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Digital Marketing and Internationalization Speed of Start-ups: Cases from
Finnish energy sector

University of Vaasa
Master`s Degree Programme in
International Business

UNIVERSITY OF VAASA
School of Management

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Title of the Thesis: Digital marketing and internationalization speed of start-ups:
Cases from Finnish energy sector

Degree: Master of Science in Economics and Business Administration
Programme: International Business
Supervisor: Tamara Galkina
Year: 2020

ABSTRACT:

Finnish start-ups that operate in the energy sector, face the challenges of performing in a limited national market, which forces them to seek for foreign revenues and enhance international commitment. The process of internationalization can be speed up through the implementation of particular strategies based on digitalization. Overall, as the concept of digitalization and resultant popularity of digital marketing tools together have increasingly influenced the internationalization of new ventures, the research question of the thesis is:

“How does digital marketing affect the speed of internationalization of start-ups?”

The theoretical part of the thesis is based on earlier research and literature. In particular, it is focused on the topics of digital marketing, speed of internationalization and start-up. In addition, the link between these concepts is provided within the literature review. The empirical research conducted through five qualitative in-depth interviews with the CEOs and the digital marketing managers of four Finnish start-ups that operate in the energy sector. The object of the interviews was to examine the speed of internationalization process together with digital marketing practices. In particular, this work addresses the main digital tools primarily used by these new ventures and the main benefits and risks associate with their implementation. Digital marketing strategies are been studied also concerning the so-called ‘four forces of internationalization’.

According to the results, entrepreneurs of new businesses need to internationalize to increase their competitiveness as well as to reach a significant number of potential customers in a fast way. The information collected during the development of the research shows that the most used digital tool for all the start-up is the social network LinkedIn, alongside to creation of the Website. Furthermore, according to the findings, the presence of high competition in the energy industry, the entrepreneur experience and knowledge in the international sector and in the digital marketing field as well as the creation of international networks through the use of digital tools, are able to accelerate the internationalization of a start-up. Lastly, all the new business except Heliostorage present a clear and structured digital marketing strategy. Furthermore, even if the respondents have a favorable view towards digital marketing not everyone is using the various channels to the fullest potential.

KEYWORDS: Digital marketing, Speed of internationalization, Start-up, Digital tools, Four Forces of internationalization

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Abbreviations

DM	Digital Marketing
SEO	Search Engine Optimization
ROI	Return On Investment
CRM	Customer Relationship Management
CEO	Chief Executive Officer
DMM	Digital Marketing Manager
TM	Traditional Marketing

1. Introduction

1.1 Background of the Thesis

According to Özoğlu & Topal (2019), we are living in the so-called digital era. It means that the Internet and the use of various communication technologies are becoming increasingly important. Moreover, this massive use of the Internet and digital technologies has led to the emergence of digital marketing that can be defined as “the marketing practices carried out by using digital channels such as Internet, mobile, and interactive platforms” (Özoğlu & Topal, 2019:1). Digital marketing provides companies with a series of advantages in terms of cost saving and increasing of competition (Özoğlu & Topal, 2019). Digital marketing has emerged in the late 1990s, and in less than twenty years has become one of the principal techniques used by firms (Ryan, 2014). The growing importance of digital marketing can be explained by fact that people integrate the use of internet tools in every-day life activities. Indeed, new technologies are used not only to communicate, but also to do business. (Ryan, 2014). Furthermore, new generations can be defined as digital native. In accordance with international statistics developed during 2019, the Internet Penetration Rate, that is the number of Internet users divided by the population and expressed in percentage, shows significant result both in developed and developing Countries. In general, the level of Internet users reached in a Country varies between 60% and 90% (Internet World Stat, 2019). This means that a significant number of people are constantly connected to Internet and use digital devices. This result underlines great opportunities for businesses to reach potential clients around the world through digital marketing technologies (Internet World Stat, 2019).

Naturally, digital marketing has become an important strategic tool for companies' international expansion; “digital marketing is a journey that can take an organization towards new markets and discover new opportunities” (Hanlon, 2019:1). Due to the globalization, national borders tend to expand and this increase the possibility for several companies to be competitive on a large scale. This process of change and growth in the economic environment is called internationalization (Reuben, 2018). In general, the term has been defined as “any increase on the international involvement of a firm” (Kutschker, Bäurle & Schmid, 1997:105). In other words, the main purpose related to the process of internationalization is to discover, evaluate and implement new growth

opportunities across national borders for the creation and development of goods and services. As a consequence of the intensification of international competition, the firm's speed of internationalization is a crucial factor in the decision-making process since it is an important managerial challenge (Chetty, Johanson, & Martin, 2014). Casillas & Acedo (2013: 85) define the general concept of speed as "the length of time over which certain targets are achieved". Given this explanation, speed of internationalization refers to the time needed by an organization to reach a certain degree of internationalization (Hilmersson & Johanson, 2015). Prashantham and Young (2011) explain that there are two main types of speed of internationalization that are the initial speed and the post-entry speed. The first one is related to the time between the foundation of the firm and the first international activity, while the second type regards the time between the first international activities and the following ones (Casillas & Acedo, 2013). Furthermore, according to Aygoren & Kadakal (2020: 5) "The initial entry speed refers to early and rapid internationalization process of a firm which achieves certain degree of international commitment for first market entry abroad in a specific period".

1.2 Research Gap

Over time, digital marketing and speed of internationalization have been examined by several authors within the academic literature. Oviatt & McDougall (1999) emphasize how technological progress with the means of transport, communication, and computers, such as digital marketing in the case of this thesis, allow entrepreneurs to start new businesses and internationalize them rapidly. Despite this, there are still research deficiencies that need to be compensated. First, even if digital marketing is one of the fastest and most efficient aspects of marketing today there is a lack of understanding about its potential and fewer established frameworks to make digital marketing easier to adapt business practices and adopt new ways of working (Hanlon 2019). Another research gap relates to the fact that the internationalization patterns of new firms such as start-ups, cannot be compared to those of large firms performing in more mature services sectors or manufacturing industries. In fact, during the last ten years, a number of researches have challenged the traditional internationalization models, which have mostly focused on large multinational corporations (Kuivalainen, Saarenketo & Puumalainen, 2012). Moreover, academic authors have provided a series of guidelines for companies about how to identify and manage

speed of internationalization in new businesses such as start-ups (Chetty, Johanson & Martín, 2014).

1.3 Research Question and Objectives

The research aims of this thesis is to analyse how the implementation of digital marketing within the organization of new enterprises can benefit the acceleration of their internationalization. The study will be conducted focusing on Finnish start-ups that operate in the energy sector. The relevance of this business context lies in the fact that the market is expanding and offers to newly-established companies great opportunities for growth and be international competitive. This expansion is mainly based on a strong digitalization of the new firm, as well as to the establishment of a business plan that is scalable internationally (Business Finland, 2020). I will develop this research by investigating Finnish start-up in order to examine their organization and business strategic activities. The point of interest of this study is to analyse how digital marketing has been utilized to increase and speed the competitiveness and the start-up's presence on the international market. The analysis intends to evaluate the main marketing tactics used by young companies during the expansion process beyond national borders. The study will support the understanding of the best digital marketing activities to put in practice to speed the procedure of internationalization.

Based on the information reported above, the research question can be spelled out as follows:

“How does digital marketing affect the speed of internationalization of start-ups?”

In order to narrow the study down, this work needs to set up several objectives. This step is useful to answer clearly and completely to the research question. Furthermore, an appropriate objective has to be specific enough to be studied and achieved. Through objectives set in a proper way, the reader will understand better how the main topic is developed along with the thesis. The following objectives have been identified for this thesis:

- Explain in-depth and comprehensive way the key concepts from a theoretical point of view through examining existing literature. The main notions that will be explained are related

to digital marketing and the speed of internationalization. Moreover, these concepts will be linked together and analysed within the start-ups context.

- Examine business cases and collect the data needed to answer the research question.
- Analyse the data collected against the theory and examine how digital marketing affects the international speed of the start-ups analysed.
- Provide insights to further studies in the energy sector.

