important competences and determining the core competence(s)

For the third phase in identifying the core competences the participants from phase one were grouped together in a focus group. The results of the scoring exercise were discussed during a meeting where all the available participants from phase one were present. Any issues that raised during this meeting could be discussed freely and after the meeting there should be consensus about the most important capabilities of the several business units. Based on these capabilities it was possible to determine the overall core competences of the Case organisation group. It should be noted that these core competences were based on the opinions of the participants in phase one to three.

¹³¹ Hafeez et al. (2012), p. 33; see Appendix II, p. 46.

Phase four: Validating the core competences of the company

In order to triangulate the findings from phase three and to avoid any bias two final tests were applied to see if the identified core competences were really core competences. The VRIN check was done to see to what extent the core competences were valuable, rare, inimitable and non-substitutable.¹³² Competences should score positive on all of the four above mentioned criteria to be realistic core competences for the Case organisation Group. Also questionnaires were sent to some of the major customers of Case organisation. These findings were compared with the core competences identified in phase one to three based on the internal opinions. There should be a match to some extent between the internal and external opinions about Case organisation's core competences. Because it was not possible for a face-to-face interview the questionnaires were sent by email to the customers. A total of four out of twenty questionnaires returned and these findings will be discussed in the next chapter. Open questions were used in combination with a Likert-scale so that respondents could clarify the importance of their answers. By this it is possible to see a difference between the several answers that were provided and if multiple respondents are providing the same answers these answers could be add-up to form some sort of ranking. An example of this questionnaire can be found in Appendix III.¹³³

4.5 Short semi-structured interviews as a tool to analyse the usage of dynamic capabilities by Case organisation over the years

The second part of this research is focused on the concept of dynamic capabilities. As already discussed in the theoretical framework of this research dynamic capabilities should be employed to reconfigure the existing operational capabilities to sustain competitive advantage. Because a company's (core) competences are represented in its operational capabilities these dynamic capabilities are one way to manage a company's competences. Three categories of dynamic capabilities were mentioned in this research, namely: sensing, seizing and reconfiguring capabilities. Besides identifying the core competences of Case organisation the goal of this research was also to see if Case organisation used any dynamic capabilities over the years.

¹³² Barney (1991), p. 105-106; Priem & Butler (2001), p. 25

¹³³ See Appendix III, p. 49.

Face-to-face interviews were conducted with the CEO, CCO and Director Innovations of the Case organisation Group and also with the production engineer working at Case organisation ABC. All the respondents were working over fifteen years at Case organisation. Because dynamic capabilities are routines that are embedded inside the organisation these respondents could provide probably the information necessary because of their working experience inside the Case organisation Group.

These sessions last about thirty minutes. During these interviews anonymity was assured. The questions were designed to be explorative and to cover all the three types of dynamic capabilities. This interview protocol benefits from other empirical and theoretical studies that have investigated dynamic capabilities.¹³⁴ Based on the results from the empirical research of Gebauer (2011) and Ellonen et al. (2009) interview questions were formulated that covered all three areas of dynamic capabilities: sensing, seizing and reconfiguring. The interview protocol can be found in Appendix IV.¹³⁵

¹³⁴ Ellonen et al. (2009), p. 760 761; Gebauer (2011), p. 1247 – 1248.

¹³⁵ See Appendix IV, p. 51.

6. Conclusion and recommendations

In this final chapter the conclusions regarding the identified core competences and dynamic capabilities will be discussed. A general conclusion and some recommendations based on the literature review will be provided towards Case organisation and this chapter will end with some limitations of the research and directions for further research.

6.3 Conclusion regarding the theoretical framework

The goal of this research was to provide more insight in the core competence concept and to see if there is a relation with dynamic capabilities. Based on the review of the dynamic capabilities literature it might be possible to consider this concept as the next step after the identification of a company's core competences. Because of the current dynamic business environment of most companies it is not enough to only define your company's core competences. The next step is to manage these (core) competences and adapt them to the changes going on in the business environment. Blind staring at your core competences can result in core rigidities, because focusing on the current core competences can inhibit innovative progress and result in a so-called competence trap.

The more theoretically focused literature about dynamic capabilities assumes that dynamic capabilities could be used to manage the competence base of your company. There is little empirical evidence however about what exactly dynamic capabilities are and how they contribute in achieving sustained competitive advantage. Empirical research however shows an organisation who wants to use more and more routines to scan the environment and translate the sensed opportunities into business models. This is necessary to keep the status of a first-tier supplier. Case organisation does have to monitor on a continuous basis what the trends in the market are; how these trends influence their resources base; if competences should be upgraded or abandoned and what actions should be taken to implement those changes.

