



The impact of marketing intelligence on SMEs

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Abstract

Companies are constantly looking for new ways to achieve and sustain a competitive advantage. Nowadays, the high volumes of data are becoming more important for companies to make marketing decisions. This means that more and more decisions are backed up by data instead of intuition and gut feeling. This study examines the impact of marketing intelligence on SMEs. The main research question is: *How can marketing intelligence enhance data-driven decision-making to increase value-creating actions in SMEs through dynamic capabilities?* It specifically focusses on the processes that lead to decision-making and value-creating actions in order to understand how marketing intelligence usage can lead to value. These processes will be explained in terms of the dynamic capabilities perspective and focuses on an SME's search and select capability and its asset orchestration capability.

To meet the research objectives a qualitative multiple case study and an additional quantitative approach was chosen. The research was based on interviews with SMEs that make use of a marketing intelligence platform. These semi-structured interviews were conducted with ten marketing managers of ten different SMEs in the Netherlands. The questionnaires were completed by the same marketing managers.

The results show that marketing intelligence gives marketers and other decision-makers insights into their marketing activities wherefore they are better able to search for the most promising opportunities. Therefore, marketing intelligence improves an SME's search capability. Moreover, these insights are used by SMEs to make data-driven decisions and to select the most promising opportunities. Because of these insights, marketers are able to enhance their decision-making and it allows them to prioritize the most important things. However, the findings show that SMEs might face some challenges while selecting an opportunity. They need to feel familiar with using data, trust the data and they should not have too much data. These challenges make it difficult for (marketing) managers and other decision-makers to translate the insights that arise from their search capability into concrete decisions and actions. In order to put data-driven decisions into effect, an SME needs to be able to orchestrate its assets. The SMEs who can adapt quick to new surroundings are the most successful ones in an age of accelerating change. Therefore, SMEs need to be flexible and budgets may rise. If SMEs are able to orchestrate their assets, they are better able to put decisions that arise from their marketing intelligence platform into effect and develop and implement value-creating actions.

This study contributes to the existing literature of marketing intelligence since there is a gap in this research area. The results of this study reveal that SMEs should invest in marketing intelligence as it enhances their decision-making. It, moreover, enables them to develop and implement value-creating actions. Thus, in order to get the most out of their marketing activities, SMEs should consider the implementation of a data-driven marketing strategy and the use of a marketing intelligence platform.

Keywords: Marketing Intelligence, Dynamic Capabilities, Small and Medium-Sized Enterprises, Search and Select Capability, Asset Orchestration Capability

*“Marketing without data is like driving
with your eyes closed.”*

Dan Zarrella

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List of definitions

Concept	Definition
Asset orchestration capability	Asset orchestration refers to assembling and orchestrating configuration of co-specialized assets in order to stimulate innovation and create new market opportunities (Helfat et al., 2007).
Data-driven decision-making	Data-driven decision-making refers to the practice of basing decisions on the analysis of data rather than purely on intuition (Provost & Fawcett, 2013).
Dynamic capabilities	<i>“The capacity of an organization to purposefully create, extent, or modify its resource base”</i> (Helfat et al., 2007, p. 4).
Marketing intelligence usage	The use of marketing intelligence which involves collection, management, and analysis – descriptive, diagnostic, predictive, and prescriptive – of data to obtain insights into marketing performance, maximize the effectiveness of instruments of marketing control, and optimize firm’s return on investment.
Search and select capability	The search process involves the identification of an opportunity, whereas the selection process involves formulating actions and resource allocation (Helfat et al., 2007).
Small and Medium-sized Enterprises	<i>“Non-subsidiary, independent firms which employ fewer than a given number of employees”</i> (OECD, 2000, p. 2).
Value-creating actions	Value-creating actions refer to the development or launch of new products or marketing campaigns, creation of new channels for customer interactions, or introduction of differential pricing (Sharma & Shanks, 2011).

1. Introduction

1.1 Relevance

Companies are constantly looking for new ways to achieve and sustain a competitive advantage. In the past years, business intelligence has become important for companies that want to be and stay competitive. In 2010, business intelligence was the fifth most important technical priority and the use of information and analytics was the third most important business priority for Chief Information Officers (Gartner Group, 2010). MIT's Sloan Management Review and IBM conducted a survey in 2011 and found that the number of companies that want to differentiate themselves from their competitors by using business intelligence is increasing (Kiron & Shockley, 2011). Improved productivity and market value are benefits of data-driven decision-making as Brynjolfsson et al. (2011) found that companies who made use of this type of decision-making had 5-6% higher productivity rates. However, although the use of business intelligence has grown over the past years, most companies still use traditional technology and spreadsheets are the most used tool for business intelligence. Moreover, business intelligence tends to be used within departments or business units and not across the whole company (Hariharen & Thangavel, 2016). Therefore, intuition is still the driving factor in decision-making. Besides this, the implementation of business intelligence is often seen as difficult and challenging as it extends beyond simple software and hardware implementations. Moreover, it is often considered as being more complicated to deploy and run.

Nowadays, the high volumes of data are becoming more important for companies to make marketing decisions. This specific type of business intelligence is called marketing intelligence. Because of improvements in the areas of qualitative and quantitative research, marketers can better understand the customer, the market and the competition. The marketing literature has come up with several benefits of using marketing intelligence with the improvement in overall decision-making as an underlying theme. However, McKinsey and Co (2009) found that only 10% out of 587 executives of large international companies use marketing intelligence on a regular base. Moreover, Kucera and White (2012) surveyed 160 business leaders and found that only 16% is using marketing intelligence. These low numbers imply that many managers are not convinced about the benefits of using marketing intelligence. Furthermore, as most of the literature is focussing on business intelligence and analytics, there is a lack of research that addresses the value that can be created from the use of marketing intelligence.

While the existing literature in the field of business and marketing intelligence has largely focused on large companies (Popovič et al., 2012; Wixom & Watson, 2010), studies that address the impact on Small and Medium-sized Enterprises (SMEs) are scarce. SMEs account for over 95 percent of the business population and for over 60 percent of employment (OECD, 2000). They, moreover, play an important role in the creation of jobs and economic growth in a sustainable manner. The need to increase the competitive environment of SMEs is of high importance as they have become a source of economic development (Llave, 2017). However, SMEs are often viewed as vulnerable which makes monitoring the business and using (information) resources efficiently essential in order to survive (Raj et al., 2016). Intelligence

systems are important for SMEs as it helps them in managing their customers. And as customers are one of the most important aspects of SMEs, intelligence systems can help SMEs to maintain a positive relationship with their customers (Gauzelin & Bentz, 2017).

This study is executed at the Dutch start-up IKUU that developed a marketing intelligence platform which makes marketing efforts measurable and visible. IKUU collects data from companies' digital marketing tools and combines the insights in a clear and comprehensive way. It, therefore, helps the companies with their decision-making by graphically visualizing the data, zooming in on patterns and providing them with periodic reports. IKUU assists its customers by generating insights from their data in case if they face problems with that. Therefore, IKUU tries to overcome the challenges of using marketing intelligence. IKUU is currently in the first phases of its business lifecycle and wants to attract more customers to expand its current customer base. In order to achieve this, IKUU wants to gain insights on the value that can be created from using marketing intelligence. They, moreover, want to create awareness among potential customers about the possibilities and benefits of using IKUU's marketing intelligence platform.

1.2 Research goal and questions

This study examines how SMEs create value from the use of marketing intelligence. The increasing amount of data enables (marketing) managers and other decision-makers to use marketing data for decision-making and value creation. However, there is little research about the processes that are involved in creating value from the use of marketing intelligence. Therefore, this study focusses specifically on the processes that lead to decision-making and value-creating actions in order to understand how marketing intelligence usage leads to value. These processes can be explained through the concept of dynamic capabilities. Therefore, the main research question is formulated as follows:

How can marketing intelligence usage enhance data-driven decision-making to increase value-creating actions in SMEs through dynamic capabilities?

In order to answer the main research question, it is subdivided into two sub-questions. These questions will provide an answer to the main research question and are defined as follows:

SQ1: How does the use of marketing intelligence enhance data-driven decision-making in SMEs?

SQ2: How does marketing intelligence based decision-making lead to value-creating actions in SMEs?

1.3 Practical and theoretical contribution

This study provides new insights into the impact of marketing intelligence on data-driven decision-making and value-creating actions in SMEs as this relationship has received limited research attention. The existing research largely focuses on the influence of business intelligence and analytics on firm performance. Therefore, this study contributes to the existing

literature by using empirical research to examine the impact of marketing intelligence. Moreover, most studies have focused on the impact of intelligence systems on large companies and neglect the impact on SMEs. For example, Germann et al. (2013) focused on the relationship between the deployment of marketing analytics and the performance of Fortune 1000 companies. Therefore, this study contributes to the existing literature as research about the impact of marketing intelligence on SMEs is still scarce.

Although the impact of marketing intelligence on firm performance has been studied, the processes involved in realizing those performance gains has not been clearly defined in the literature. Therefore, this study fills a research gap by examining the processes that lead to an enhancement of data-driven decision-making and value-creating actions. Moreover, studies about the mechanisms that are driving the relationship between marketing intelligence usage and firm performance are still lacking in the existing literature as the focus was more often on business intelligence.

Additionally, studies with empirical evidence about the relationship between intelligence systems and dynamic capabilities are scarce. Sharma et al. (2010) came up with a theoretical model that draws on the dynamic capabilities literature but this was not empirically tested. This study also provides new insights into the dynamic capabilities perspective with regard to the search and select capability. It, therefore, extends the existing literature of dynamic capabilities.

With the growing interest in data-oriented business practices, this study has important implications for practice. The low number of business leaders that use marketing intelligence in the study of Kucera and White (2012) implies that many managers are not convinced about the benefits of marketing intelligence. This study is useful for (marketing) managers who are doubtful about the implementation of marketing intelligence within their company. It will, moreover, provide (marketing) managers with new valuable information about the possibilities and benefits of using marketing intelligence. This study will, therefore, serve as a way to convince them about the benefits of using a marketing intelligence platform.

2. Literature review

2.1 Business intelligence and analytics

Business intelligence has become increasingly popular in the past years. The use of business intelligence and analytics can be helpful as companies create greater value out of their data assets and are thus more likely to outperform their competitors (Sidorova & Torres, 2015). Business intelligence and analytics can be defined as a “*unified term to describe information-intensive concepts and methods for improving business decision-making*” (Llave, 2017, p. 195). Davenport (2006, p. 8) considers business intelligence as a concept that “*encompasses a wide variety of processes and software used to collect, analyse, and disseminate data, all in the interest of better decision-making*”. Additionally, Wixom and Watson (2010, p. 13) acknowledge that business intelligence is “*an umbrella term that is commonly used to describe the technologies, applications, and processes for gathering, storing, accessing, and analysing data to help users make better decisions*”. Finally, according to Sabanovic and Sjøilen (2012), business intelligence is a concept that encompasses processes, tools and techniques to make decision-making processes in businesses faster and more effective.

The different definitions of business intelligence make it clear that it improves a company’s decision-making. Business intelligence provides tools and techniques (e.g. data visualization) that are used to explore past business data in order to develop new insights into a company’s performance. The goal of using business intelligence is to inform the management about the health of the company and to explain what to expect in the future (Hariharen & Thangavel, 2016).

Besides supporting a company in its decision-making, business intelligence has other advantages. Wieder et al. (2012) argue that the use of business intelligence can lead to reduced costs, increased revenues and increased profit margins. Sabanovic and Sjøilen (2012) state that business intelligence does not only lead to better and more efficient decision-making processes, but also influences the entire company by improving its return on investment, hire the best employees and gain new customers and suppliers. Because of business intelligence, managers have a greater understanding of the company and the environment that it operates in (Sabanovic and Sjøilen (2012). Business intelligence leads to information gathering which is used for the development of strategic plans. These strategic plans allow a company to attract the best employees, target and reach customers in a better way and, in turn, achieve the best return on investment. Therefore, business intelligence has a positive impact on a company’s performance. However, there can be some difficulties in measuring the actual outcome of any of the implemented intelligence systems. If this is the case, the overall outcome can be used to measure the effectiveness of the intelligence systems (Amara et al., 2012).