1.4 Structure of the Thesis

The remainder of this thesis is structured as follows:

The second chapter will present the existing theoretical framework on the main topics. As already mentioned, the notions there are necessary to study according to the research question are the meaning and characteristics of digital marketing and speed of internationalization. Once the principal topics are discussed separately, they will be combined to analyse the connection between digital marketing and speed of internationalization from a theoretical point of view. Moreover, in the theoretical section I will provide an explanation of the type of companies examined, the so called start-ups. The following chapter is related to the methodology used to develop the thesis. It covers the research design and research approach. Additionally, in this section I will present the data collection, sample size and sample composition. Each of these elements will be described in detail to increase the traceability of the study. Furthermore, I will define validity and reliability and further explanation will be provided on how compliance with these concepts will be achieved. The fourth chapter is related to the empirical examination. In this part, I will develop the description, analysis, and evaluation of the findings. The main purpose established in this chapter is to evaluate to which extent the theoretical framework developed in advance is connected to the actual results. The final part of the research paper will be structured as a conclusion of the research paper, with a summary of the main findings given by the previous analysis. Another aspect that will be highlighted in this last chapter is the description of the way by which the results can be applied from a managerial point of view. Moreover, I will explain the limitations of the study as well as suggestions for future research in the same field.

1.5 Key Concepts

This section aims to provide definitions of the key concepts of the thesis, namely digital marketing and speed of internationalization. The latter will then be explained exhaustively in the theoretical framework section. In addition, the notions of digitalization, internationalization and start-ups will generally be contextualized, as they are necessary to understand the reference-context.

- *Digital Marketing* (DM) is defined as an umbrella-term that describes the process of using technological tools to develop a business activity, acquire customer and increase sales (Simões, Barbosa & Filipe, 2019). According to Hofacker (2018:3), “digital marketing is the use of networks created from hardware and software in the process of marketing” and it can be applied into the development of three main firm’s operations such as communicate, sell and connect (Hofacker, 2018). Thus, digital marketing represents a sub-process of marketing, in which companies and customers - both existing and potential – create business relationship and value through the use of Internet (Visser, Sikkenga & Berry, 2018)
- *Speed of internationalization* can be understood as “a relationship between the internationalization distance covered and the time passed to reach this” (Chetty, Johanson & Martin, 2014:3). Prashantham and Young (2011) introduce the distinction between the initial entry and the post-entry speed, depending on whether the company is carrying out its first international activity or not. Zhang (2010) explains that there are several indicators that can measure the speed of internationalization, such as “the number of new countries to which the firm exports or in which it makes capital investment (subsidiary outlets, production plants), the increase in the geographical diversification of its sales, or the mean physical and/or cultural distance of those Countries from its home base” (Casillas & Acedo, 2012: 20).
- *Digitalization* “is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business” (Gartner, 2017:webpage). Digitalization is based on a large amount of data, often cloud-based, and on machine learning technique (Gray & Rumpe, 2015). These are applied to recognize new business chances or for the prevision of future market and customer conduct (Gray & Rumpe, 2015).
- *Internationalization* is defined as “a process of increasing involvement in international operation” (Welch & Loustarinen 1988:34). Äijö (2001) states that the main reason why companies looking for internationalization is growth and make profits. The

internationalization of business activities is evidenced by the fact that it influences the internal organization of several firm's departments. Moreover, it has an important impact on academic areas of studies, such as strategic management, organization science, operation management or economic institutions (Rättich, 2011).

- *Start-up* is the term that refers to a new business (Cambridge Dictionary, 2020) that has less than 10 years old (Ripsas & Troger, 2014). From an entrepreneurial point of view, "a start-up is a human institution designed to deliver a new product or service under conditions of extreme uncertainty" (Ries, 2011: 2).

2. Theoretical Framework

The following section will provide the reader with the theoretical background of the thesis. Moreover, the major topic areas will be explained and linked together. Finally, I will provide in the end of the chapter, a summary of the theoretical framework of the study. The aim of the thesis is to verify the importance of digital marketing as part of the acceleration of the internationalization process of start-ups. The purpose will be attempted to achieve through the introduction of relevant theories from which specific peculiarities and characteristics will be derived. In addition, the theories regarding the elements that characterize the digital marketing and the speed of internationalization will be analysed as a contribution to the research. In the last section of this chapter, I will briefly describe what is a start-up from a theoretical point of view and which are its main characteristics in terms of size, team composition and business. Furthermore, I will clarify the theoretical explanation of the link between start-up and internationalization process.

2.1 Digital Marketing

The concept of digital marketing has changed over time, passing from be used as an advertising technique for users to be a tool able to create an interactive experience (Brosnan, 2012 cited by Isidro, Gavilanez, Arbelaez & Alonso, 2017). In fact, during the past years the term was used to identify only the marketing of products and services developed through digital channels, while currently it is related to all the procedures that involves the use of digital technologies with the aim to acquire new clients, promote the company's solution, create and increase brand awareness and enhance sales (Hongshuang & Kannan, 2017). Indeed, marketing strategies are being reshaped thanks to the use of new digital technological devices such as smart products and Artificial Intelligence (Yadav & Pavlou, 2014). Through digitalization the information can be processed, stored, and transmitted via digital circuits, devices, and networks. Digital technologies are rapidly modifying the economic context in which firms develop their business (Kannan & Li, 2017) and, in particular, the way how business strategies are observed and developed (Ghotbifar, et al., 2017). In this digitalized environment, firms have understood that there is the necessity to transform their marketing processes, thus they have started applying strategies of digital marketing (Ng & Wakenshaw, 2017).

Kotler (2017) explains that both traditional and digital marketing develop two well-defined processes, that are *segmentation* and *targeting* of customers. The first is a practice that consists of creating groups of customers based on some characteristics, such as demographic, geographic and behaviour profile. The second one is a procedure used by the firm to select one or more segments to address their product or service based on the attractiveness of the brand to the customer. The major difference in carrying out this practice in a traditional way lies in the level of involvement of the client. It means that traditional marketing creates a vertical relationship between company and customer, as “segmentation and targeting are unilateral decision made by marketers without the consent of firm’s costumers” (Kotler, 2017:3). In other words, marketers determine the criteria of segmentation and targeting. While, in the digital marketing the client is involved into these processes. Indeed, “customers are socially connected with one another in horizontal webs of communities”. In the digital economy, communities are considered as the new market segments, with the difference that they are created by the same customers and not only by the firm. As a result, “to effectively engage with a community of customers, brand must ask for permission” (Kotler, 2017:5).

In general, digital marketing allows to entrepreneurs the development of business strategies that are executed through media devices and platforms that provide an interactive, focused and measurable way of reaching potential clients (Lamberton & Stephen, 2016). According to Bruyn (2008), digital marketing is composed by four main aspects: “Web Marketing/Mobile Marketing, Search Engine Optimization (SEO), Social Network/Social Media, and Customer Relationship Management (CRM)” (Isidro et al, 2017: 244). These factors are utilized for the identification, evaluation and comparison of opportunities, positioning and levels of competition (Kannan & Li 2017). Digital marketing components are used to minimize or avoid economic risks and increase the creation of a proactive behaviour through an exhaustive market research.

2.1.1 Web Marketing/Mobile Marketing

One of the main approaches related to the development of a digital marketing campaign is developed through the use of the web or mobile devices. Ferris (2007) argues that the term web marketing refers to the set of digital platforms that allow businesses to sell their products or deliver their services (Isidro et al., 2017). Technically, digital platforms contain a number of

components such as the device, the operating system, and the applications that provide a support for the development of business activities (De Reuver, Sørensen & Basole 2018). Figueiredo, Cardoso, Pocinho, Rodrigues & Oliveira (2019), define web marketing as a creative and interactive tool that companies use to communicate with their customers and increase their fidelity. Indeed, in an extremely competitive business context, firms have to integrate the traditional marketing with this new means of communication, since the web-marketing “presents its contents in a different way from the conventional means, being able to personalize and direct them to each individual of an audience, providing a capacity of response and thus allowing a more effective company- client interactivity” (Figueiredo et al., 2019:1). Digital platforms used by companies to develop web marketing, can support new and flexible means for inter-organisational relations through a variety of resources facilitating the coordination of activities at arm’s length. (De Reuver et al, 2018). Web-marketing, thanks to the use of new technologies, brings to several benefits such as the identification of each customer of its audience and the possibility to create an interactive communication, offering a specific and individualized response by clients. In fact, Kotler (2017:53) argues that “web-marketing is primarily responsible for the transformations in the sell activities, by bringing connectivity and transparency to companies' relationships with customers”. In this way, the relationship with the clients is direct, since the company can provide “a quick and precise response to the content of certain information or comment”.