Based on this finding it could be concluded that a small SME does not need dynamic capabilities to manage their resources base. Dynamic capabilities in this case are seen as purposeful actions of the company. In other words they are often standardised routines. However when the SME is growing, dynamic capabilities could definitely be an additional and a useful tool to manage the company's competence base. Again further research is probably necessary to underpin these findings.

6.4 Recommendations to Case organisation and contributions to science

In the current dynamic business environment it is difficult to sustain competitive advantage. The literature review of core competences showed the importance of being aware of your core competences in order to put the company in a position where it does have greater gains over their competitors. However managers do have to be aware of their core and non-core business. It is important to continuously adapt the (core) competences and capabilities to the changing business environment. Scanning the business environment for opportunities and threats is an important tool and should be done on a regular basis. Setting up business models and decision protocols will not only improve the support base for disinvestment or investment decisions but can also be used as marketing tools to show to the customer. These business models and decision protocols can show that a company really understands its customer's needs and has access to the necessary technologies to meet the customers demand.

This research gives a clear understanding of the core competence of Case organisation and the supportive competences and capabilities. Some of these supportive competences and capabilities can be broken down into a lot of other assets and resources.

The core business of Case organisation is the production of special components and assembling those components together into complete systems and modules. Besides important supportive core capabilities Case organisation also possesses several non-core capabilities. Most of these non-core capabilities were the result of the acquisition of DEF and GHI.

Now this research has provided a useful insight in the real core competences of Case organisation they should dedicate employees to this core competence framework. These people should come up with propositions what has to be done with the non-core competences and they should also monitor the core competences on a regular basis so that decisions about nurturing, developing or abandoning of (core) competences can be taken on time. This can result in sustained competitive advantage for Case organisation.

Another recommendation is referring to the fact that Case organisation has problems with their logistics capacity, which is also mentioned by their customers in the questionnaire. Seizing capabilities in the form of business models and decision protocols could be used to tackle these problems. Another solution could be a critical analysis of the non-core processes. Should these non-core assets and competences be outsourced or should these non-core processes be exploited by the formation of strategic alliances? By this Case organisation can dedicate their valuable resources to the right competences.

Another recommendation refers to the intention of Case organisation to take over the development of complete modules and systems Case organisation is assembling. Becoming a *** supplier is one of the ‘unspoken’ long-term goals. It is impossible to bring in the necessary competences in-house because that would result in the same situation as now: possessing a lot of core competences but also non-core competences. Strategic alliances or partnerships with external specialists could be a solution to prevent that within five years another research will be necessary to conclude that Case organisation does have a few important core competences but also some non-core competences.

The effectiveness of a core competence as a source of competitive advantage is in the hands of the managers inside Case organisation. They have the skills to exploit the core competences in the right way. A way to help them doing this could be with the use of the dynamic capabilities concept: purposeful actions to sense opportunities and threats; translate these opportunities and threats in business models and finally take the right actions to realign the operational capabilities with the opportunities and threats. During these managerial processes Case organisation should keep in mind they are a supplier of special parts and modules and they have the necessary capabilities to deliver these parts and modules in-house.

Contributions to the science

The goal of this paper was to, based on a theoretical foundation, identify the core competences of Case organisation and how dynamic capabilities can contribute to manage these core competences. In doing so, this research provides four important contributions for the science.

First this research provides a comprehensive literature review on the subject of core competences and dynamic capabilities. It became clear what core competences are and where they come from. Also this research provides a more structured insight in the ‘blurry’ field of dynamic capabilities. This literature review can serve as a starting point for scholars who wants to undertake future research on these subjects.

Second, the proposed structured methodology for identifying core competences can be used by other scholars or practitioners. The methodology proved itself in this research because the identified core competence was consistent with the VRIN-check and the external opinions from customers. This research also provides an interview protocol that could be used to see if there are embedded routines inside a company, or so-called dynamic capabilities.

Third, the theoretical framework and this research show that the possession of core competences will not result in a competitive advantage by itself. The example of Case organisation showed that when the identified core competences are not managed on a regular basis this will result in the possession of a lot of competences and the waste of valuable resources towards both core and non-core competences. A company should monitor their competences and take the right actions when needed.

Fourth, this research shows that there is a relation between dynamic capabilities and core competences. Core competences have to be managed on a regular basis. Managers have to decide whether competences should be nurtured, developed or abandoned. The necessary information to take these decisions could be gathered with the help of sensing capabilities. With the use of seizing and reconfiguring capabilities it is possible to actually change the core competences. Academics can use this research to further investigate the relationship between core competences and dynamic capabilities.

6.5 Limitations and further research

Research limitations

Of course there are some limitations to this research. The first limitation is the so-called researcher bias. Because the researcher was active within the organisation for a period of three months, the opinions of the employees around him could influence the investigation. However the researcher worked independently and internal opinions were validated with the use of external opinions there could still be some chance that the eventual results are affected by this research bias.