According to Davenport and Harris (2007), using business intelligence can result in significant value and competitive advantage for companies when it is deeply embedded in their business processes. They argue that business intelligence can influence performance and create a sustainable competitive advantage. According to the results of Gauzelin and Bentz (2017), 95%

of the interviewed managers mentioned that intelligence systems have many other advantages besides timely decision-making. One of the benefits of their study was the increased efficiency and productivity of the companies. The results show that business intelligence systems have an impact on return of investment as it offers a cost and time-saving method to gather business-related information. Budgets that would have otherwise been spent on market research will be used for other important aspects of a company. Moreover, their results show that 70% of the interviewed junior employees think that intelligence systems help to improve productivity and in turn performance. Finally, 96% of the interviewed managers and 85% of the junior employees agreed that their companies should use intelligence systems in the future as well.

However, success with business intelligence systems needs additional conditions (Wixom & Watson, 2010). For business intelligence to be successful, senior management must believe in and must drive the use of it. Therefore, they should provide the necessary resources and insist on the use of data-driven decision-making. Moreover, the use of intelligence systems must be part of the organization's culture. Finally, the company must have high-quality data as employees will not rely on or accept data if they do not trust it.

2.2 Marketing intelligence

Marketing intelligence is an element of business intelligence as it is an intelligence system that is specifically used for marketing. Business intelligence can obtain important marketing information which can be referred to as an intelligent way of gathering information that can be used in marketing functions. Sjøilen (2010) confirms this by arguing that business intelligence systems can be used to gather information that can be employed during marketing campaigns.

Marketing intelligence can be defined as a “*technology-enabled and model-supported approach to harness customer and market data to enhance marketing decision-making*” (Lilien, 2011, p. 5). This definition emphasizes the positive impact of using marketing intelligence on a company's decision-making process. According to Wedel and Kannan (2016, p. 98), “*marketing analytics involves collection, management, and analysis – descriptive, diagnostic, predictive, and prescriptive – of data to obtain insights into marketing performance, maximize the effectiveness of instruments of marketing control, and optimize firm's return on investment*”. Some authors argue that the use of marketing intelligence does not lead to improved firm performance as it can slow companies down which leads to market opportunities that are not being seized by the analytics-oriented company (Harari, 1996). However, most of the literature describe the positive impact of the use of marketing intelligence on firm performance. Elsner et al. (2004) found that a German mail order company increased its customer base with more than 55% and its profitability was quadrupled during the first few years after the implementation of a marketing intelligence platform. Because of their marketing intelligence platform, they were able to answer its most important marketing questions: When, to whom, and how often should we mail our catalogues? Kannan et al. (2009) examined the impact of a marketing intelligence platform at the National Academies Press (NAP). They concluded that the use of marketing intelligence leads to a better customer understanding and to better ways of reaching the customers.

The underlying theme of these examples is that the use of marketing intelligence allows SMEs to develop products and services that meet customers' needs and wants. Because of the use of marketing intelligence, marketers know which marketing campaigns were successful and which were not. Moreover, they can use analytical data to develop new and better ways for marketing campaigns in the future. They can, for example, simplify processes to increase consumer response or analyse which keywords are most used and which keywords lead to conversion. Kohavi et al. (2002) describe marketing intelligence as applications that can increase customer profitability, reduce customer attrition, and increase the response rate of email marketing campaigns.

Marketing intelligence must take place in all phases of the process of customer involvement (Hauser, 2007). During the awareness process, it will focus on getting to know the potential customer. It is important to know the demographics of the potential customer and how he or she did get in contact with the SME and its products. Moreover, an SME wants to know why the potential customer is interested in the product and whether he or she need additional information. Based on this information, marketing intelligence can be used to qualify and target the potential customer with the right offers. The last step in this process consists of the final purchase outcome that will be recorded by the data.

2.3 Small and Medium-sized Enterprises

SMEs are “*non-subsidiary, independent firms which employ fewer than a given number of employees*” (OECD, 2000, p. 2). This number is different across national systems, but the most frequent upper limit is 250 employees. This is also the limit in the European Union. The financial aspect is also a characteristic of SMEs. SMEs' upper limit annual turnover is EUR 40 million and/or the balance-sheet valuation cannot be more than EUR 27 million (OECD, 2000).

Intelligence systems are more adopted in large companies than in SMEs. SMEs consider business intelligence to be more effective for large companies that invest highly in technologies as they have the required resources to implement and maintain such a technology system (Gauzelin & Bentz, 2017). Moreover, they hire highly skilled people to work with the business intelligence systems. However, SMEs can make use of those intelligence systems that are not difficult to use and do not require high skilled personnel.

SMEs make use of intelligence systems to manage their customers. Sjøilen (2012) conducted a research on SMEs in Sweden and found that SMEs use intelligence systems to manage customers and combine information in a quick and easy manner. In this way, the use of intelligence systems is important for SMEs as it helps them with managing their customers. SMEs can also use intelligence systems to spend their budget efficiently. The budget of an SME reflects how to reach goals by maximizing the available resources (Gauzelin & Bentz, 2017). Lueg and Lu (2013) argue that intelligence systems can be used to enhance budget efficiency as it increases transparency, simplicity and friendliness. These factors are essential in improving data validation and thus increase SMEs' budget efficiency.

Furthermore, SMEs can use intelligence systems in dealing with their competition. The businesses of today operate in a dynamic environment and competition is the main factor in determining the strategies of the business. SMEs should learn to deal with the competition which can be achieved by making SMEs more agile and proactive in their decision-making (Gauzelin & Bentz, 2017). Guarda et al. (2013) confirm this by arguing that SMEs that make use of intelligence systems compete more effectively and, in turn, have a leading position in their market. This is due to the additional information they have about their customers and competitors. SMEs use intelligence systems as they are interested in information about their customers and competitors in order to differentiate their offerings and positioning. Moreover, beyond gathering information, SMEs need to use the obtained information to make well-informed decisions. Today's businesses are dealing with increased volumes of data and intelligence systems can help them in deriving insights from it.

2.4 The impact of marketing intelligence on SMEs

2.4.1 Dynamic capabilities

Sharma et al. (2014) argue that further research needs to be conducted to understand the role of decision-making in order to know how companies create value from the use of intelligence systems. They argue that the first-order effects of using intelligence systems are on decision-making. Additionally, improved firm performance is likely to be an outcome of improved decision-making that is enabled by the use of intelligence systems. In this study, the second-order effects of marketing intelligence refer to value-creating actions as these actions deliver performance gains. This means that improved performance is the result of the development and implementation of value-creation actions. Therefore, value-creating actions mediate the relationship between intelligence systems and firm performance (Sharma et al. 2010). However, since firm performance depends on several factors and is difficult to be traced to the use of marketing intelligence, it will not be included in this study.

According to the resource-based view (Barney, 1991; Wade & Hulland, 2004) are organizational resources the basis in improving firm performance. Resources refer to “*specific physical, human and organizational assets that can be used to implement value-creating strategies*” (Eisenhardt & Martin, 2000, p. 1107). Organizational resources can be intangible or tangible and include technical (equipment, systems), human (people, skills) and organizational (processes, routines) capabilities. Resources must be valuable, rare, inimitable and non-substitutable to be of strategic value (Barney, 1991). Improved performance can be assigned to the unique capabilities of a company that enables them to perform activities more effectively and efficiently than the competition (Amit & Schoemaker, 1993). In response of the static nature of operational capabilities was the concept of dynamic capabilities introduced. Organizational capabilities do not focus on changes due to the environment but focus on ‘resource picking’ (Barney, 1991) while dynamic capabilities focus on ‘resource renewal’ (Teece et al., 1997). Since SMEs operate in a rapidly changing environment and marketing intelligence usage reveals (unexpected) ways to adjust and improve marketing activities, the focus of this study is on dynamic capabilities that continually change resources to address rapid changes in the environment.

Dynamic capabilities refer to “*the capacity of an organization to purposefully create, extend, or modify its resource base*” (Helfat et al., 2007, p. 4). Dynamic capabilities build, integrate and reconfigure external and internal resources in order to respond to changes in the environment (Shanks, 2012). The resource base contains the “*tangible, intangible and human assets (or resources) as well as capabilities which the organization owns, controls, or has access to on a preferential basis*” (Helfat et al., 2007, p. 4). The key role of the dynamic capabilities perspective is to enable companies to change their way of doing things (Helfat et al., 2007). In themselves, dynamic capabilities are not a source of long-term competitive advantage wherefore they require managers to take action in order to effectively use a company’s resources and achieve innovative changes (Eisenhardt & Martin, 2000). Dynamic capabilities depend on real-time information in order to quickly react to market changes and to take necessary actions. In this way, marketing intelligence is related to dynamic capabilities as marketing intelligence provides a company with real-time information.

The concept of dynamic capabilities is used in several studies in order to understand how intelligence systems create value (Sharma, 2011; Sharma & Shanks, 2011; Wang & Byrd, 2017). The use of intelligence systems can lead to improved firm performance and competitive advantage, but this does not always follow from just the implementation of intelligence systems (Sharma & Shanks, 2011). Sharma and Shanks (2011) argue that dynamic capabilities lead to value-creating actions and improved firm performance if these capabilities are enabled by intelligence systems. Previous research that focused on the relationship between business and marketing intelligence and firm performance ignored the role that managers play in the creation of value through identifying opportunities, orchestrating assets and taking actions (Helfat et al., 2007). The dynamic capabilities perspective tackles this problem as it focuses on the role of managers in creating value from the use of intelligence systems. Therefore, as the focus of this study is on how SMEs create value from marketing intelligence usage, the dynamic capabilities perspective serves as the appropriate way to explain this.

The dynamic capabilities perspective comprises two organizational capabilities: search and select capability and asset orchestration capability (Helfat et al., 2007). The search capability refers to the identification of an opportunity, whereas the select capability refers to formulating actions and resource allocation (Helfat et al., 2007). The search and select capability provides decisions and the commitment of resources. The asset orchestration capability focuses on the ability to put decisions into effect and execute changes that depends on the ability to orchestrate assets (Helfat et al., 2007). Asset orchestration refers to “*assembling and orchestrating configuration of co-specialized assets*” in order to stimulate innovation and create new market opportunities (Helfat et al., 2007, p. 26).

DeLone’s and McLeans’s (1992; 2002; 2003) information systems success model has also received a lot of attention in this research area in the past decades (Wieder et al., 2012). This model provides a comprehensive overview of information system success by identifying and describing the relationships among six dimensions of success. Wieder et al. (2012) built upon this information success model and developed a business intelligence quality and performance

model. However, these studies do not pay attention to the processes and the role of managers and other decision-makers in creating value from intelligence systems.

2.4.2 Data-driven decision-making

With regard to the concept of dynamic capabilities, Sharma et al. (2014) recognize the improvement of a company's search and select capability as a result of the use of business intelligence. Sharma et al. (2011) argue that the search and select capability depends on managerial processes that identify actions to improve performance and commit resources to specific courses of action. These managerial processes often rely on information to support the search and select capability. Business and marketing intelligence deliver relevant and high-quality data and information to decision-makers which improves an SME's search and select capability. Subsequently, these data and information will be used for decision-making. Given the fact that the search and select capability provides decisions (Helfat et al., 2007), it is likely that an SME's search and select capability explains the relationship between marketing intelligence and data-driven decision-making. An SME is able to enhance its data-driven decision-making by using marketing intelligence as it provides relevant and high-quality information for decision-making.

Data-driven decision-making refers to "*the practice of basing decisions on the analysis of data rather than purely on intuition*" (Provost & Fawcett, 2013, p. 53). For example, a marketer could choose advertisements based on experience and gut feeling or on the analysis of data with regard to how customers react to different advertisements. The definitions of business and marketing intelligence recognize their contribution to decision-making. Intelligence systems provide high-quality information to companies which is essential in their decision-making processes (Popovič et al., 2012). This is due to the fact that intelligence systems create an opportunity for decision-makers to have timely access to information, effectively analyse it and present the right information. SMEs are able to make the right decisions and take the right actions because of intelligence systems. Therefore, it should be considered as the ability to think, plan, predict and solve a problem in an innovative way (Popovič et al., 2012).