Alongside web marketing, another highly developed element of digital marketing is mobile marketing. According to Castronovo & Huang (2012), mobile marketing can take several forms, including messaging, Wireless Application Protocol (WAP) and the mobile Internet, streaming media, and downloadable content. The importance of this form of digital marketing lies in the ability of a firm to increase communication and consequently sales, as well as collect the data needed for customer relation management. Moreover, mobile marketing provides the possibility to leverage social networks to enhance the involvement and consumption of digital content (Castronovo & Huang, 2012). Truong & Simmons (2011) argue that customers prefer use their mobile devices to access social networks. Thus, this tendency can be applied to drive communications and targeting specific segments of consumers (Castronovo & Huang, 2012).

2.1.2 Search Engine Optimization (SEO)

Consumers want to get information online through a number of methods, the most notable being search engine results (Kannan & Li, 2016). In fact, Search Engine Optimization (SEO) is the main tool used by digital users to gather free information concerning products and services and identify firms and brands that fit users' research criteria, starting from keywords that users type in. Search Engine marketing involves three main 'players', namely the search engine, the advertiser/firm and the client (Kannan & Li, 2016). SEO can be defined as a technical method that converts a document from a webpage into a search engine's top search result (Gunjan, Kumari, Kuman & Rao 2012). According to Rutz & Bucklin (2011), SEO campaigns play a crucial role to integrate marketing communication, as the process of searching and selecting web pages starts with the analysis of the keywords written by the user. Website content is then crafted to include the keywords in titles, tags, and other text.

The effectiveness of a SEO campaign is measured through the analysis of some indicators, such as website ranking and traffic, clicks, impression and referral. The mentioned metrics, in several cases, are made accessible through search engine themselves (Isidro et al., 2017). Furthermore, search engines offer to firms reports containing the keywords performance, in order to show the success of company's paid search advertising. For instance, Google proves every day specific statistics that include a number of data such as "the number of impressions, number of clicks, click-through rate (CTR), and conversion rate, average cost per click (CPC), total costs, average position, and quality scores" (Kannan & Li, 2016: 21). A well-defined SEO campaign is essential since most of the people that use search engines opt for the options that are available on the first page and as a consequence, if the webpage of a company is visualized in the following pages, the probability to obtain an economic return from the initial investment diminished (Gunjan et al., 2012). In other words, if a potential customer types the keyword into a search engine instead of the company name and the company's website turns out to be among the first shown as a search result, it means that the firm is optimizing its website and is also getting more profitable results (Wang, Li & Shang, 2011 cited by Isidro et al., 2017). This is the reason why, according to Forbes, companies need an optimization of their website so that it will increase the website's visibility. (Forbes, 2014).

Usually, the process of web-optimization initiates with a redevelopment turn the already existent keywords in more effective ones, to communicate with major search engines (Gunjan et al., 2012).

Kannan & Li (2016) focus on the role of attribution approaches in SEO campaigns, arguing that “SEO models the firm’s keyword bidding and its return on investment (ROI), the search engines’ ranking decision and the customers’ click-through and conversion. These attribution strategies can have a significant impact on targeting customers using keywords” (Kannan & Li, 2016: 21). In addition, another strategy that can be adopted by the firm is the creation of high-quality content video marketing (Sitrasasu, 2020). To this end, Sitrasasu (2020) explains that each video has to incorporate three main elements that are the proper keywords, a substantial description linked to the content and an interesting title. This approach allows the company to reach the target audience and, by this way, to “ increase your search engine ranking, click-through rates, open rates and conversions” (Sitrasasu, 2020: 378).

2.1.3 Social Network/Social Media

The use of social networks and social media to build up a digital marketing campaign is dramatically increased in the current period since they are considered as powerful communication instrument used online, that allow people to interact with each other (Boyd & Ellison, 2007). According to Boyd & Ellison (2007), a social network site is defined as “web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection. Their list of connections may vary from site to site” (Isidro et al., 2017:248). Another explanation linked to the notion of social network is that “it is a collection of software based on digital technologies—usually presented as apps and websites—that provide users with digital environments in which they can send and receive digital content or information” (Appel, Grewal, Hadi & Stephen, 2019:80). Moreover, it is culturally significant since it has become for several individuals the main domain used to receive and share vast amounts of information (Appel et al., 2019). In accordance with Kotler (2017), though social media geographic barriers are eliminated, people are connected and companies are enabled to innovate.

From this point of view, social networks and social media are considered synonyms, since the Cambridge Dictionary (2020:webpage) defines both notions as “websites and computers programs that allow people to communicate and share information on the internet using a computer or mobile phone”. These types of technologies not only allow people to communicate in a direct way, but also help companies to reach a number of potential customers (Ingle, Desai & Kale, 2020). In

short, these tools have a great impact not only on single individuals but also on corporations, considering that through the use of social networks and social media, organizations have the possibility to share information and distribute content about the solution offered in order to increase the brand presence throughout the Internet (Isidro et al.,2017). Indeed, “the most important goal of a social media marketing campaign is brand responsiveness and the establishment of social trust, but going deeper into social media marketing, it can be used as a direct sales channel” (RV & RNair, 2020:7559).

Nowadays, social media are known and utilized by billions of people globally so much to become one of the defining technologies and digital tools of the our time. According to the statistics, “the total number of social media users is estimated to grow to 3.29 billion users in 2022, which will be 42.3% of the world’s population” (eMarketer, 2018: webpage). As a result, entrepreneurs are able to increase their visibility by implementing a digital marketing strategy that is based on the use of these devices. Cortizo-Burgess (2014) explains the power of social media in the marketing strategies of a firm, since social media has the tendency to have a crucial impact on the clients’ decision process. For instance, need recognition can be stimulated when a customer is watching his/her favourite influencer trying a new product on YouTube. Moreover, people search for information about a product by asking their Facebook friends which one their recommended. (Appel et al., 2020). The main advantages in the use of social media are based on the fact that they include interactive platforms created by mobile and web technologies through which people can create and share several contents, as defined by the earlier scholar Mayfield (2008). Furthermore, this type of virtual connection is a suitable method to develop a digital marketing strategy, since it is cheap but at the same time entrepreneurs are able to be directly connected with their clients (Leonardi, Huysman, & Steinfield, 2013).

2.1.4 Customer Relationship Management (CRM)

Several scholars have recognized the crucial role played by customers in the development of the product design process or improvement and co-creation of the services provided by the company (Heinonen & Michelsson, 2010). According to Bressolles (2012) the fundamental principle of digital marketing is the development of digital tools that allow companies to interact in order to improve the management of the relationship with existing customers. On a large scale, technological

changes are enabling firms to improve their capabilities of handling customer needs while retaining existing and attracting new customers (Chang et al., 2010). In particular, technology can be applied in the marketing area to provide information regarding customer profiles, product and campaigns. (Al-Homery et al., 2019). Customer relationship management (CRM) literature reveals a variety of understanding for CRM definitions and its components. Customer Relationship Management is the main procedure used by the firm “to understand clients, to monitor their actions, to coordinate resources and to support sales processes” (Rudskaia & Eremenko, 2019:2). CRM can be also described as a business strategy that deals with the selection and management of customers for long-term value optimization for the organizations given that it is used by firms for identifying, attracting, satisfying and maintaining a good relationship with their partners and potential and existing customers. (Al-Homery, Asharai & Ahmad, 2019). Indeed, according to Reinartz & Venkatesan (2008), CRM provides a technical link between the firm and its clients. CRM technique emerged in 1970s (Buttle, 2004) as a management tool that was used to maximize sales-force automation within the organization. That is why Chen & Popovich, (2003:675) argue that “customer relationship management itself is not a new concept but is now practical due to recent advances in enterprise software technology”. Ever since, according to King & Burgess (2007) it has become one of the most famous tools that firms can use to manage several information, from sales and marketing to customer knowledge and customer interaction (Al-Homery, Asharai & Ahmad, 2019). Almotairi, (2008) explains that the main components of a CRM are business processes, technology and people (Al-Homery et al., 2019). These elements are connected to create a mainstream of data helpful to provide knowledge. In practical terms, “from a dynamic customer database, the information is collected, analysed, disseminated, and applied to the specific customer profile. Consequently, with that information “the firm will be able to understand, targeting and segmenting the catchment area to create value and increase their loyalty” (Isidro et al., 2017: 249).