Another limitation of this research is the fact that it was a single case study. This means that the results and/or findings could not be generalised that easily. The methodology used at Case organisation to identify the core competences and dynamic capabilities can probably not be used as a general tool to identify the core competences of other companies. An important reason for this is that Case organisation does not produce its own product. Existing literature about core competences and dynamic capabilities is often applied to companies producing a product of its own. This means that the used qualitative and quantitative research methods could not be used in the same way in any other small-medium enterprise. The use of a single case study limits the external validity of this research.¹³⁶

A third limitation is the fact that the results of the research are based mostly on the opinions of the employees participating in the first three research phases. The results of these phases were verified by the use of questionnaires sent to Case organisation's customers. It was not possible to conduct face-to-face interviews with these customers and also there was a low response since almost twenty questionnaires were sent to several contacts of Case organisation's customers and only three filled in questionnaires returned. This limits the internal validity of this research.¹³⁷

Further research

Besides the limitations of the research mentioned above some directions for further research will be presented in this section. Some of these directions are based on the limitations of this research.

¹³⁶ Shadish et al. (2002), p. 87.

¹³⁷ Shadish et al. (2002), p. 55.

As already mentioned in the limitations, this research cannot be generalised because of the fact it is based on a single case study and Case organisation does not produce an own product. Applying the methodology used in this research on other firms in different industries could probably result in a validation of the used methodology. This could be done by a multiple-case study with a longitudinal design, including small-medium enterprises. The focus in this study should be both on 'make-to-order' enterprises and enterprises producing an own product. This kind of research would also be a contribution to the existing core competence literature because most of this literature is focused on large enterprises producing an own product.

Another direction for further research is the dynamic capability perspective. As already mentioned in the theoretical framework there seems to be a relation between both core competences and dynamic capabilities. Researchers in the field of dynamic capabilities mention the fact that dynamic capabilities can result in the divestment of a company's competences but also in new improved competences. This eventually can result in a change in a company's core competences.

These conclusions however are based mostly on theoretical insights and are not empirically tested. Empirical research therefore could provide insight in the relationship between core competences and dynamic capabilities. This research could be part of the multiple-case study mentioned before. In this type of study the results of multiple cases can be compared and therefore provide a solid foundation to draw conclusions about the relationship between dynamic capabilities and core competences.

In general it could be concluded that most empirical research aimed towards core competences and dynamic capabilities is focused on large multinationals. It would be interesting to see if these empirical findings also could be generalised over small-medium enterprises.

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8 Appendices

Appendix I: Interview protocol for determining the capabilities

Internal-focused questions

1. Case organisation does lots of things, but what does it do well?
2. What underlies these strengths? For instance this could be teamwork, craftsmanship, or formal/informal systems.
3. Which activities does Case organisation struggle to do well and which activities do they very well?
4. Which activities deliver the most customer benefit in terms of value?
5. What does Case organisation that competitors cannot do? For instance high quality, flexibility, etc.
6. Which resources does Case organisation have that help it to succeed?
7. Are these resources unique? Do the competitors also own these resources or could they get easily access to these unique resources?
8. Which capabilities does Case organisation have that help it to succeed?
9. Looking at these capabilities, are there any areas in which Case organisation has adapted and changed over the years which has enabled it to continue to be successful?
10. If so, how is Case organisation able to be so flexible?
11. Are the mentioned resources and capabilities only relevant for you own business unit or are they characterizing the Case organisation Group?
12. A competency is a combination of resources and skills. Can you mention perhaps competencies based on the above mentioned resources and capabilities?

External-focused questions

13. What are the most important changes going on at the moment in the industry?
14. Looking at these changes are there any resources or capabilities that:
 - are outdated or no longer matter?
 - which must be maintained or improved?

15. Are there perhaps new resources or capabilities which need to be developed or analyzed to address the changes going on in industry?

Appendix IV: Interview protocol concerning the use of dynamic capabilities*Sensing capabilities:*

1. What capabilities did Case organisation use, over the years, to scan the business environment for opportunities and threats? (e.g. benchmarking, customer survey, market analysis, attending industry workshops, follow technological developments)

Seizing capabilities:

2. How did Case organisation address the sensed opportunities and fended off potential threats? (e.g. designing business models, the use of decision-making protocols)
3. What was the role of the senior management in this decision-making process?

Reconfiguring capabilities:

4. Were investment decision in the past based on top management decisions or also in dialogue with lower levels within the organisation?
5. Does Case organisation have built up valuable, unique combinations of assets over time? If so, what actions were undertaken to combine those assets? Were this purposeful actions?
6. Did Case organisation create any learning, knowledge-sharing, and knowledge-integrating procedures over time to improve business performance?