Managers and other decision-makers have recognized the importance of decision-making that is driven by data as opposed to decision-making that is intuition-based. They, moreover, want to manage their companies in this manner (Rouhani et al., 2016). Watson and Wixom (2007) argue that managers and other decision-makers use intelligence systems to interpret organizational data in order to improve decision-making. Shanks and Bekmamedova (2012) state that intelligence systems need to be embedded in the decision-making processes of managers and other decision-makers. Moreover, decision-makers should implement an 'evidence-based management' culture and intelligence systems should be part of this culture. Furthermore, they state that intelligence systems should be aligned with the strategy of the company and should contribute to strategy development. Davenport (2010) argues that a company needs to be provided with information on consumer behaviour which is constantly changing. Intelligence systems can, therefore, provide an SME with information that is essential

for decision-making. Therefore, the use of marketing intelligence is of high importance in helping (marketing) managers with making decisions.

Intelligence systems provide tools that help in analysing business information which gives managers and other decision-makers the data that is needed in their decision-making processes (Gauzelin & Bentz, 2017). The results of Gauzelin and Bentz (2017) show that 89% of the interviewed managers recognize the positive influence of intelligence systems on their decision-making processes. They argue that intelligence systems provide tools that enable companies to base their decision-making on reliable knowledge. Intelligence systems combine historical data and real-time data wherefore it enables managers to make decisions efficiently and with a high level of confidence as the provided information is highly reliable (Gauzelin & Bentz, 2017). Thus, intelligence systems provide essential information that is used to make timely decisions which brings efficiency to the company. Besides providing timely information, intelligence systems lead to high-quality data as it is analysed and free of errors (Wieder and Ossimitz, 2015). The only thing managers have to do is to interpret the results.

2.4.2 Value-creating actions

It seems likely that a higher quality of decision-making leads to value-creating actions. But having high-quality decision-making does not automatically mean that those high-quality decisions will be implemented successfully and lead to value-creating actions. This is exactly where an SME's asset orchestration capability comes into play. The asset orchestration capability is the ability to put decisions that arise from the search and select capability into effect by the implementation of new combinations of assets (Teece, 2009). This means that if SMEs are able to orchestrate their assets, they are better able to put the data-driven decisions into effect and develop and implement value-creating actions. Therefore, it is likely that the asset orchestration capability positively influences the relationship between data-driven decision-making and value-creating actions.

Research on this perspective suggests that a company's asset orchestration capability has an important influence on its performance (Helfat et al, 2007; Teece, 2009). Asset orchestration capabilities depend on managerial processes to undertake change (Sharma et al., 2011). These changes refer to new processes, new products and new decision-making processes, which can also be referred to as value-creating actions. The underlying theme of the asset orchestration capability is that companies has to maintain competitiveness through combining, enhancing, protecting and reconfiguring the company's assets.

According to Sharma et al. (2010), intelligence systems collect new information and knowledge through the analysis of data and employing that gained knowledge in order to develop and implement value-creating actions. Shanks and Sharma (2011) describe that dynamic business analytics capabilities are the processes for identifying needs and opportunities and allocating resources for them. They, moreover, propose that dynamic business analytics capabilities lead to value-creating actions. These actions can, with regard to marketing intelligence, refer to the development of new marketing campaigns. The insights gained from the use of marketing

intelligence are used to implement these value-creating actions. These value-creating actions can, in turn, drive firm performance. Marketing managers and other decision-makers have an important role in taking action after opportunities and needs are identified and asset are orchestrated. They use insights that are derived from analysing data and use these insights to launch new products, create new channels for customers interaction or develop new marketing campaigns (Shanks & Sharma, 2011)

2.5 Theoretical framework

Figure 1 shows the combined effects of marketing intelligence usage and data-driven decision-making on value-creating actions. It, moreover, shows the mediating role of the search and select capability and the moderating role of the asset orchestration capability. The relationship between marketing intelligence usage and data-driven decision-making can be explained by an SME’s search and select capability since marketing intelligence provides marketers and other decision-makers with relevant and high-quality information that enhances their decision-making. Additionally, the asset orchestration capability positively influences the relationship between data-driven decision-making and value-creating actions. If SMEs are able to orchestrate their assets according to the decisions that are based on their marketing intelligence platform, they are better able to put these decisions into effect and implement value-creating actions.

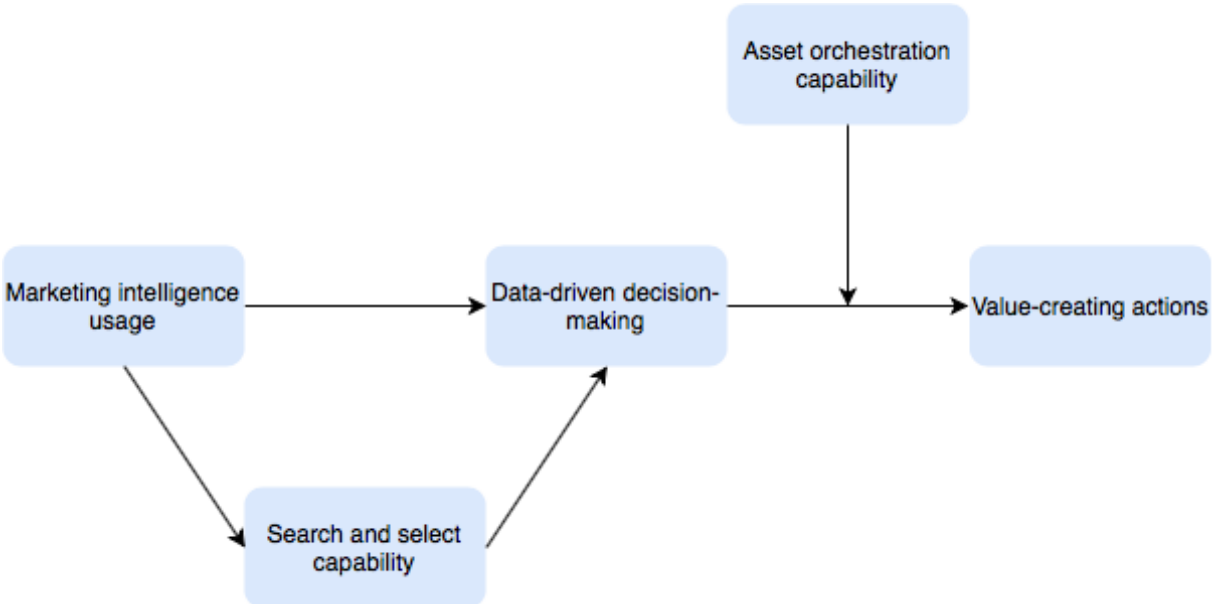


Figure 1. Theoretical framework

3. Methodology

3.1 Research objective

The research objective of this master thesis was to examine how SMEs create value through the use of marketing intelligence. It is assumed that the use of marketing intelligence positively influences an SME's decision-making which, in turn, lead to value creating actions. This research aimed to identify the processes that are involved in creating value from marketing intelligence usage. An SME's search and select capability explains how marketing intelligence usage enhances data-driven decision-making. Furthermore, since an SME needs to orchestrate its assets in order to turn data-driven decisions into value-creating actions, an SME's asset orchestration capability positively influences the relationship between data-driven decision-making and value-creating actions.

3.2 Research approach

As literature in the field of marketing intelligence is still in its early stages and requires further investigation and exploration, the purpose of this study was exploratory and qualitative. An advantage of this type of research is that it is "*flexible and adaptable to change*" (Saunders et al., 2009, p. 140). The aim of this research was to build a theory and gain insights in the area of marketing intelligence. An exploratory case study is most appropriate when the amount of research is limited and when the researcher wants to explore a specific phenomenon (McCutcheon & Meredith, 1993). Moreover, as the use of marketing intelligence by SMEs is still limited, an exploratory research seems to be the appropriate research approach.

A theoretical framework was developed based on the literature review. However, the data could reveal insights that were not covered in the theoretical framework. Therefore, an abductive approach was chosen as this combines theory and reality (Dubois & Gadde, 2002). This type of approach relies stronger on theory than an induction approach. Dubois and Gadde (2002) argue that an abductive approach has the potential to yield more than an inductive approach as it takes advantage of both the empirical world and theoretical models.

3.3 Research design

3.3.1 Research strategy

A case study was chosen as the appropriate research strategy for this study. A case study can be defined as "*an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used*" (Yin, 1984, p. 23). A case study is one of the most recommended research strategies for exploratory research (Sanders et al., 2009). An advantage of a case study is that data is collected within the context where the phenomenon actually takes place which lowers the chance of distortion (Yin, 1984).

This study makes use of a multiple case study approach in order to examine how SMEs can create value through the use of marketing intelligence. Multiple case studies are preferred over

single case studies as it enables the researcher to see whether findings from the first case are the same as in other cases (Yin, 2003).

3.3.2 Selection of cases

This study was initiated and carried out at the Dutch start-up IKUU and the cases were selected in consultation with them. Some of IKUU's customers have been adopted as cases for this research, but this was not a prerequisite as there are a lot of other marketing intelligence platforms. Secondary sources such as the company's website were used to select the right companies. Two criteria were set to determine which companies were useful for this research. The size of the company was one of the inclusion criteria as this study focused on SMEs. Therefore, the upper limit of employees was 250. The second criteria for inclusion was the use of marketing intelligence. Companies must use a marketing intelligence platform in order to be included in this research. This can be IKUU's platform, Google Analytics, marketing automation etc. In total ten interviews with SMEs were conducted. These SMEs were all operating in different sectors ranging from online marketing companies to a company that offers business solutions.

3.3.3 Sample

An overview of the interviewed companies can be found below. Privacy of the respondents was granted and responses were anonymously wherefore the name of the SME and the respondents is kept secret. All SMEs are located in the Netherlands.

The first interview was held with the marketing manager of a company that consists of counsellors who help professionals to become better entrepreneurs, based on their own developed model. They coach the professionals how to manage their company and to make their company stronger, healthier and more valuable. It is an SME and their daily activities are also focused on professionals of SMEs. The second interview was held with the marketing manager of a full-service digital marketing agency. They work for different companies and they combine all marketing activities to get a clear overview of the results of their customers' efforts. They set up campaigns, create content and give advice to their customers. The third interview was held with the marketing manager of a startup studio that creates businesses by connecting and evolving entrepreneurs and corporate investors. The team consists of people who have a broad experience in corporate innovation, entrepreneurship and technology. The fourth company developed a flexible client tracking system for the healthcare. The interview was held with the inbound marketing manager of this company. The fifth company is a creative marketing agency and the interview was held with the marketing manager. They create a marketing strategy for their customers and they take care of design, content, online marketing and marketing execution.

The sixth interview was held with the digital marketer of a full-service digital agency. They work in the areas of strategy, marketing, design and technology. The seventh interview was held with the marketing manager of a museum for Dutch Modern Realism. Last year, they made several adjustments to their website based on insights that were derived from their marketing

intelligence platform. The eighth and ninth interviews were held with marketing managers of the second company, the full-service digital marketing agency. However, the second interview concerned the activities of this company and the eighth and ninth interviews concerned activities of their customers. The respondents of these two interviews were told to keep in mind examples of campaigns they did for SMEs while answering the interview questions. Finally, the tenth interview was held with the marketing manager of a business services company. They focus on ensuring business continuity through monitoring and the security of infrastructure, applications and business processes. Additionally, they take care of the translation of IT performance to the optimization of business activities and results.

An overview of the positions of the interviewees, the type of companies and the length of the interviews can be found in Table 1.

Table 1. Overview of the interviews

Interview	Position of interviewee	Type of company	Length
1	Marketing manager	Management consultancy agency	12:13
2	Marketing manager	Full-service digital marketing agency	08:12
3	Marketing manager	Startup studio	10:52
4	Inbound marketing manager	Software developer	09:26
5	Marketing manager	Creative marketing agency	18:34
6	Digital marketer	Full-service digital agency	18:25
7	Marketing manager	Museum	07:39
8	Marketing manager	Full-service digital marketing agency: activities of their customers	13:29
9	Marketing manager	Full-service digital marketing agency: activities of their customers	15:07
10	Marketing manager	Business services company	09:57

3.4 Data collection

Data was collected from both primary and secondary sources to answer the research questions. First data was collected on the websites of the organizations in order to find out how many employees the company employed. The main data was collected by conducting ten semi-structured interviews. Because of this type of interview, it was possible to deepen the questions and answers while maintaining the possibility to change the direction when needed. However, simultaneously a certain structure is maintained (Lee, 1999).