2.1.5 Advantages and disadvantages of digital marketing

Overall, the literature demonstrates that digitalization and the techniques related to it, such as digital marketing, is positively related to new business growth, performance and competitiveness since it provides new opportunities to reach clients more efficiently (Taiminen & Karjaluoto, 2015). In accordance with Parida et al. (2019) nowadays the necessary condition for a company to

maintain its level of competitiveness in a market is not only using computer technologies, but integrate them in an innovative business model (Shpak, Kuzmin, Dvulit, Onysenko, & Sroka, 2020). Through digital marketing, the company can reach the target audience with cost efficiency and in a measurable way. This strategy is particularly relevant for new businesses that suffer a lack of resources (Deepa & Anirudh, 2020). In point of fact, interactivity between company and clients based on the use of Internet tools allows direct contact and, as a consequence, increase the customer's attention and the general satisfaction (Taiminen & Karjaluoto, 2015). In addition, the importance of an high quality customer management lies in the fact that digital marketing has shifted the attention of companies from the product to the customer (Patruti-Baltes, 2016), since in the traditional marketing the sales strategy was oriented towards the product while the current marketing activities are focused on the needs of the client which play a primary role in the development of sales strategies. Furthermore, Rishika et al. (2013) indicate that the use of social media as a digital marketing campaign, can also produce sales-related outcomes. It means that customers who are committed with the firm through social media tools are more profitable compared to the others (Taiminen & Karjaluoto, 2015). Another crucial benefit is related to the possibility for the company to track and measure easily the result of a digital marketing campaign, in order to establish how effective it is. Indeed, online metric tools provide detailed information about how customers use firm's website and in which way they react to firm's advertisements (Deepa & Anirudh, 2020). Together, all these aspects of digital marketing have the potential to add up to more sales.

Nevertheless, there are various barriers in the implementation of a firm's digital business model (Shpak et al., 2020). These difficulties can be derived by a lack of a digitalization plan, a scarcity of staff ability in this area or even a low level of thinking (Shpak et al., 2020). In fact, tools, platforms and trends change rapidly, so the company can have problems to carry out digital marketing with success (Deepa & Anirudh, 2020). Moreover, a well-designed digital marketing campaign and the creation of marketing contents can take considerable time-consuming (Shpak et al., 2020). Another challenge linked to the use of Internet is that through digital tools clients have access to the contents provided by the firm, but any negative feedback and criticism is also visible. As a result, brand reputation can be damaged (Shpak et al., 2020). Lastly, security and privacy are among the major topics that companies have to take into consideration. In point of fact, Lantos (2011) explains that customers' data can be easily shared and that data are not immune from hackers (Rajaselvi & Thomas, 2020). This problem leads to a lack of trust by the client, which has

been recognized as “a great challenge on the way of online marketing growth” (Rajaselvi & Thomas, 2020:6243). Bart et al. (2005) define trust in virtual environment as follows: "online trust includes consumer perceptions of how the site would deliver on expectations, how believable the site's information is, and how much confidence the site commands" (Rajaselvi & Thomas, 2020:6243).

2.2 Speed of internationalization

Based on the research question presented in the thesis, another concept that needs to be conceptualized within the academic literature regards the so-called speed or acceleration of internationalization. In general, speed of internationalization is considered as a multidimensional concept (Hilmersson, Johanson, Lundberg, & Papaioannou, 2017), since it is influenced by internal factors such as the thinking of entrepreneurial actors and by external factors, for instance environmental and industry condition (Oviatt & McDougall, 2005). Indeed, “the advances in technology, the changing market conditions, and the increasing number of managers and entrepreneurs who can explore cross-border opportunities all contribute to early and rapid internationalization phenomenon” (Jianga, Kotabeb, Zhangc, Haod, Paule & Wangf, 2020: 1). Overall, the antecedents of the speed of internationalization can be divided into four groups of independent variables: entrepreneurial and management abilities, networks of relationships and connections, institutions and technologies in foreign states and the firm’s strategy (Chetty, Johanson & Martín, 2014).

In accordance with Oviatt & McDougall (2005), several authors within the international business literature attempted to conceptualize the internationalization speed. Casillas & Mendéz (2014) argue that the speed of internationalization depends on several decisions taken by the firm inside the internationalization process, such as choice of location and modes of operation. Another element that indicates the speed of internationalization of a firm is the proportion of sales between domestic and international sales operation within a certain period of time, that is defined by Casillas & Acedo (2013) as the speed of the growth in a firm’s international commitment. Moreover, the correlation between the level of international commitment and time has a great impact on the speed of internationalization (Johansson & Kalinic, 2016). First, international

commitment is intended by scholars as to the extent to which firm's resources are invested in international activities (Pedersen & Petersen 1998; Johanson & Vahlne 1977; Johansson & Kalinic, 2016). Moreover, the acceleration of internationalization is defined by the number of international markets in which a company performs its business activities and establishes subsidiaries, given a certain period of time (Johansson & Kalinic, 2016).

The temporal dimension of internationalization is perceived as a crucial element in the international business theory (Buckley & Casson, 1981; Melin, 1992; Casillas & Acedo 2013). It reflects "the time that elapses from a firm's inception to its first sales abroad" (Hilmersson et al., 2017:24). According to several authors, among the factors that affect the time related to the internationalization the main ones are the technologies used and specific business models (Hilmersson et al., 2017). In addition, unique competences such as entrepreneurial skills and an international perspective, are able to reduce time and speed up the process of internationalization (Oviatt & McDougall, 1994). As a consequence, there are two principal reasons why the time influences speed of international expansion (Hilmersson et al., 2017). The first is related to the company's ability to develop marketing activities, while the second reason is linked to the entrepreneur's international experience. In fact, as argued by Hilmersson & Jansson (2012), depending on the similarity between the markets, existing experiences are also useful in markets in addition to those in which they were developed. In this way, costs can be reduced and thanks to the shortcuts made and mistakes avoided, entrepreneurs are able to speed the entrance in foreign markets. Since the early 1990s, literature on internationalization speed highlight the presence of specific factors that drive the acceleration of the internationalization process, and that therefore affect why and how new firms internationalise (Johanson & Kalinic, 2016). The forces that influence the speed of internationalization are divided in four main categories: enabling, motivating, mediating and moderating. The main theoretical contribution linked to the explication of these forces is provided by Oviatt & McDougall (1999,2005).

2.2.1 Four forces of speed of internationalization

The first force is the enabling force, which is characterized by an improvement in the conditions of transport, communication and development of digital technologies. These three elements make it possible to accelerate the internationalization process (Oviatt & McDougall, 2005). For example, the use of faster and more efficient transport means allow companies to cut costs for foreign

trade and investment and reach a foreign Country faster. In addition, Ibrahim (2004) shows that the advent of digital technologies has also enabled companies with limited resources, such as start-ups, to engage in more cost effective market research and communications (Johanson & Kalinic, 2016). In point of fact, Langseth, O'Dwyer & Arpa (2016) argue that technology is a driving force in the internationalization process.

The second force that influences the speed of internationalization is the motivating force of competition. Indeed, competition encourage or even force entrepreneurs to accelerate the process of internationalization in order to gain market share and maintain high level of sales and profits (Oviatt & McDougal, 2005). For instance, several businessmen have been encouraged to take pre-emptive advantages of technological opportunities beyond national borders since they feared competitors would respond fast to a new product introduction, preventing the entrance in international markets in the case that they initially competed only nationally (McDougall et al., 1994; Oviatt & McDougall, 1995). In other words, through technology, firms can accelerate their internationalization, while the presence of real or potential competitors motivates and encourage them to accelerate internationalization.

Mediating is the third force and it is linked to the characteristics of entrepreneurial actors. The process of internationalization that develops from the discovery by the entrepreneur of an economic opportunity allows the expansion of the company beyond national borders. Business leaders interpret the potential offered by the market in a different way, on the basis of their personal characteristics, such as years of international business experience or risk-taking propensity (Oviatt, Shrader, & McDougall, 2004). Indeed, owners' personality traits and backgrounds drive them to discover the best international opportunities (Ibrahim, 2004), in terms of communication, transport and technology (Oviatt & McDougall, 2005). Ruzzier et al. (2006) note that "especially crucial are the skills, competencies, and management know-how the entrepreneur needs to develop in order to be successful in the process of internationalisation" (Langseth et al., 2016:126). The attitude of the owner-manager tends to determine whether or not an activity is regarded as a driver for international trade (Lloyd-Reason and Sear, 2003 cited by Langseth et al., 2016) or a growth opportunity for firm (Walker & Brown, 2004 cited by Langseth et al., 2016). In sum, Chaganti & Sambharya, (1987) explain that the success of a company and the improvement of internationalization processes in terms of speed are based on the experiences of entrepreneurs (Ziyae, Sajadi & Mobaraki, 2014), who are considered as the core of knowledge for

the development of business activities (Edmans, 2011 cited by Ziyae et al., 2014). Moreover, Ziyae et al., (2014:3) argue that “in the knowledge-intensive economy, speed of internationalization, not only seizes environmental conditions, but may also rely on the capability and enthusiasm of entrepreneurs to spread their business activities beyond nationwide borders in the digital form”.