The interviews were conducted on a one-to-one basis. Eight of them were video call interviews and two were personal meetings that took place in a meeting room of the SME. All interviews were scheduled according to the preference of the interviewees. Every interview contained predefined questions, but new ones were added during the interview to get a deeper understanding. All interviews were audio-recorded in order to transcribe it for the analysis. All interviewees gave permission for being audio-recorded.

The definition of marketing intelligence was made clear at the beginning of the interviews in order to avoid ambiguity. Wedel and Kannan's (2016, p. 98) definition of marketing intelligence was shortened and simplified. This led to the following definition: "*Marketing intelligence involves collection, management and analysis of data to obtain insights into marketing performance, maximize the effectiveness of marketing instruments, and optimize firm's return on investment*".

3.5 Operationalization

An operationalization of the theoretical concepts of the qualitative research can be found in Table 2.

Table 2. Operationalization qualitative research

Concept	Definition	Operationalization
Marketing intelligence usage	The use of marketing intelligence which involves collection, management, and analysis – descriptive, diagnostic, predictive, and prescriptive – of data to obtain insights into marketing performance, maximize the effectiveness of instruments of marketing control, and optimize firm's return on investment	Does your company make use of marketing intelligence? Why?
Search and select capability	The search process involves the identification of an opportunity, whereas the selection process involves formulating actions and resource allocation (Helfat et al., 2007).	How did the information from your marketing intelligence tool help you with making decisions?
Data-driven decision-making	Data-driven decision-making refers to the practice of basing decisions on the analysis of data rather than purely on intuition (Provost & Fawcett, 2013).	Does the information from the marketing intelligence tool help you with making decisions?
Asset orchestration capability	Asset orchestration refers to assembling and orchestrating configuration of co-specialized assets in order to stimulate innovation and create new market opportunities (Helfat et al., 2007).	What was needed to implement the decisions and to realize the advantages?
Value-creating actions	Value-creating actions refer to the development or launch of new products or marketing campaigns, creation of new channels for customer interactions, or introduction of differential pricing (Sharma & Shanks, 2011).	What are other advantages of using marketing intelligence? Can you mention an example of such an advantage?

3.6 Data analysis

The interviews were voice recorded and transcribed as this makes it easier to analyse the interviews. In order to analyse the data from the interviews, the transcripts were transferred to the qualitative data analysis software ATLAS.ti.8. Codes were used to group the data and to provide a structure for analysing the data (Saunders et al., 2009). Terms that can be used as codes can emerge from the data or can be found in existing theory and literature. All interviews

were read multiple times to identify the codes. The main codes in this study were based on the literature review and the interview topics and can be found in Table 3.

Table 3. Main codes

Main codes
Marketing intelligence usage
Data-driven decision-making
Search and select capability
Value-creating actions
Asset orchestration capability

In the process of analysing the data further sub-codes emerged in order to refine the analysis as recommended by Dey (1993). These sub-codes can be found in Table 4.

Table 4. Main codes and sub-codes

Main codes	Sub-codes
Marketing intelligence usage	Gain insights Communication with customers
Search and select capability	Search for opportunities Select opportunities
Data-driven decision-making	Reliable knowledge Enhancement of data-driven decision-making Challenges
Asset orchestration capability	Flexibility Resource acquisition
Value-creating actions	Improve results Change strategy

3.7 Additional quantitative research

In addition, a quantitative research design was chosen to support the findings of the qualitative research. The quantitative method was used to support the model that was derived after reviewing the existing literature. Tashakkori and Teddlie (2003) state that using multiple methods is useful as it provides better opportunities to answer the research questions. It, moreover, gives the researcher the opportunity to better evaluate whether the findings can be trusted.

A questionnaire was used to complement the findings that were derived from the interviews. Data that is collected using a questionnaire can be used to propose possible reasons for relationships between variables (Saunders et al., 2009). These data are standardised which makes it easy to compare. The online questionnaire was developed in the web-based tool “Qualtrics” and was written in Dutch. As literature in the field of this study is scarce, there were no existing scales. Therefore, a scale had to be created. The survey was sent to the respondents

immediately after the interview took place and all respondents completed the survey the same day. Privacy of the respondents was granted and responses were anonymously.

All items were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This type of Likert scale was used for several reasons. First, using a five-point scale makes it possible to compare the results easily. Previous research found that a five-point Likert scale enables respondents to express their perceptions (Marton-Williams, 1986). It, moreover, makes questions less confusing to interpret (Hayes & Hayes, 1992). An overview of the operationalization of the concepts of the quantitative research can be found in Table 5.

Triangulation is often used as a data collection method in case studies. It is the “*use of different data collection techniques within one study in order to ensure that the data are telling you what you think they are telling you*” (Saunders et al., 2009, p. 146). This study made use of methodological triangulation as interviews and questionnaires were used to gather data.

After the data collection, the quantitative data was analysed using SPSS. A frequency table was made to get an overview of the answers on the statements. Thereafter, a correlation matrix was made to measure the strength of association and the direction of the relationship between the variables. David (193) recommends the use of the Pearson test only if the sample size is bigger than 25. As this research contains 10 cases, the Pearson test was not the appropriate test for this research. Therefore, a non-parametric test was chosen to measure the strength. Kendall’s tau is preferred over the Spearman rank correlation as it gives a better estimate of the correlation (Howell, 1997). Moreover, Kendall’s tau should be used when the research contains a small data set (Field, 2013).

Table 5. Operationalization quantitative research

Concept	Items in Dutch	Items in English
Search and select capability	<ol style="list-style-type: none"> 1. Door marketing intelligence zijn wij sneller in staat om kansen in de markt te ontdekken. 2. Door marketing intelligence zijn wij beter in staat om kansen in de markt te ontdekken. 	<ol style="list-style-type: none"> 1. We are quicker to discover opportunities in the market due to marketing intelligence. 2. We are better able to discover opportunities in the market due to marketing intelligence.
Data-driven decision-making	<ol style="list-style-type: none"> 1. Ons marketing besluitvormingsproces is verbeterd door het gebruik van marketing intelligence. 2. Het sneller ontdekken van kansen in de markt heeft ons besluitvormingsproces verbeterd. 3. Het beter ontdekken van kansen in de markt heeft ons besluitvormingsproces verbeterd. 	<ol style="list-style-type: none"> 1. Our marketing decision-making process has been improved by using marketing intelligence. 2. The faster discovery of opportunities in the market has improved our decision-making process. 3. A better discovery of opportunities in the market has improved our decision-making process.
Asset orchestration capability	<ol style="list-style-type: none"> 1. Voor het realiseren van nieuwe ideeën hebben wij intern veranderingen moeten doorvoeren. 2. Voor het realiseren van waardevolle ideeën hebben wij intern veranderingen moeten doorvoeren. 	<ol style="list-style-type: none"> 1. We had to make changes internally in order to realize new ideas. 2. We had to make changes internally in order to realize valuable ideas.
Value-creating actions	<ol style="list-style-type: none"> 1. Door het verbeteren van het besluitvormingsproces hebben wij nieuwe ideeën kunnen realiseren. 2. Door het verbeteren van het besluitvormingsproces hebben wij waardevolle ideeën kunnen realiseren. 3. Door marketing intelligence hebben wij nieuwe ideeën kunnen realiseren. 4. Door marketing intelligence hebben wij waardevolle ideeën kunnen realiseren. 	<ol style="list-style-type: none"> 1. We have been able to realize new ideas by improving our decision-making process. 2. We have been able to realize valuable ideas by improving our decision-making process. 3. We have been able to realize new ideas through marketing intelligence. 4. We have been able to realize valuable ideas through marketing intelligence.

4. Results

4.1 Marketing intelligence usage

All SMEs use marketing intelligence as this was one of the inclusion criteria for this research. They make use of different marketing intelligence tools, such as marketing automation, Google Analytics or IKUU's platform. The interviewees were asked why they had chosen to use marketing intelligence and several reasons are identified. These will be discussed below.

4.1.1 Gain insights

The main reason for SMEs to make use of marketing intelligence was to gain more insights into the performance of their marketing activities. Marketers want to know what the impact is of their marketing investments, what visitors are doing on their website and how they could generate the most relevant leads. They just want to know what is going on. This was the main reason for SMEs to start using marketing intelligence. This reason also reflects the expectations of SMEs of the benefits of using marketing intelligence.

“The reason why we have chosen to use marketing intelligence is to gain more insights into the impact of our marketing investments.” (Respondent 1)

“We make use of marketing intelligence to get more insights into what is happening. For example, on our website or with collecting leads. Where they come from and what our main sources are.” (Respondent 2)

“Many companies generate a lot of leads, but ultimately, only a few of them are relevant. In my opinion, marketing intelligence can help with generating more relevant leads.” (Respondent 5)

“When you're running a campaign, or even when you have a budget for marketing activities, it is important to calculate the return on investment at a certain point in time. Ultimately, with all campaigns, the goal is to actually get rid of the efforts you make. If you don't track your activities, how much you have invested and what the return is, it becomes very difficult to say something about it.” (Respondent 8)

“When you have to collect a certain number of leads within a certain time period, you can use marketing intelligence to see which platform produces the best results.” (Respondent 9)

“Our reason to make use of marketing intelligence was to gain more insights. Why does a particular blog work and why not another one? We wanted to get started with marketing automation, but how do you know which download will work better and why?” (Respondent 10)

4.1.2 Communication with customers

Moreover, marketing intelligence is used to communicate in a personalized manner with customers. As because of marketing intelligence marketers know what visitors are doing on their website, it is easier for marketers to get to know how to deal with them. If visitors have shown interest in an SME and have done a lot of different things on the website, for example, visited a lot of webpages and downloaded several e-books, it might mean that marketers can get into contact with them and try to sell their products. However, on the other hand, when a lead has only visited the homepage and downloaded only one e-book, it might mean that he needs more time and information and is not ready yet to get called or contacted.

“We can align our contact with potential customers better than if we do not make use of marketing intelligence.” (Respondent 1)

“Our relationship with our customers is very important. We must be able to communicate very well with them. In addition, we want to offer a personalized experience. Therefore, we want to know what they are doing on our website and what they are looking for.” (Respondent 4)

“You communicate with customers on a structural basis which is experienced as positive by them.” (Respondent 5)

4.2 Search and select capability

The search and select capability refers to the identification of an opportunity and the formulation and resource allocation of it. This capability can be subdivided into the capability to search for the most promising opportunities and the capability to select the most promising opportunities. These will be further explained in the paragraphs below.

4.2.1 Search for opportunities

The main outcome of using a marketing intelligence platform is to gain more insights into an SME’s marketing activities. Or, in other words, marketing intelligence is used to search for the most promising opportunities. This means that the use of marketing intelligence contributes positively to an SME’s search capability. This was also the main reason for SMEs to start using marketing intelligence. Because of marketing intelligence, marketers know exactly which marketing activities are successful and which are not. Moreover, it provides them with insights they could not have generated without the use of such a platform.

“A large part of our marketing budget is spent on inbound marketing. The insights from our marketing intelligence platform gives us good insights into the buyer journey of our target audience.” (Respondent 1)

“We use different channels to generate leads. Because of marketing intelligence, we know which channels perform best.” (Respondent 2)

“Marketing intelligence provides integrated insights that is difficult to get by yourself.” (Respondent 2)

“Marketing intelligence gives me more insights.” (Respondent 3)

“Because of marketing intelligence, you what is going on in your company. This makes you aware of problems or successes.” (Respondent 4)

“Because of marketing intelligence, we know how many leads and orders we have through which title.” (Respondent 5)

“We have gained more insights into the campaigns and which leads we generated through marketing intelligence. Based on the data, we know exactly which campaigns are running well and which are not.” (Respondent 6)

4.2.2 Select opportunities

After SMEs have searched for the most promising opportunities, they have to select the most promising one. Because of the insights they derive from the use of marketing intelligence, marketers know what they should do in order to optimize their campaigns and to adjust their marketing activities in order to improve the results. Therefore, they are able to identify and select the most promising opportunity which enables marketers to get the most out of their time, efforts and money.

“I do the marketing on my own and I often run out of time. So, you have to do the right things. And how do you know that? That is by measuring it and knowing that what you do gives the best results.” (Respondent 3)

“The use of marketing intelligence ensures that you prioritize the most important things which leads to working in the most productive way. It helps you to get more out of your time.” (Respondent 3)

“You have a campaign that doesn’t generate many leads and people who go to your website are not converting. Then it is quite important to find out what can be the cause of this.” (Respondent 8)

“Because of using data, you know what you have done, what you have set up and why you are generating leads. We know what to do if it doesn’t work. In my opinion, these are insights that I really need.” (Respondent 8)

“If you spend a lot of money and only get a few leads, you have to decide if it is worth it or if it is better to use another platform. Therefore, you need marketing intelligence.” (Respondent 9)

“Because of marketing intelligence, we found out that blogs with practical tips work better than blogs about a general topic.” (Respondent 9)

4.3 Data-driven decision-making

A few years ago, marketing decisions were mostly based on intuition and most marketers relied heavily on gut feeling while developing and implementing campaigns. However, when marketing goals were not met, it was difficult to find the source of the problem. Nowadays, marketing is changing to a data-driven approach and more and more marketers rely on data while making decisions.

4.3.1 Reliable knowledge

The use of marketing intelligence provides (marketing) managers and other decision-makers with reliable information that is needed in their decision-making. SMEs recognize the importance of analysing data instead of following their gut feeling and basing decisions on intuition. Using data gives marketers and other decision-makers more reliable knowledge so that they can base their decisions on numbers and facts.

“On the basis of your gut feeling, you may feel that this is the direction you need to go. But if your gut feeling says A and the data says B, then of course it is best to go the direction the data says. Because from there you know exactly what the visitors or customers consider as interesting.” (Respondent 6)

“We use marketing intelligence to get to know the facts and numbers.” (Respondent 7)

“You can follow your gut feeling, but that is not always the right direction to go.” (Respondent 7)

“As a marketer you often have a vague suspicion of what it will be. But that vague suspicion might completely be the wrong direction. So, it is very important that you understand that and that you substantiate it with numbers.” (Respondent 8)

4.3.2 Enhancement of data-driven decision-making

The use of marketing intelligence leads to insights wherefore managers and other decision-makers are better able to make decisions and prioritize and select the most promising business opportunities. It gives real-time information and reliable knowledge which enhances decision-making. Marketers are able to find out what works, what does not work and how they should optimize their campaigns. Because of reliable knowledge and real-time information, marketing intelligence enhances data-driven decision-making. Or, in terms of the dynamic capabilities perspective, marketers and other decision-makers are able to select the most promising opportunities based on reliable knowledge and real-time information.

“Together with our website statistics, we decide whether a campaign is successful or not. So, you make other decisions when you make use of marketing intelligence.” (Respondent 2)

“Because of marketing intelligence, you can see how much a lead costs. Therefore, you are better able to estimate how much money you need and how many leads you can generate with a certain budget.” (Respondent 2)

“You are able to make better decisions by doing a good analysis instead of relying on your gut feeling.” (Respondent 3)

“Marketing intelligence gives me more insights and it makes it easier to make decisions.” (Respondent 3)

“Marketing intelligence has helped us to be able to make quick decisions about our external communication. For example, you can decide better what should and should not be written in an e-mail and what works and what doesn’t work.” (Respondent 3)

“If you have insights into what works and what doesn’t work, you are better able to make decisions.” (Respondent 4)

“We are convinced that you are able to make the best decisions based on data and that you can achieve the goals you have set.” (Respondent 6)

“Because of using marketing intelligence, I can easily make a good choice to optimize marketing campaigns.” (Respondent 6)

“You can, of course, make a very concrete decision based on the statistics.” (Respondent 8)

“You are able to find out what kind of messages work and which platforms work the best. This allows you to make better decisions.” (Respondent 9)

Marketing intelligence is not only used to enhance marketing decisions. It also provides insights into other departments of SMEs. The insights that are derived from the marketing intelligence platform can therefore be used to make decisions for other activities within an SME.

“In addition, we use marketing intelligence for our human resource department. If we have many leads that cannot be followed due to our capacity, we know we have to hire new people.” (Respondent 4)

4.3.3 Challenges

However, using marketing intelligence might come with some challenges. There need to be sufficient data to base decisions on the information of the marketing intelligence platform. If marketers and other decision-makers do not have enough data or if the data is not reliable, they base their decisions mainly on their gut feeling instead of the data. Not having enough data might be a challenge, but having too much data can also be a challenge as marketers do not know on which numbers they should focus and how they should interpret the data. Moreover, there need to be a shared data-driven mindset within an SME. Marketers, decision-makers and anyone else in an SME need to see the added value of using data.

“We as an organization are drowning in data. The amount of data is not important, but the insights where you can base your decisions on are way more important.” (Respondent 1)

“Sometimes you don’t have enough data for example. And if you don’t have enough data, you should not base your decision on it. Sometimes it’s a bit ambiguous. If that’s the case, you have to base your decision on your gut feeling as well.” (Respondent 9)

“...in this case it was a mindset. And that is the most difficult thing to create. So that takes some time.” (Respondent 9)

Moreover, there need to be consensus in order to make data-driven decisions. This means that marketers and other decision-makers need to interpret the data in the same way. Moreover, the data need to be translated into actionable decisions and insights in order to develop value-creating actions at a later stage. As data might be ambiguous and interpreted in different ways, it is important to strive for consensus before selecting opportunities and making decisions.

“We mainly need consensus in order to be able to properly anticipate to the data. By this I mean that everyone interprets the data in the same way. I think it is very important that everyone thinks and looks at the numbers in the same way.” (Respondent 4)

These challenges influence the relationship between an SME’s search capability and its capability to prioritize and select opportunities. If SMEs face these challenges, they should tackle these in order to enhance their data-driven decision-making and to select the most promising opportunities.

4.4 Asset orchestration capability

The asset orchestration capability focuses on the ability to put decisions into effect and execute changes that depends on the ability to orchestrate assets. There are several capabilities identified that are related to the asset orchestration capability and that of importance to put data-driven decisions into effect in order to implement value-creating actions. These will be further explained in the paragraphs below.

4.4.1 Flexibility

In an age of accelerating change are the SMEs who can adapt quick to new surroundings the most likely to succeed. Embracing ever-changing circumstances is for marketeers the best way to take advantage of their opportunities. Therefore, in order to be data-driven, SMEs need to be flexible to put decisions that arise from the data into effect and to take full advantage of these opportunities.

“We definitely need to be flexible. I am the only one who is responsible for the marketing so I am very flexible. So, if we have measured something, we are able to adapt to it.” (Respondent 3)

“We had decided to organize one event, but it became more events as the data showed a larger demand than we expected. Therefore, flexibility was very important. We work agile and flexibility is achieved throughout the whole company.” (Respondent 4)

“It is a continuous game to evaluate the ROI of a campaign and to adjust the policy according to that ROI.” (Respondent 5)

“Working on a data-driven basis is actually very playful. You have to be very flexible and you have to make sure that you have a buffer in order to be able to adjust things. Because in advance you never know how something will turn out.” (Respondent 7)

“It is important to be flexible. You have to be open to do something based on your data. Because why do you use it? To only see that it is not going well?” (Respondent 9)

4.4.2 Resource acquisition

Besides being flexible, SMEs also need to keep in mind the additional costs that a data-driven strategy involves. SMEs might have to change their budget if the data turns out that their campaigns will perform better if they adjust some things. These adjustments require additional money which means that extra resources, in this case money, need to be obtained.

“Besides flexibility, you also need capacity for the process to run smoothly. Both financially and people who can carry out the additional work.” (Respondent 4)

“Changing campaigns asks a lot of money of course. You need some additional working hours for that.” (Respondent 6)

“We had to make several changes to improve our website. The first thing we did is discuss it internally. Then we have checked if there was enough budget and how much we could make free for adjusting the website.” (Respondent 7)

“Sometimes it is difficult to put a decision into effect. You often have to deal with budgets that need to be changed.” (Respondent 8)

“For example, if we notice that LinkedIn does not work and Facebook does, we decide to move the budget from LinkedIn to Facebook.” (Respondent 9)

“Sometimes we have to write a blog very quickly. If this is the case, it is needed that we have more money. So, often the conclusion is that we need more money to improve one of our campaigns.” (Respondent 10)

4.5 Value-creating actions

Marketing intelligence gives marketers and other decision-makers new information and knowledge that is derived from an analysis of their marketing data. Marketers and other decision-makers use this information and knowledge to make decisions and, in the end, develop and implement value-creating actions. If marketers and other decision-makers are able to put the data-driven decisions into effect, they can improve the results of their marketing efforts. However, this depends on an SME’s asset orchestration capability which means that if SMEs are able to orchestrate their assets, they are better able to develop and implement value-creating

actions. Value-creating actions can refer to making small improvements in order to increase the results of marketing activities. Additionally, it can refer to a change of a strategy because of insights that were not expected beforehand.

4.5.1 Improve results

Marketing intelligence is used by marketers to gain more insights into marketing activities and to evaluate the results of their efforts. It enables marketers to review the success of their activities and define the required steps to improve their results. Moreover, it gives them real-time insights so they can adjust campaigns when it turns out to be needed. This means that marketers do not have to wait until a marketing campaign ends to review the success. Instead, they are able to adjust a campaign while it is still running.

“We did an analysis on how the blogs were written. Which one had the most views? And which one have led to the most clicks to a call to actions? We use this information to improve the blogs we will write in the future.” (Respondent 1)

“We have a look at our best performing e-mail and use it again to run a new experiment with.” (Respondent 3)

“When we started with advertising we wanted to have as many leads as possible. However, we received far too many requests. So, we have changed the advertisement several times. The number of leads declined, but the number of meetings remained the same. So that was good. We have adjusted everything 3 to 4 times until we had as many serious leads as possible.” (Respondent 5)

“We noticed which days and times were the best to advertise. Then, we have set up a Google Adwords campaign in such a way that we are shown on Google at the times that we are the most relevant. Our conversion percentage raised and we could even achieve a better result with lower costs.” (Respondent 6)

“We have adjusted one of our campaigns and started to target more tightly. As a result, we received less traffic but the performance was improved by 150%.” (Respondent 6)

“If you do not analyse the results, you are not able to make any improvements.” (Respondent 8)

“We did not get a lot of leads and through Google Analytics we could conclude that it was probably because of the landing page. We have implemented a lot of improvements and in the end, we saw a rise in our conversion rate.” (Respondent 8)

“We pay a lot of attention to the number of visitors to see where we should put important information on the website. So, we look at which pages are performing well and put the important information on those pages.” (Respondent 10)

4.5.1 Change strategy

The use of marketing intelligence might release results that were not expected beforehand. This might mean that marketers have to change their strategy if that turns out to be the best option. For example, they can intensify their campaigns or they can organize more events. The results of an analysis of marketing data might also reveal that SMEs need to change their target audience.

“We are now figuring out if our target audience spends time online. We also want to know if there is a target audience that spends a lot of time online but that we are not reaching yet. If this is the case, it could lead to a change in our marketing strategy.” (Respondent 1)

“If we notice insufficient conversion and progress from subscribers to sales qualified leads, it might mean that we have to change our strategy.” (Respondent 1)

“We have intensified a campaign as we got a lot of traffic and we generated a lot of leads. That is why we have organized events for our customers to give them more information about that specific topic.” (Respondent 4)

“We have advertised in a newspaper which resulted in many leads but only a few new customers. But we have had to put a lot of effort in generating and following up those leads. Therefore, we decided to stop with it while we thought in advance that it would be perfect.” (Respondent 5)

“We noticed that a campaign ran very well in terms of traffic, but that the quality was very low. Therefore, we have changed the campaign and we have had to adjust the target audience.” (Respondent 6)

4.6 Overview qualitative research

An overview of the results per respondent can be found in Table 6. The Appendix includes an overview of the results with the corresponding quote of the respondent. It can be noticed that some respondents correspond with multiple variables of the model of this study while others correspond only with a few variables. The majority of the respondents started using marketing intelligence because of the expectation of getting more insights into their marketing activities. Moreover, some respondents use marketing intelligence to improve the communication with their customers.