Lastly, speed of internationalization is also influenced by a moderating force. It can be divided into two sub-groups, that are knowledge-intensity and international networks. After an entrepreneurial actor identifies or enacts an opportunity and interprets the enabling and motivating forces, the knowledge intensity of the opportunity combined with the characteristics of the entrepreneur’s international networks can determine internationalization speed (Oviatt, 1994). The different levels of novelty, complexity and sophistication of knowledge employed in a company determine the speed of internationalization. In fact, companies with a high intensity of knowledge applied in the design and production of a product, as well as in the provision of a service, are able to accelerate the process of internationalization (Oviatt & McDougall, 1994). The entrepreneur can use business knowledge derived from both personal life and work experience to determine and generate international opportunities (Ardichvili & Gasparishvili, 2003). In other words, more complex knowledge can influence the speed with which an international business opportunity is exploited (Oviatt & McDougall, 2005). Entrepreneurial enterprises led by owner-managers or executives who have a greater wealth of knowledge on the international market are more likely to take advantage of business opportunities in advance. (Casillas et al., 2013).

Academic researches conducted by several authors (Halikias & Panayotopoulou, 2003; Cox and Wicks, 2011, Carroll & Shabana, 2010) show that entrepreneurs with international knowledge are able to facilitate the entry of their own companies into global markets and to speed up this process (Ziyae et al., 2014). Santos and Ruffin (2010), explain that the experience gained depends on the way in which the businessman analyses the international environment in terms of possible changes at the market level that favour the entry of the company (Ziyae et al., 2014).

To sum up, the main factors that trigger business internationalization speed are: “technological developments in the areas of production, transportation and communication, the increased importance of global networks and more elaborating capabilities of entrepreneurs, who starts early the internationalization process” (Rialp, Rialp, & Knight 2005: 153). Foreign market knowledge has also an important impact in accelerating the entry in international markets (Langseth 2009). Besides the internationalization forces that are able to increase the speed, international business scholars (Miller, 1992) suggest the presence of risks that can affect firms’

operation in international markets (Jeana, Kimb & Cavusgil, 2019). One of the major issues is linked to the foreign market competition, that in accordance with Li et al. (2008), refers to the level of competition intensity abroad (Jeana et al., 2019). In point of fact, “an increased intensity is often characterized by a greater rivalry among incumbents, which can take the form of price wars, more advertising or product offerings, added services, and increased transactions” (Jeana et al., 2020: 2). Along with the competition, another crucial problem that companies have to face is the intensive foreign market uncertainty (Jeana et al., 2020), that refers to the degree of instability and unpredictability registered in foreign markets (Li et al., 2008). It is characterized by three principal elements, that are “the unpredictability of market demand, customer, and competitor behaviour” (Jeana et al., 2020: 4). This can be a particular problem to stem especially for new ventures, since they need more information and resources to analyse the foreign market situation (Jeana et al., 2019). In addition, institutional voids represent a great challenge for companies to access resources and intermediaries for their internationalization process to such an extent that, according to Doh et al. (2017) firms are enhanced to create opportunistic behaviour (Jeana et al., 2019).

2.3 Start-ups and internationalization

A start-up is defined by Oxford Dictionary (2020: webpage) as “a company that is just beginning to operate”, characterized by small organizations and centralized controls (Chen & Chen, 2002). It has not to be confused with a smaller version of large companies (Blank, 2013) since a start-up is actually a new established business designed to search for a repeatable and scalable business model (Blank, 2013). Therefore, these organizations can be also defined with different terms such as new ventures (Sohl, 1999), young firms (Baum, Calabrese & Silverman, 2000), new entrants (Rothaermel, 2002). Ripas & Troger (2014) describe a start-up as “a young company, less than 10 years old, with an innovative business model and/or innovative technologies” (Rompho, 2018: 31). The definition of young venture is also used in the theory to identify start-ups that count with a number of employees lower than 50 (Hogehuis, Van Den Hende & Hultink, 2016). Furthermore, Wymer & Regan (2005) explain that start-up organization are characterized from a limited amount of tangible and intangible resources, due to the internal structure (Spender, Corvello, Grimaldi & Rippa, 2017) However, it has promising ideas, organizational agility, the willingness to take risks

and aspirations of rapid growth (Weiblen & Chesbrough, 2015 cited by Rompho, 2018). The role of start-ups in the modern economies is dominant, since they have unique characteristics and innovative ideas to succeed market potential and growth (Akkaya, 2020). The life cycle of a start-up can be divided into three main stages. Bootstrapping is the first stage, the second one is the so-called seed stage and the last one is the creation stage (Salamzadeh & Kawamorita Kesim, 2015). The seed phase is the critical one for the business development of a new venture, during which a number of start-ups fail (Salamzadeh & Kawamorita Kesim, 2015). Since the main goal of a start-up is to turn an idea into a business, there are several challenges to be faced such as lack of finance, business knowledge and team management (Akkaya, 2020). In fact, Salamzadeh & Kawamorita Kesim (2015) argue that finance is a crucial issue related to each stage of start-ups development since, by definition, new businesses are characterized by low resources. In addition, new ventures can experience problems to access to support mechanism for instance accelerators and business angels (Salamzadeh & Kawamorita Kesim, 2015). Another problem is related to the management of human resources due in particular of a lack of deep knowledge of the operating field among the team members (Salamzadeh & Kawamorita Kesim, 2015). Moreover, awareness scarcity to environmental factors for example existing trends or markets restriction can determine the failure of a number of start-ups (Salamzadeh & Kawamorita Kesim, 2015).

The internationalization of small firms in terms of resources differs to that of larger companies operating in more mature industries (Kuivalainen, Saarenketo & Puumalainen, 2012). Indeed, over the past decade, several studies have questioned the traditional internationalization models (Johanson & Vahlne, 1977), which have mostly focused on large multinational corporations (Kuivalainen, Saarenketo & Puumalainen, 2012). In point of fact, Granlund and Taipaleenmäki (2005) notice also that these new businesses has different systems in terms of growth and external influences compared to traditional organization (Rompho, 2018). Moreover, a start-up operates in a volatile unpredictable context, with the purpose of create new business opportunities in a short amount of time (Hoffman & Radojevich-Kelley, 2012). In fact, a new venture aims for growth in international markets and this creates the need to organize part of the structure and business activity through global networks (Sipola et al., 2016). The industrial change resulting from the development of globalization and the use of new technologies has triggered changes in the economic system that have fostered the internationalization of start-ups (Sipola et al., 2016).

Through the examination of companies' internationalization decision, there is the benefit to comprehend why new business opportunities are recognized and captured not only nationally but also internationally (Ellis, 2000; Johanson & Vahlne, 2009, cited by Hafeez & Nuro Arroiteia, 2017). Furthermore, Johanson & Martin Martin (2015) provided quantitative evidence of how certain factors are considered driving forces in the internationalization of new business. These elements are the level of experience achieved in international trade, and in general the level of internationalization and the international commitment of young companies (Johanson & Martin Martin, 2015). Another essential element that brings several advantages and opportunities to young companies for a rapid internationalization is the rise of the digital economy, by upending the way start-ups expand into foreign markets. In general, Neubert (2016) explains that a company born of a small, open economy is often forced to internationalize early and fast to become profitable even if early and rapid internationalization is very challenging for entrepreneurs because it requires specific skills and excellent preparation, including, for example, product adaptations (Scherer, Minello, Kruger & Rizzatti, 2018). Cavusgil & Knight (2015) state that early and accelerated internationalization of new ventures is associated with strong organizational capabilities such as innovation, market orientation, and international marketing skills (Cahen & Mendes Borini 2020). These capabilities have an impact on a variety of new venture issues, including speed of internationalization (Cahen & Mendes Borini 2020).

2.4 Relation between digital marketing and speed of internationalization

Nowadays, for a number of firms the ability to internationalize has become crucial for their survival and for increase their competitiveness (Joensuu-Salo, Sorama, Viljamaa, & Varamäki, 2018). Since digitalization and the use of digital devices has become a current phenomenon, firms leverage the "contemporary globalized and digitalized world to develop a unique competitive advantages across borders". In particular, the development of digital business activities "has revolutionized how organizations, irrespective of their size or industry, create and deliver value-based transactions within local and foreign markets" (Ojalaa, Eversb & Riapl, 2018: 725). The Internet and mobile devices have opened up international markets, and according to Oviatt and McDougall (1994) they can increase a business's market potential and that brings to the emerge of firms that internationalize proactively and rapidly shortly after inception (Ojalaa et al., 2018).

Digitization has redefined the possibilities of entrepreneurship in a way that the barriers of the countries are disappearing, accelerating the internationalization path (Bhaduri, 2015 cited by Rathee & Rajain, 2018). Alexander and Meyers (2000) emphasize that application of technological tools within the firm's business organization may be the indicators of competitive advantage for entering international markets. Indeed, several scholars (Neubert, 2018; Stallkamp & Schotter, 2018) argue that the impact of digitalization in firms' business models has crucial result, since companies can achieve early and rapid internationalization. Moreover, through the use of Internet, a new paradigm of marketing comes into play and consequently this brings to a new perspective of firm internationalization and international speed (Skudiene, Auruskeviciene, & Sukeviciute, 2015). Thus the traditional marketing strategy and tactics have to be revised (Chaffey, 2009 cited by Skudiene et al, 2015) in the light of firms' internationalization process perspective based on the use of digital tools. (Skudiene et al, 2015). Marketing capability is intended as the knowledge of clients' profile and of the competitive behaviour, the ability in the activities of market segmentation and targeting, a successful marketing strategy design, and it is related to the organizational performance (Song, Nason & Di Benedetto, 2008). The development of marketing capabilities based on the use of digital technologies provide a powerful tool for marketers to reach international markets. In general, Song, Nason, & Di Benedetto (2008), suggest that companies leverage digital capacity to create or increase the value of business (Lee et al., 2019). The term of digital capacity refers to the use of digital technologies such as digital marketing, e-commerce, Internet Of Things and cloud computing, which are able to increase and improve the performance of firms even internationally (Eggers, Hatak, Kraus, & Niemand, 2017; Gabrielsson & Gabrielsson, 2011) by optimizing business processes and building faster and more efficient business ties (Pagani & Perdo, 2017, cited by Lee at al.,2019). The result is that digital capacity helps new businesses anticipate the entry into international markets (Lee et al., 2019). In particular, companies that develop digital marketing can increase their awareness and market their products at a lower cost, "if the target market has a suitable online infrastructure" (Lee et al., 2019:2). Furthermore, digital marketing enables interactivity between a company and customers, and allows companies to reach both national and international potential clients_(Skudiene et al, 2015). To conclude, according to Cox and Wicks (2011), marketing capability is crucial for new businesses in the path of the rising speed of entry to foreign markets, since they can build a renowned international brand, enhance supply chain management and involve actively costumers in the product developing process (Ziyae et al., 2014).

2.5 Summary of the literature review

The mentioned literature review provides crucial elements that contribute to the development of the thesis. The first section contains a series of definitions and explanations of the meaning of the term digital marketing. Furthermore, evidence has been given of the main difference between digital marketing and traditional marketing. A section of the chapter is dedicated to clarify the major elements that compose digital marketing, which are Web/Mobile marketing, Search Engine Optimization (SEO), Social network/Social Media, Customer Relationship Management (CRM). For each of the above-mentioned factors, the usage methods and benefits to the business organization have been introduced. The second central theme linked to my research question is the speed of internationalization. Again, academic definitions are provided in the text to put in context what is meant by the term speed of internationalization. Moreover, I extensively analysed what the "time" factor is, since it is considered by a number of scholars as a critical element of influence. In conclusion, the four forces that drive the acceleration of the internationalization process are explained based on the academic contribution mainly provide by Oviatt and McDougall (2005). These forces are: enabling, motivating, mediating and moderating. The chapter is concluded with a part dedicated to describing the new business, the so-called start-up. Specifically, I listed the main definitions and characteristics of start-ups as well as I exposed the role that the internationalization process plays within these new ventures. Lastly, the literature review regarding the study of the relationship between digital marketing and speed of internationalization is discussed and in particular, how the first element is able to influence the second one. Further, I will turn to the empirical part of this thesis and explain the specific methodological procedures undertaken to answer its research question.

3. Research Methodology

The research question of my thesis is *“how does digital marketing affect the speed of internationalization of start-ups?”*. In particular, the study focuses on Finnish start-ups that operate in the energy sector. In this chapter, I will analyse and discuss the methods used to obtain data and also the reason for choosing these methods. Furthermore, I will present the means of how to increase validity and reliability.

3.1 The “Honeycomb of Research Methodology”

Based on the thesis’ purpose, the following section will provide the main information related to the research methodology and the techniques linked to it. In general, the term ‘research’ denotes a systematic and methodical process of investigation composed by a series of questions that will be analysed through the collection of information relating to the question and the study of them (Wilson, 2014). The major purpose of a research is to increase the knowledge about the research question and the topic linked to it through the findings (Wilson, 2014). In other words, a research is a “step-by-step process that involves the collecting, recording, analysing and interpreting of information” (Wilson, 2014: 4) The structure followed to develop the research is principally based on the so-called “The Honeycomb of Research Methodology” (Wilson 2013) (see Picture 1), which is composed by six-dimensional entities that are:

1. Research Philosophy
2. Research Approach
3. Research Design
4. Research Strategy
5. Data Collection
6. Data Analysis



Picture 1. The Honeycomb of Research Methodology (©Wilson, 2013)

In this chapter, I will therefore present and describe each methodological element with the aim of provide a reasonable methodology used for the research development.

3.1.1 Research Philosophy

Research philosophy refers to a set of hypotheses about the development and nature of knowledge (Saunders & Lewis, 2018) that the researcher considers important for the evolution of the research (Wilson, 2014). According to Mark Eastervy-Smith et al. (2002), research philosophy is crucial, since it helps to clarify the research design that works best and accordingly to that, how to collect and interpret data (Wilson, 2014). It means that research philosophy is useful to set the direction of the research process, from the research question to the conclusion. The philosophies connected to the nature of this research are positivism and interpretivism (Wilson, 2014). Moreover, Wilson (2014) presents an additional philosophy called pragmatism, which is a combination between positivism and interpretivism.

The research philosophy used for the developing of this research is the interpretivism, since it “relates to the study of social phenomena in their natural environment” (Saunders and Lewis, 2018:106). Through this philosophy, the researcher needs to interact with the social world that is under his examination. (Wilson, 2014). The research is carried out through the collaboration and the participation of the participants. For this reason, the research can be complex because the findings are open to interpretation and this can leads to problems associated with reliability (Wilson, 2014). Indeed, while the collection of data is relatively short, the interpretation is a long-lasting process because the analysis of data has to be carried out carefully (Kontkanen, 2019). According to Saunders & Lewis (2018), the observations are based on qualitative data and the findings are not generalized but they provide knowledge in a specific context. This philosophy is particularly relevant in the business researches linked to management organization, in particular of the marketing and human resources (Saunders & Lewis, 2018); hence, it matches this study. In order to provide to the reader a complete overview of research methodologies and to further justify my decision, I will briefly describe the positivism philosophy and the pragmatism philosophy.