60% of the respondents argued that the use of marketing intelligence contributes positively to their search capability. This seems logical as marketing intelligence is used to gain more insights into the performance of marketing activities. The use of marketing intelligence leads to insights which are difficult to get by yourself. Therefore, SMEs are better able to search for opportunities because of marketing intelligence. Most of the respondents mentioned an enhancement of their data-driven decision-making because of getting more insights into their marketing activities. Because of marketing intelligence, marketers and other decision-makers are able to get to know what works and what does not work. Therefore, they are able to make

better decisions and, in terms of the dynamic capabilities, to select the most promising opportunity. Remarkable is the fact that the majority of the respondents did not mention the select capability. This could be due to the challenges of a data-driven marketing strategy since respondent 1 and 4 face some challenges and did not mention that they are able to select the most promising opportunity.

The respondents were asked what they need to do in order to implement data-driven decisions. In other words, what they should do in order to put data-driven decisions into effect and to implement value-creating actions. Most of the respondents came up with flexibility and resource acquisition which points into the direction of the asset orchestration capability. This seems logical as the data points into a direction that could not have been expected beforehand. Therefore, SMEs need to be flexible in order to behave in accordance with the results of their marketing intelligence platform. Moreover, SMEs need to be aware of the fact that their budgets might change if they use marketing intelligence. The real-time insights might reveal opportunities to improve the results which would cost more money than was expected.

Table 6. Overview of results per respondent of qualitative research

Variable	Code	Respondent									
		1	2	3	4	5	6	7	8	9	10
Marketing intelligence usage											
	Gain insights										
	Communication										
Search and select capability											
	Search										
	Select										
Data-driven decision-making											
	Reliable knowledge										
	Enhancement										
	Challenges										
Asset orchestration capability											
	Flexibility										
	Resource acquisition										
Value-creating actions											
	Improve results										
	Change strategy										

4.7 Additional quantitative research

An overview of the results of the questionnaire can be found in Table 7. From this table, it can be noticed that all respondents argue that the use of marketing intelligence has improved their decision-making process. However, not all respondents are convinced that the positive relationship between marketing intelligence usage and data-driven decision-making is due to their search and select capability. The minority of the respondents argue that the use of

marketing intelligence results in a better discovery of opportunities in the market. However, the majority of the respondents argue that a better discovery of opportunities has improved their decision-making process. Half of the respondents argue that marketing intelligence usage leads to a quicker discovery of opportunities. Additionally, half of the respondents states that a faster discovery of opportunities has improved their decision-making process. The majority of the respondents recognize that internal changes are needed in order to realize new and valuable ideas. Finally, the majority of the respondents recognize the positive contribution of marketing intelligence usage and data-driven decision-making on value-creating actions.

Table 7. Overview of results of the questionnaire

Items	Totally disagree	Disagree	Neutral	Agree	Totally agree
Search and select capability					
We are quicker to discover opportunities in the market due to marketing intelligence.		1 (10%)	4 (40%)	4 (40%)	1 (10%)
We are better able to discover opportunities in the market due to marketing intelligence.			6 (60%)	4 (40%)	
Data-driven decision-making					
Our marketing decision-making process has been improved by using marketing intelligence.				5 (50%)	5 (50%)
The faster discovery of opportunities in the market has improved our decision-making process.			5 (50%)	3 (30%)	2 (20%)
A better discovery of opportunities in the market has improved our decision-making process.			1 (10%)	8 (80%)	1 (10%)
Asset orchestration capability					
We had to make changes internally in order to realize new ideas.		1 (10%)	3 (30%)	4 (40%)	2 (20%)
We had to make changes internally in order to realize valuable ideas.		1 (10%)	3 (30%)	5 (50%)	1 (10%)
Value-creating actions					
We have been able to realize new ideas by improving our decision-making process.		1 (10%)	3 (30%)	4 (40%)	2 (20%)
We have been able to realize valuable ideas by improving our decision-making process.			3 (30%)	4 (40%)	3 (30%)
We have been able to realize new ideas through marketing intelligence.			1 (10%)	7 (20%)	2 (20%)
We have been able to realize valuable ideas through marketing intelligence.			2 (20%)	6 (60%)	2 (20%)

A bivariate Kendall's tau correlation test (2-tailed) was performed in order to look for a correlation between the key variables. The results can be found in Table 8. All correlations were positive, but there was only a significant correlation between search and select capability and value-creating actions ($r = 0.564$, $p < 0.05$). This means that SMEs are better and quicker able to discover opportunities because of marketing intelligence which leads to the realization of new and valuable ideas. There is no significant correlation between search and select capability

and data-driven decision-making ($r = 0.261, p > 0.05$), and the asset orchestration capability and value-creating actions ($r = 0.293, p > 0.05$). Moreover, there is no significant correlation between data-driven decision-making and value-creating actions ($r = 0.129, p > 0.05$).

Table 8. Bivariate Kendall's tau Correlation test ($N = 10$). Significance level * $p < 0.05$; all variables tested two-sided

Variables	Search and select capability	Data-driven decision-making	Asset orchestration capability
1. Search and select capability			
2. Data-driven decision-making	0.261		
3. Asset orchestration capability	0.220	0.026	
4. Value-creating actions	0.564*	0.129	0.293

An overview of the results of the quantitative research per respondent can be found in Table 9. The table visualizes which respondents filled in agree or totally agree. Therefore, this table shows which respondents correspond with the variables of the model of this study.

4.8 Comparison of quantitative and qualitative research

Comparing the results of the quantitative research with the qualitative research reveals some interesting aspects. First, half of the respondents agreed with the statement “*We are quicker to discover opportunities in the market due to marketing intelligence*” while only respondent 3 mentioned this in the interviews. In the interviews, the majority of the respondents argued that the use of marketing intelligence leads to insights wherefore they are able to search for opportunities. However, they did not mention a quicker discovery because of marketing intelligence, except for respondent 3.

Second, when comparing the individual results of respondent 4 of the qualitative and the quantitative research it can be found that if SMEs want to put data-driven decisions into effect they should be able to orchestrate their assets. Respondent 4 had to make changes internally to realize new and valuable ideas. Moreover, this SME emphasizes the need for flexibility and resource acquisition when developing and implementing value-creating actions that are based on data-driven decisions. However, when looking at the quantitative and qualitative results of respondent 1, it can be noticed that the results do not fit regarding the asset orchestration capability. The respondent agreed with the statements of the quantitative research while he did not mention the need for flexibility or resource acquisition in order to put data-driven decisions into effect and implement value-creating actions in the interview.

Third, all respondents agreed with the statement “*Our marketing decision-making process has been improved by using marketing intelligence*” which is in line with the findings of the qualitative research in which the majority mentioned an enhancement of their data-driven decision-making because of the use of marketing intelligence. Moreover, the majority of the respondents agreed that a faster and better discovery of opportunities has improved their

decision-making which is also in accordance with the results of the qualitative research. The majority of the respondents argued in the interviews that marketing intelligence usage has given them insights wherefore they are able to search for the most promising opportunities and enhance their decision-making.

Table 9. Overview of results per respondent of quantitative research

Variable	Respondent									
	1	2	3	4	5	6	7	8	9	10
Search and select capability										
We are quicker to discover opportunities in the market due to marketing intelligence.	█		█	█		█	█			
We are better able to discover opportunities in the market due to marketing intelligence.		█		█		█				█
Data-driven decision-making										
Our marketing decision-making process has been improved by using marketing intelligence.	█	█	█	█	█	█	█	█	█	█
The faster discovery of opportunities in the market has improved our decision-making process.	█			█		█	█	█		
A better discovery of opportunities in the market has improved our decision-making process.	█	█	█	█		█	█	█	█	█
Asset orchestration capability										
We had to make changes internally in order to realize new ideas.	█	█	█	█	█	█				
We had to make changes internally in order to realize valuable ideas.	█		█	█	█	█			█	
Value-creating actions										
We have been able to realize new ideas by improving our decision-making process.			█	█	█	█		█		█
We have been able to realize valuable ideas by improving our decision-making process.			█	█	█	█	█	█		█
We have been able to realize new ideas through marketing intelligence.	█		█	█	█	█	█	█	█	█
We have been able to realize valuable ideas through marketing intelligence.	█		█	█	█	█	█	█		█

5. Discussion

5.1 Discussion

The study was guided by the following main research question: *How can marketing intelligence enhance data-driven decision-making to increase value-creating actions in SMEs through dynamic capabilities?* To answer the main research question, the study executed an empirical study intended to (1) examine how the use of marketing intelligence enhances data-driven decision-making in SMEs and (2) how marketing intelligence based decision-making leads to value-creating actions in SMEs. This study has empirically examined the impact of the use of marketing intelligence on SMEs. In particular, it focused on the processes involved in realizing performance gains.

The results show that marketing intelligence is mainly used by SMEs to gain more insights into their marketing activities. This is in line with the definition of Wedel and Kannan (2015, p. 98) which states that marketing intelligence is used “*to obtain insights into marketing performance, maximize the effectiveness of instruments of marketing control and optimize firm’s return on investment*”. Marketing intelligence might reveal insights that would not be noticed without collecting, managing and analysing data. Furthermore, the results imply that marketing intelligence is used by SMEs to communicate in a personalized manner with their customers. Companies want to know the reasons behind customers’ interest in order to target them with the right offers (Hauser, 2007). Because of marketing intelligence, SMEs know what their customers want and what the best way is to reach them.

The findings suggest that (marketing) managers and other decision-makers are able to gain more insights into their marketing activities because of the use of marketing intelligence. Therefore, they are able to search for the channels or campaigns that perform best. This means that marketing intelligence points (marketing) managers and other decision-makers into the right direction. They know exactly which activities are successful and which are not as it provides them with insights they could not have gained without the use of marketing intelligence. Therefore, marketing intelligence usage contributes positively to an SME’s search capability since (marketing) managers and other decision-makers are able to search for the most promising opportunities in the market.

Nowadays, (marketing) managers and other decision-makers are more and more faced with data and data-driven decision-making has become a much more fundamental part of SMEs. This means that decisions are backed up by data instead of decisions that are intuitive based or based on observations. The findings show that, because of marketing intelligence, (marketing) managers and other decision-makers are able to make informed decisions and select opportunities with confidence. Therefore, they do not have to guess how they should set up a campaign for example. The use of data allows marketers to work with numbers and facts which gives them reliable information. This is in line with Gauzelin and Bentz (2017) who argue that intelligence systems combine historical and real-time data which leads to reliable information.

Because of the insights that marketers get from their marketing intelligence platform, it is easier to make decisions and to select the most promising opportunities. The insights that derive from their marketing intelligence platform allows them to prioritize the most important things. The findings suggest that it helps (marketing) managers and other decision-makers to get the most out of their time, efforts and budget since they are able to select the most promising business opportunities based on reliable knowledge and real-time information. They are, moreover, able to improve their decision-making which is also supported by the findings of Gauzelin and Bentz (2017) which show that 89% of the managers recognize that intelligence systems facilitate decision-making processes. However, it is remarkable that the results of the qualitative study reveal that SMEs struggle to select the most promising opportunity while the majority of the respondents mentioned an enhancement of their data-driven decision-making because of marketing intelligence. The results of section 4.3.2 suggest that selecting an opportunity based on data and making a data-driven decision can be seen as the same. Therefore, it is decided to adjust some variables of the initial theoretical framework. Since an SME selects opportunities and makes decisions based on data instead of gut feeling, the variable 'data-driven select capability' is introduced. The insights that arise from an SME's search capability are used to select the most promising opportunity and make a data-driven decision.