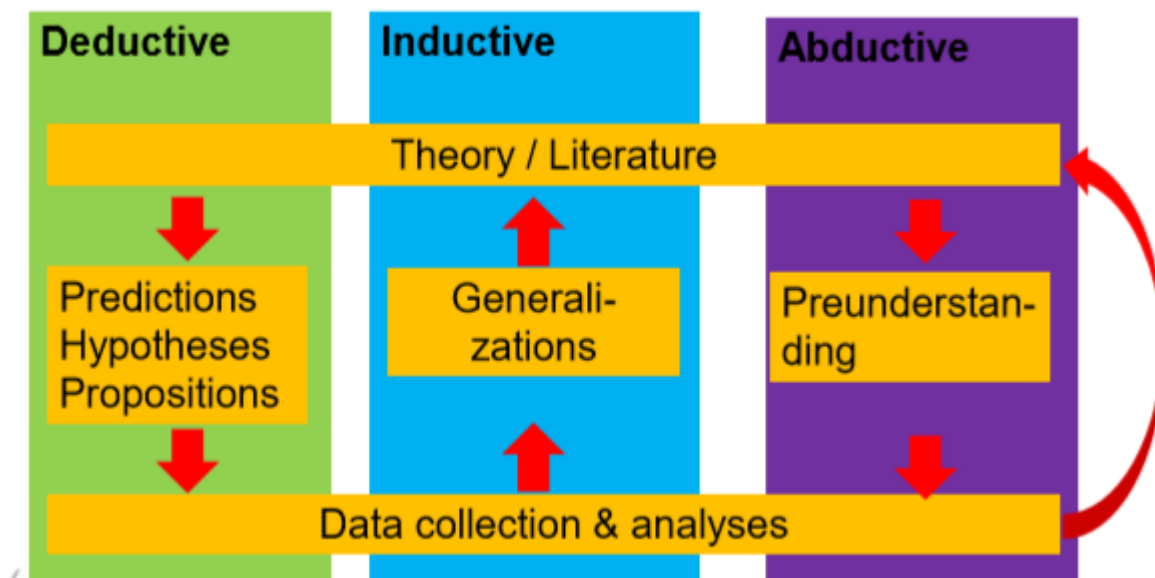
Positivism “takes an objective view” (Wilson, 2014: 14) and the researcher has minimal interaction with the participants when he is developing the research (Saunders & Lewis, 2018). With this philosophy, the research is carried out following a scientific approach, moving from the theory to observation. In general, observations are based on quantitative data and the findings are applicable to the whole of population. (Saunders and Lewis, 2018). Positivism is based on fact and the collection of data takes considerable time because is important to check the truthfulness of them. Analysis is often mechanic, carried out by using tables and matrices (Kontkanen , 2019). While, pragmatism allows the researcher to conduct a deep analysis about the ‘what’ and ‘how’ of the research problem. Indeed, using this mixed-philosophy, research problem and research question are placed at the centre of the study (Wilson, 2014).

3.1.2 Research Approach

Research methods are often associated with two main approaches, that are inductive and deductive, and a mixed approach called abductive approach (Wilson, 2014). The underlying approach regarding this thesis is inductive. With the inductive approach the researcher uses the data as the first source of knowledge and builds up the theory from them (Kontkanen , 2019).

Wilson (2014) explains that inductive approach is applied to contribute in the development of a new theory, based on observations and data analysis. Finally, according to Saunders et al (2007), induction emphasizes a close understanding of the research context through the collection of qualitative data. It is less concerned with the need to generalize and is a more flexible approach that permits changes of research emphasis as the research progresses (Wilson, 2014).

On the other hand, the deductive approach “involves the testing of a theoretical proposition by using a research strategy designed to perform this test to explain relationship between variables” (Sanders & Lewis, 2018:113), and the abductive approach “begins with the observation and then works out a plausible theory of how this could have occurred” (Saunders & Lewis, 2018:114). Deduction is based on scientific principles, since it moves from theory to data. It is a structured approach based on the analysis of quantitative data with the aim of generalize a conclusion (Wilson, 2014). Moreover, abductive approach attempts to the examination of a particular phenomenon with uncertain variables from which the “best possible explanation” is established (Kovács & Spens 2005).



Picture 2 Research Methodologies: main choices in research design (2015, University of Vaasa – Business faculty)

3.1.3 Research Design

Research design concerns to a plan that contains explicit guidelines or passages for the research process itself (Wilson 2014). For this reason, the determination of a clear research philosophy and the dimensions related to it, can facilitate the definition of a research design. Yin (2009:26) provides an informal definition of the concept, explaining that “research design is a logical plan for here to there”. ‘Here’ means the initial set of questions to which is based on the research, while ‘there’ regards the set of findings that give an answer for the research question (Yin, 2009). In other words, the research design is composed of the series of steps that aim the researcher to combine the empirical data to the research problem and, in the end, to the research question (Yin, 2009). Saunders & Lewis (2018) show that there are various types of research design, such as experiment, survey, case study, action research. Further research design typologies are grounded theory, ethnography, archival research, narrative inquiry. (Saunders & Lewis, 2018).

Based on the nature of my research question the empirical part of my thesis follows a case-study strategy and, in particular, a multiple-case study, since this is a design that requires data from two or more cases to achieve the purpose of the research (Dul & Hak, 2008). Dul & Hak (2008:4) define this type of research design as “a study in which one case or a small number of cases in their real life context are selected, and scores obtained from the cases are analysed in a qualitative manner”. The case study help the researcher to have an in-depth comprehension of the context of the research and operations performed within that context. It is mostly used in exploratory and explanatory research and there are different type of method to collect the data such as interviews, observation and documentary analysis and questionnaire (Saunders & Lewis, 2018). Case study entails a detailed study concerning a particular issue within a certain environment (Wilson, 2014) and data are collected through the examination of written reports and by the use of interview procedure (Jankowicz, 2005). To further justify the decision of conducting a case study analysis, this research design is the preferred one when the research question is related to the explanation of ‘how’ and ‘why’ and the “focus of the study is on a contemporary phenomenon within a real-life context” (Yin, 2009:2).

3.1.4 Research Strategy

Research strategy is divided into two categories: quantitative and qualitative. However, Wilson (2014) highlights also the possibility to mix both approaches: the researcher first conducts a qualitative step of a study and then a quantitative step or vice-versa. Given the purpose of the thesis and the concerning research question, the research strategy will focus on a qualitative research method. The main justification for using this method is that the purpose of a qualitative research is to provide a contribution to the already existing literature, instead of produce new theoretical framework in connection with the phenomena analysed. Furthermore, quantitative research refers to research techniques in which a certain circumstance or research problem is evaluated through mathematical calculation, statistical analysis and causal relationship, while the objective of a qualitative research is explore a specific phenomenon in order to interpret it and acquire a deep understanding of it (Wilson, 2014). Moreover, quantitative research is associated with numerical analysis, instead the qualitative is not. According to Pandey & Patnaik (2014: 5744) qualitative research is “multi-method in focus, involving an interpretative naturalistic approach to its subject matter”. Furthermore, qualitative research typically involves methods such as in-depth interviews, focus group discussions and observations (Hennik, Hutter & Bailey, 2020).

First, interviews can be structured, semi-structured or unstructured. In structured interviews the questions developed are standard and can be replicated to several interviews in order to compared the data collected (Kontkanen, 2019). Semi-structured interviews are developed with a higher level of informality compared to the first type. Indeed, there is a flexible scheme of questions and the person interviewed has the possibility to add more information (Kontkanen, 2019). The last category of interview regards the unstructured ones. Here, the researcher has no to prepare any question, but just some guidelines to conduct the interview. For this reason, it is also called “narrative interview” (Kontkanen, 2019). At last, qualitative research based on observations refers to a systematic study of relationship and interaction between people, attitude and conversation in a natural context in which the observed individuals act spontaneously. In this case, the aim of the research is to catch and analyse a natural behaviour in detail, to make conclusion or induce data (Hennik et Al.,2020). Since the research question linked to my thesis necessitates a complete understanding of ‘what’, ‘how’ and ‘when’ regarding the speed of the internationalization and the digital marketing strategies applied by the examined Finnish start-ups, the approach used to develop the analysis will be through semi-structured interviews. Indeed, even if the interviewer prepares a set of pre-established questions, semi-structured interviews are

developed in a conversational manner and the people interviewed have the opportunity to explore issues that in their opinion are considered of particular interest (Longhurst, 2003). One of the main modes to conduct a semi-structured interview is through the development of a questionnaire, in which a potential respondent has to answer to a list of questions following the same order (Saunders & Lewis, 2018). Indeed, a questionnaire “follows predefined topic, issues and sequence” (Jankowicz, 2005:260). There are several ways through which a questionnaire can be developed, such as by the use of Internet, by telephone or face to face. In general, the questionnaire is used as the explicit statement of the researcher’s purpose, in which the major topic is highlighted. The researcher has to provide a number of questions through which is possible to collect data linked to the research objective (Jankowicz, 2005).