However, the results of section 4.3.3 reveal that SMEs might face some challenges while selecting an opportunity. As a lot of marketers do not know how and where to start with their data-driven marketing strategy, it is important that they feel familiar with data. If they do not trust the data or if they do not have enough data, they will still base their decisions on their gut feeling. This aspect of data is also highlighted by Wixom and Watson (2010) who argue that employees will not rely on data if they do not trust it. However, having too much data is also a challenge for SMEs. If they are drowning in data, they do not know which data they should focus on and how they should interpret the data. This large amount of data makes it difficult for (marketing) managers and other decision-makers to translate the insights that arise from their search capability into concrete decisions and actions. This is also suggested by Xu et al. (2016) who argue that the challenge of data is to turn it into insights that can be used to improve the results. In the context of the current study, it means that (marketing) managers and other decision-makers struggle with the interpretation of data and with selecting opportunities. Especially if they use different marketing channels, it is difficult to manage the data across these platforms and to get a single view. Therefore, the challenges of a data-driven marketing strategy influence the relationship between searching for opportunities and selecting the most promising ones. If SMEs are able to tackle these problems, they will highly benefit from the use of marketing intelligence and it will be easier for them to select opportunities.

The results indicate that (marketing) managers and other decision-makers use the information that is derived from their marketing intelligence platforms to make data-driven decisions, select opportunities and implement value-creating actions. This is also supported by the statistically significant correlation between the search and select capability and value-creating actions. This is in line with Shanks and Sharma (2011) who argue that decision-makers use insights that are derived from analysing data and use these insights to launch new campaigns or products. They want to know how their activities are performing, what the results are and how they can improve

the results. The real-time insights they derive from their marketing intelligence platform allow them to get the most out of their marketing activities. Having real-time insights is crucial since there are always unplanned events and you can never fully prepare for how it will unfold. Marketing activities and campaigns that are planned may be altered due to changes in the market. Therefore, it is crucial for marketers to adapt their campaigns to these changes in order to get the most out of their time and money.

However, decisions that are made based on marketing intelligence do not automatically turn into value-creating actions. The results of this study show that SMEs need to be able to put these decisions into effect by orchestrating their assets. This depends on an SME’s asset orchestration capability which means that it relies on managerial processes to undertake change (Sharma et al., 2011). This means that (marketing) managers and other decision-makers need to take action after they made a decision. SMEs need to respond to changes in the market and the speed at which they adapt their campaigns to these changes is the key to their success. The SMEs who can adapt quick to new surroundings are the most successful ones in an age of accelerating change. This is also suggested by Huang et al. (2014) who argue that flexibility is a crucial capability that has an influence on a company’s success in rapidly changing environments. Therefore, SMEs need to be flexible and need to be able to change their running campaigns. Moreover, budgets may rise as marketing activities need to be adjusted. The findings suggest that if SMEs are able to orchestrate their assets, they are better able to put the decisions that arise from their marketing intelligence platforms into effect and implement value-creating actions.

The initial theoretical framework is adjusted with regard to the findings of this study. Therefore, a new model is introduced based on the results of the interviews and questionnaires. This model can be found in Figure 2.

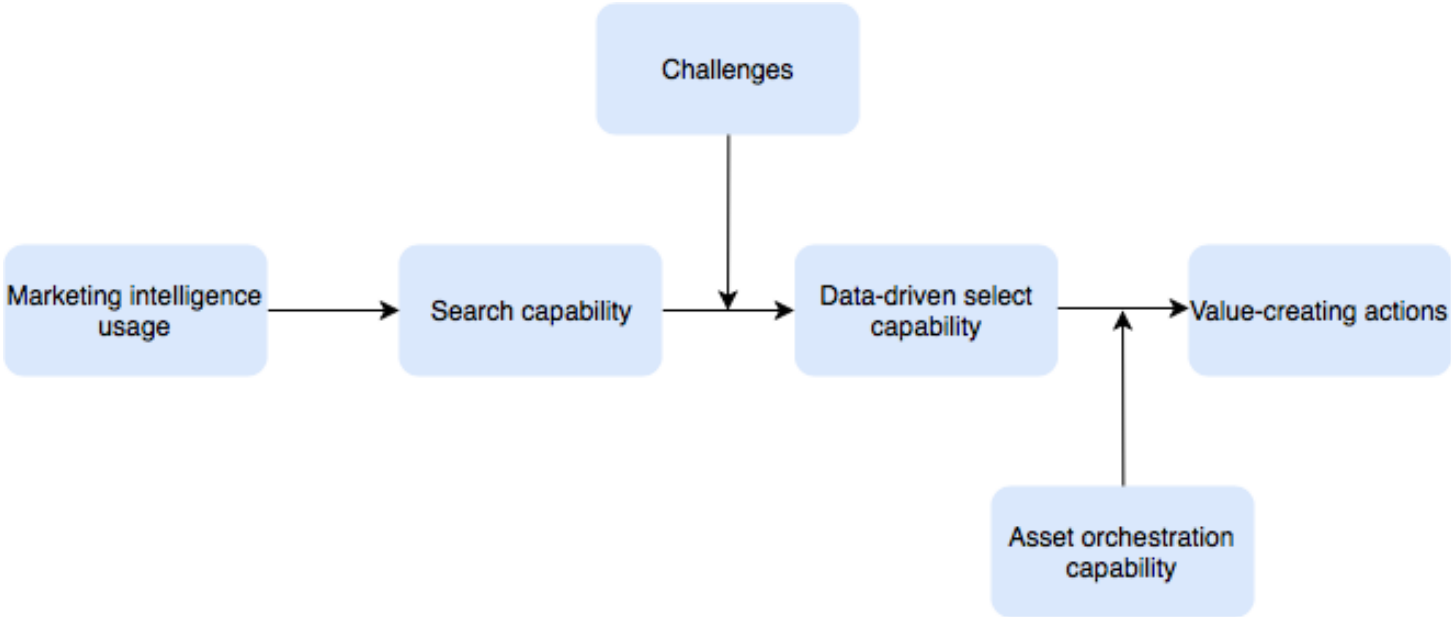


Figure 2. New theoretical framework

5.2 Management implications

This study aimed to understand how the use of marketing intelligence enhances data-driven decision-making and, in turn, lead to value-creating actions in SMEs. The results of this study show valuable management implications. An important practical implication is that marketing intelligence usage enables SMEs to search for new opportunities. Because of this capability, SMEs are able to enhance their data-driven decision-making. The findings of this study reveal that the use of marketing intelligence enhances SMEs' decision-making which is due to the fact that SMEs are able to base their decisions on data which gives them reliable knowledge. They, therefore, do not have to base their decisions on gut feeling and intuition but they can support their decisions with data and facts. Moreover, because of the use of marketing intelligence, SMEs are able to find out where they should spend their money.

However, it should be noted that the use of marketing intelligence comes with some challenges. First of all, marketers and decision-makers need to feel familiar with using data and they should know how to interpret the results in order to gain new and valuable insights. Furthermore, all employees of an SME need to have the same mindset which means that all employees need to see the added value of using marketing intelligence. This can be a challenge as not everyone wants to move from an intuitive to a data-driven approach since they never had that much data to base their decisions on. Therefore, marketers need to show the benefits of using marketing intelligence.

Besides the search capability, the asset orchestration capability is essential in creating value from marketing intelligence usage. This means that (marketing) managers and other decision-makers need to be flexible in order to put data-driven decisions into effect. Gathering real-time data is important, but putting it quickly into action is even more important. The use of marketing intelligence might reveal results that were not expected beforehand due to changes in the market. Therefore, marketers need to have a look at the results of their marketing activities from time to time. Marketers and decision-makers need to focus on real-time insights and an evaluation of a marketing campaign at the end of the period it not the way of working anymore. Therefore, they need to change their way of working and constantly evaluate their marketing activities. They need to be able to constantly change their budgets and campaigns in order to get the most out of their marketing activities and to get the highest returns.

5.3 Theoretical implications

Since there is a lack of research in the area of marketing intelligence, this study offers new insights on the impact of marketing intelligence usage on data-driven decision-making and value-creating actions in SMEs. The existing literature mainly focuses on the impact of business intelligence instead of marketing intelligence and studies with empirical evidence about the impact of marketing intelligence are scarce. Moreover, the literature does not focus on the processes that are involved in realizing performance gains. Since it is clear that the benefits do not follow from just the implementation of a marketing intelligence platform, it is interesting to examine how the implementation leads to value-creating actions. The results of this study

show that dynamic capabilities play a critical role in creating value from the use of an intelligence platform.

By examining the role of dynamic capabilities in creating value from marketing intelligence usage, this study contributes to the existing literature regarding the search and select capability. The existing literature describes this capability as an overarching concept that consists of the identification of an opportunity and the formulation of actions and allocation of resources (Helfat et al., 2007). However, the findings of this study show that this capability can be divided into two different capabilities. Marketing intelligence contributes to the search capability through offering a possibility to search for the most promising opportunities as it gives marketers more insights into the results of their activities. Subsequently, these insights will be used by SMEs to make data-driven decisions. Therefore, the select capability refers to selecting and prioritizing the most promising business opportunities. This study thus extends the existing literature about the search and select capability by showing the division of this capability.

5.4 Limitations and recommendations

This study is not executed without limitations. First, case studies are associated with the risk of getting lost in the data as conducting interviews gives a lot of information. Since not all information could be included, only the most relevant findings were identified and included. Therefore, it was difficult to link the results with the different variables of the research model. That is why the transcripts were read several times to verify the different codes and to make sure that the quotes reflect the right variables.

Second, this study was based on and limited to SMEs. Therefore, it is not applicable in large companies. This study emphasizes the need for flexibility in order to put data-driven decisions into effect and to develop and implement value-creating actions. Large companies are less flexible than SMEs due to their rigid character. Therefore, it could be more difficult for large companies to adjust their marketing activities and to behave according to the results of the data. For future research, it would be interesting to examine the impact of marketing intelligence on large companies and compare it with the results of the impact on SMEs.

In addition, only a few SMEs use marketing intelligence as the implementation of such a platform could be experienced as challenging. A lot of SMEs recognize the importance of using data to back up decisions, but a lot of SMEs do not know how to get started. This means that a lot of marketers and other decision-makers still base their decisions on gut feeling. Those SMEs could not be included in this research which led to only ten cases that could be used for this research. This could also explain the lack of significant results of the quantitative research. Nevertheless, the aim of this study was to explore the impact of marketing intelligence usage so the research questions could still be answered in the end.

The difference between the results of quantitative and qualitative research regarding the asset orchestration capability could be due to the nature of these researches. Standardized scales make use of an objective measure while interviews reflect personal and subjective views (Slonim-Nevo & Nevo, 2009). The researcher had to make a judgement while reading the

transcripts of the interviews which is subjective and based on interpretation. Moreover, the researcher developed the scales of the survey since there were no existing scales available. This could have led to misinterpretations of the statements by the respondents. This could also explain the difference between the percentage of respondents who are better able to discover opportunities and the respondents who improved their decision-making process because of a better discovery of opportunities.

As all SMEs are based in the Netherlands, the findings of this study may not be applicable in other countries. Therefore, it would be useful to extend this work to other geographies. This could lead to insights that are not covered in this research. Moreover, it would be interesting to compare the impact of marketing intelligence on companies among different countries.

Moreover, only a few sectors are included in this research. Marketing agencies are overrepresented while other sectors are not included at all in this research. This is due to the fact that a lot of companies still do not make use of marketing intelligence. A data-driven marketing strategy is often considered as challenging as marketers are not familiar with working with numbers and data. They do not know how to derive actionable insights from the data or how they should interpret it. As marketing agencies are often more familiar with data, they are the first ones who adopted a data-driven strategy. This explains the overrepresentation of marketing agencies in this study.

The results of this study suggest a different theoretical framework than the initial framework that was based on theoretical insights. Firstly, this study found that the search and select capability can be divided into two different variables. Further research about the relationship between the search capability and the select capability could contribute significantly to the existing dynamic capabilities literature. Therefore, additional research is required in order to examine and understand this relationship. Moreover, the findings of this study reveal that marketing intelligence might come with some challenges that influence the realisation of performance gains. Further research should therefore focus on extending these findings by examining the impact of the challenges of a data-driven marketing strategy.

Since this study only focussed on SMEs, it would be interesting to examine the processes that are involved in creating value from marketing intelligence usage within larger organizations. Therefore, and with regard to other interesting findings of this study, further research should focus on the following hypotheses in order to understand how (marketing) managers and other decision-makers create value from the use of marketing intelligence:

H1: Marketing intelligence usage is positively related to an organization's search capability.

H2: An organization's search capability is positively related to its data-driven select capability.

H3: The challenges of marketing intelligence usage mediate the relationship between the search capability and data-driven select capability.

H4: Data-driven select capability is positively related to value-creating actions.

H5: An organization's asset orchestration capability mediates the relationship between its data-driven select capability and value-creating actions.

Overall, the use of marketing intelligence is an interesting field for further research. Marketing intelligence will be adopted in more and more companies in the future. Further research could lead to new insights and opportunities of marketing intelligence that are not identified in this study. As a lot of companies are in the first stages of marketing intelligence adoption, further research would extend this study. Since this study is mainly based on qualitative findings, further quantitative research is needed in order to quantify the impact of marketing intelligence. Moreover, more cases could and should be researched in the future to get a full understanding of the impact of marketing intelligence.

6. Conclusion

The aim of this study was to examine the impact of marketing intelligence usage on SMEs. The results of this study show that the use of marketing intelligence has a positive impact on SMEs. It enhances an SME's data-driven decision-making as (marketing) managers and other decision-maker are able to search for new opportunities and select the most promising one. The use of marketing intelligence leads to new insights which could not be derived without the use of such a platform and, therefore, improves an SME's search capability. These insights make it easier to make decisions and select opportunities as it allows (marketing) managers and other decision-makers to prioritize the most important things. Therefore, it helps them to get the most out of their time, efforts and budget. Because of marketing intelligence, (marketing) managers and other decision-makers are able to make decisions and select opportunities based on reliable knowledge and real-time information instead of intuition and gut feeling. However, it should be noted that a data-driven marketing strategy might come with some challenges. SMEs need to know on which data they should focus and how they should interpret the results of their marketing intelligence platform. This can be difficult when the platform does not provide enough data or if it provides too much data. Because of these challenges, it can be difficult for SMEs to make data-driven decisions and to select the most promising opportunities based on the insights that arise from their marketing intelligence platform.

The use of marketing intelligence leads to the implementation of value-creating actions as SMEs are able to gain insights and select ways how to improve their marketing activities and change their strategy which eventually leads to a better performance of their activities. However, having high-quality decision-making does not automatically mean that those high-quality decisions will be implemented successfully and lead to value-creating actions. This depends on an SME's asset orchestration capability. In an age of accelerating change the SMEs who can adapt quick to changing environments are the most likely to succeed. Therefore, SMEs need to be flexible in order to behave according to the results of their marketing intelligence platform and to implement value-creating actions. Moreover, they might have to change their budgets in order to increase the performance of their marketing activities. To conclude, if marketers and other decision-makers want to get the most out of their marketing efforts, they should consider the implementation of a data-driven marketing strategy and the use of a marketing intelligence platform.

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Appendix

Variable	Code	Case	Quote
Marketing intelligence usage	Gain insights	1	<i>"The reason why we have chosen to use marketing intelligence is to gain more insights into the impact of our marketing investments."</i>
		2	<i>"We make use of marketing intelligence to get more insights into what is happening. For example, on our website or with collecting leads. Where they come from and what our main sources are."</i>
		5	<i>"Many companies generate a lot of leads, but ultimately, only a few of them are relevant. In my opinion, marketing intelligence can help with generating more relevant leads."</i>
		8	<i>"When you're running a campaign, or even when you have a budget for marketing activities, it is important to calculate the return on investment at a certain point in time. Ultimately, with all campaigns, the goal is to actually get rid of the efforts you make. If you don't track your activities, how much you have invested and what the return is, it becomes very difficult to say something about it."</i>
		9	<i>"When you have to collect a certain number of leads within a certain time period, you can use marketing intelligence to see which platform produces the best results."</i>
		10	<i>"Our reason to make use of marketing intelligence was to gain more insights. Why does a particular blog work and why not another one? We wanted to get started with marketing automation, but how do you know which download will work better and why?"</i>
	Communication with customers	1	<i>"We can align our contact with potential customers better than if we do not make use of marketing intelligence."</i>
		4	<i>"Our relationship with our customers is very important. We must be able to communicate very well with them. In addition, we want to offer a personalized experience. Therefore, we want to know what they are doing on our website and what they are looking for."</i>
		5	<i>"You communicate with customers on a structural basis which is experienced as positive by them."</i>
	Search and select capability	Search for opportunities	1
2			<i>"Marketing intelligence provides integrated insights that is difficult to get by yourself."</i>
2			<i>"We use different channels to generate leads. Because of marketing intelligence, we know which channels perform best."</i>
3			<i>"Marketing intelligence gives me more insights."</i>
4			<i>"Because of marketing intelligence, you what is going on in your company. This makes you aware of problems or successes."</i>
5			<i>"Because of marketing intelligence, we know how many leads and orders we have through which title."</i>
6			<i>"We have gained more insights into the campaigns and which leads we generated through marketing intelligence. Based on the data, we know exactly which campaigns are running well and which are not."</i>

	Select opportunities	3	<i>"I do the marketing on my own and I often run out of time. So, you have to do the right things. And how do you know that? That is by measuring it and knowing that what you do gives the best results."</i>
		3	<i>"The use of marketing intelligence ensures that you prioritize the most important things which leads to working in the most productive way. It helps you to get more out of your time."</i>
		8	<i>"You have a campaign that doesn't generate many leads and people who go to your website are not converting. Then it is quite important to find out what can be the cause of this."</i>
		8	<i>"Because of using data, you know what you have done, what you have set up and why you are generating leads. We know what to do if it doesn't work. In my opinion, these are insights that I really need."</i>
		9	<i>"If you spend a lot of money and only get a few leads, you have to decide if it is worth it or if it is better to use another platform. Therefore, you need marketing intelligence."</i>
		9	<i>"Because of marketing intelligence, we found out that blogs with practical tips work better than blogs about a general topic."</i>
Data-driven decision-making	Reliable knowledge	6	<i>"On the basis of your gut feeling, you may feel that this is the direction you need to go. But if your gut feeling says A and the data says B, then of course it is best to go the direction the data says. Because from there you know exactly what the visitors or customers consider as interesting."</i>
		7	<i>"We use marketing intelligence to get to know the facts and numbers"</i>
		7	<i>"You can follow your gut feeling, but that is not always the right direction to go."</i>
		8	<i>"As a marketer you often have a vague suspicion of what it will be. But that vague suspicion might completely be the wrong direction. So, it is very important that you understand that and that you substantiate it with numbers."</i>
	Enhancement of data-driven decision-making	2	<i>"Together with our website statistics, we decide whether a campaign is successful or not. So, you make other decisions when you make use of marketing intelligence."</i>
		2	<i>"Because of marketing intelligence, you can see how much a lead costs. Therefore, you are better able to estimate how much money you need and how many leads you can generate with a certain budget."</i>
		3	<i>"You are able to make better decisions by doing a good analysis instead of relying on your gut feeling."</i>
		3	<i>"Marketing intelligence gives me more insights and it makes it easier to make decisions."</i>
		3	<i>"Marketing intelligence has helped us to be able to make quick decisions about our external communication. For example, you can decide better what should and should not be written in an e-mail and what works and what doesn't work."</i>
		4	<i>"If you have insights into what works and what doesn't work, you are better able to make decisions."</i>
4	<i>"In addition, we use marketing intelligence for our human resource department. If we have many leads that cannot be followed due to our capacity, we know we have to hire new people."</i>		

		6	<i>"We are convinced that you are able to make the best decisions based on data and that you can achieve the goals you have set."</i>
		6	<i>"Because of using marketing intelligence, I can easily make a good choice to optimize marketing campaigns."</i>
		8	<i>"You can, of course, make a very concrete decision based on the statistics."</i>
		9	<i>"You are able to find out what kind of messages work and which platforms work the best. This allows you to make better decisions."</i>
	Challenges	1	<i>"We as an organization are drowning in data. The amount of data is not important, but the insights where you can base your decisions on are way more important."</i>
		4	<i>"We mainly need consensus in order to be able to properly anticipate to the data. By this I mean that everyone interprets the data in the same way. I think it is very important that everyone thinks and looks at the numbers in the same way."</i>
		9	<i>"Sometimes you don't have enough data for example. And if you don't have enough data, you should not base your decision on it. Sometimes it's a bit ambiguous. If that's the case, you have to base your decision on your gut feeling as well."</i>
		9	<i>"...in this case it was a mindset. And that is the most difficult thing to create. So that takes some time."</i>
Asset orchestration capability	Flexibility	3	<i>"We definitely need to be flexible. I am the only one who is responsible for the marketing so I am very flexible. So, if we have measured something, we are able to adapt to it."</i>
		4	<i>"We had decided to organize one event, but it became more events as the data showed a larger demand than we expected. Therefore, flexibility was very important. We work agile and flexibility is achieved throughout the whole company."</i>
		5	<i>"It is a continuous game to evaluate the ROI of a campaign and to adjust the policy according to that ROI."</i>
		7	<i>"Working on a data-driven basis is actually very playful. You have to be very flexible and you have to make sure that you have a buffer in order to be able to adjust things. Because in advance you never know how something will turn out."</i>
		9	<i>"It is important to be flexible. You have to be open to do something based on your data. Because why do you use it? To only see that it is not going well?"</i>
	Resource acquisition	4	<i>"Besides flexibility, you also need capacity for the process to run smoothly. Both financially and people who can carry out the additional work."</i>
		6	<i>"Changing campaigns asks a lot of money of course. You need some additional working hours for that."</i>
		7	<i>"We had to make several changes to improve our website. The first thing we did is discuss it internally. Then we have checked if there was enough budget and how much we could make free for adjusting the website."</i>
		8	<i>"Sometimes it is difficult to put a decision into effect. You often have to deal with budgets that need to be changed."</i>
		9	<i>"For example, if we notice that LinkedIn does not work and Facebook does, we decide to move the budget from LinkedIn to Facebook."</i>

		10	<i>“Sometimes we have to write a blog very quickly. If this is the case, it is needed that we have more money. So, often the conclusion is that we need more money to improve one of our campaigns.”</i>
Value-creating actions	Improve results	1	<i>“We did an analysis on how the blogs were written. Which one had the most views? And which one have led to the most clicks to a call to actions? We use this information to improve the blogs we will write in the future.”</i>
		3	<i>“We have a look at our best performing e-mail and use it again to run a new experiment with.”</i>
		5	<i>“When we started with advertising we wanted to have as many leads as possible. However, we received far too many requests. So, we have changed the advertisement several times. The number of leads declined, but the number of meetings remained the same. So that was good. We have adjusted everything 3 to 4 times until we had as many serious leads as possible.”</i>
		6	<i>“We noticed which days and times were the best to advertise. Then, we have set up a Google Adwords campaign in such a way that we are shown on Google at the times that we are the most relevant. Our conversion percentage raised and we could even achieve a better result with lower costs.”</i>
		6	<i>“We have adjusted one of our campaigns and started to target more tightly. As a result, we received less traffic but the performance was improved by 150%.”</i>
		8	<i>“If you do not analyse the results, you are not able to make any improvements.”</i>
		8	<i>“We did not get a lot of leads and through Google Analytics we could conclude that it was probably because of the landing page. We have implemented a lot of improvements and in the end, we saw a rise in our conversion rate.”</i>
		10	<i>“We pay a lot of attention to the number of visitors to see where we should put important information on the website. So, we look at which pages are performing well and put the important information on those pages.”</i>
		Change strategy	1
	1		<i>“If we notice insufficient conversion and progress from subscribers to sales qualified leads, it might mean that we have to change our strategy.”</i>
	4		<i>“We have intensified a campaign as we got a lot of traffic and we generated a lot of leads. That is why we have organized events for our customers to give them more information about that specific topic.”</i>
	5		<i>“We have advertised in a newspaper which resulted in many leads but only a few new customers. But we have had to put a lot of effort in generating and following up those leads. Therefore, we decided to stop with it while we thought in advance that it would be perfect.”</i>
	6		<i>“We noticed that a campaign ran very well in terms of traffic, but that the quality was very low. Therefore, we have changed the campaign and we have had to adjust the target audience.”</i>