3.1.5 Data Collection

The need to look for a study sample is that the researcher cannot collect data from an entire population. The selection of the sample is crucial for the research, because the data collected through the study of the sample have to be used to answer to the research question (Kontkanen, 2019). According to Morse and Niehaus (2009), sampling methods have to increase and maximize both efficiency and validity. In order to reach this objective, sampling must be coherent with the goals set and the concerning hypothesis (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2015). For this reason, the selected business cases for this study were based on specific research criteria. First, the selected organizations are operating as start-ups according to certain standards that are year of foundation, team composition and type of business. In accordance with the literature (Ripsas & Troger, 2014) a start-up is a company recently founded, that is with less than 10 years old. Another element that characterizes a start-up and differentiates it from other entrepreneurial realities is the composition of the team. Hogenhuis et al. (2016) argue that a new business is composed by less than 50 employees. Lastly, the start-ups analysed are characterized by an innovative business and/or innovative technologies. Additionally, I took into consideration two other key criteria for the research of business cases, namely the economic sector in which the start-up operates and the target market. In fact, the selected new ventures operate in the energy sector (solar power and waste-to-energy) and the addressed markets are beyond national borders,

mainly developing countries. These are therefore start-ups that operate internationally or are beginning their expansion across national borders.

As for the context, all the start-ups selected are based in Finland since there is the presence of a dynamic and highly innovative environment, able to support new business at the financial and strategic level. In point of fact, Finland is one of the top-players for innovation and technological development and among the growing economic sectors in the country, the energy industry stands out. According to Business Finland, which is a Finnish Government-owned innovation funding agency, Finland represents the ideal testbed for smart energy solutions. Moreover, already 40% of Finnish energy is produced by renewable energy. Furthermore, the Nordic region has a strong start-up ecosystem due to a frontrunner in digital knowhow and to the develop of a strong communication-technology ecosystem. This innovative environment allows new business to start their internationalization process. Indeed, Finland can boast of being one of the best countries in the world for the faster development and growth of a start-up since 4,000 start-up companies begin operating in Finland each year, and there are around 300–400 ‘growth start-ups’, which have grown significantly over a three-year period (Business Finland, 2020).

Table 1 summarizes the criteria followed for the case selection, in order to give a clear overview to the reader:

CRITERIA FOR THE CASE SELECTION	1. Operating as a start-up	2. Economic sector in which the start-up operates	3. Addressed markets	4. Country of foundation
	Year of foundation (<10 years) Team composition (<50 employees) Type of business (innovative business)	Energy sector	International markets	Finland

Table 1. Selection criteria for the multiple-case study

Given these criteria cited above, four cases firms were selected for this study: WOIMA Corporation, Arcteq, CleanerFuture and Heliostorage.

All the new ventures are considered as young companies, as they were all founded between 2015 and 2019. The only exception is the firm Arcteq, that was founded in 2010. The reason why I chose to consider the company is due to the fact that Arcteq began its internationalization process immediately after its founding, when it therefore operated as a start-up. The team composition of the new businesses examined ranges from four to eight members. Arcteq currently has 35 employees, while during the foundation year the team consisted of only 5 members. Lastly, the star-ups operate in the energy sector. Indeed, WOIMA Corporation treats urban, industrial and agricultural waste to transform it into energy through the use of special plants. Arcteq produces high technology- protection relays, while both CleanerFuture and Heliostorage are involved in the construction of solar panels.

To reach the research objects, my first idea was to conduct two different face-to-face interviews for each company. The first was supposed to be addressed to the CEO and the second one to the Digital Marketing Manager. For this reason, I decided to create one questionnaire for the CEO's interview and structured it dividing the questions into four sections, as follow (see Appendix 1): the first part covers general information about the company, such as year of foundation, product offered and company's strategies. The second section is about the reasons why the company decided to start an internationalization process. The third group of questions is linked to the digital marketing activities developed and the digital tools mainly used by the company. Finally, the last section consists in specific questions to understand better the link between digital marketing and speed of internationalization. While the questionnaire used to conduct the interview with the Digital Marketing Manager is based on detailed questions on the development of the digital marketing strategy (see Appendix 2). Given the emergency linked to the CoronaVirus outbreak, the Finnish government has taken restrictive measures to limit contagion and these prevention measures have not allowed me to conduct all the interviews face-to-face. It was therefore necessary to opt for alternative meeting-methods, such as Skype video-calls, Microsoft team video-call, WhatsApp calls or email conversation. Despite the difficulty created due to this emergency situation, I managed to conduct two interviews for each start-up, although the results were more limiting, especially with regard to email correspondence. The interviews conducted were semi-structured, in which pre-established question were used to develop the conversation. The interviews developed face to face or through Skype video-call and WhatsApp call lasted

approximately between 30 minutes and 45 minutes. Every interviews was transcribed, while the face-to-face interview was also recorded after that the respondent has allowed. Each interviewee could speak freely and explain in the way that he thought the concepts related to the questions asked were most appropriate, for instance through the use of examples. The interviews were all performed in English. The data were collected from the middle until the end of March. The interviews' data are presented in the table below (see Table 2).

COMPANY	INTERVIEWED	POSITION IN THE COMPANY STRUCTURE	DATE	DURATION OF THE INTERVIEW	TYPE OF INTERVIEW
WOIMA Corporation	Henri Kinnunen	CEO	11/03/2020	45 minutes	Face to face
	Jari Kangasmäki	DMM	19/03/2020	34 minutes	Skype video-call
ARCTEQ	Robert Olander	CEO	17/03/2020	45 minutes	Microsoft team video-call and email conversation
CLEANERFUTURE	Joni Lepistö	CEO and	23/03/2020	45 minutes	Skype call
		DMM	23/03/2020	30 minutes	
HELIOSTORAGE	Timo Sivula	Senior Vice	24/03/2020	34 minutes	WhatsApp call and email conversation
		President	26/03/2020		

Table 2. Data Collection

As it can be seen from the table, the interview with Henri Kinnunen was the only one that took place face-to-face and not through digital devices support. In addition, due to CoronaVirus, companies were committed to transferring all activities normally performed physically online. For this reason I was not able to conduct the interview with the DMM of Arcteq and I sent via email the second questionnaire to the CEO of the company, who replied to me by full-fill the questionnaire by email. As for the interview conducted with the CEO of Heliostorage, due to Internet connection issues I was unable to conduct both interviews via WhatsApp call. Again, the second questionnaire was emailed. I received the answers few days later in a Word document.

3.1.6 Data Analysis

In accordance with Wilson (2014:282), the data analysis of a quality research includes four main steps :“transcribing your data; reading and generating categories, themes and patterns; interpreting your findings; writing the report”. The mentioned guidelines will be utilized within the following research. In this case, the data analysis was performed as follows. During face-to- face or call interviews, some responses provided by the informants were analysed directly, through a request to provide more detailed information in response to the question addressed. After each the interview, the transcript was transcribed verbatim in a Word document and interview notes were including. In the case of the face-to-face interview, I listened to the recording again, so that I could include every detail in the Word document containing the answers of the questionnaire. The qualitative data analysis involved knowing the data collected, coding them in order to recognize similarities and relationship between them, treating themes and examining the theoretical hypothesis (Saunders, Lewis & Thornhill, 2016). For this reason, each transcript was read a number of times and I wrote some additional notes in a Word document with a first impression about the answers obtained in order to understand the general meaning of each interview and then to analyse possible connections or contradiction between answers. Later on, relevant categories were distinguished, following the knowledge gained from the theoretical framework. I developed the creation of the categories through label relevant words or sentence from each questionnaire that can be related to my research question and the theory linked to it. I established five main categories by combining the answers obtained from both questionnaires addressed to a start-up as follows: the first category concerns the reasons to internationalize, the second the speed of internationalization, the third relates the link between digital marketing and speed of internationalization. The fourth category is the digital marketing strategy implemented by each start-up and the last category is the relation between digital marketing and the four forces of internationalization. Each category was then divided into issues addressed. To help you fully understand, the categories and subcategories are represented in the following table (Table 3):

CATEGORY	SUB-CATEGORY
Reasons to internationalize	Industry in which the start-up operates
	Product offered by the start-up
Speed of internationalization	Time between the foundation and the internationalization
	Markets addressed by the start-up

	Sale-ratio between domestic and foreign markets
Link between DM and speed of internationalization	Opportunity recognition Opportunity capture
DM strategy	Benefits and risks Strategy implemented: Tools used, CRM, combination between digital and traditional marketing
Link between DM and four forces of internationalization	Enabling Force Motivating Force Mediating Force Moderating Force

Table 3. Categories

Finally, I ran the cross-case comparison by analysis the categories within each case in all the start-ups, to have a complete picture of the strategies adopted and the results obtained.

3.2 Reliability and validity

Both qualitative and quantitative researches have to be credible, it means that the research has to provide evidence on the congruence between findings and the reality. (Pandey & Patnaik 2014)

The term reliability regards the outcome of the research. It means that a study is reliable if it produces consistent findings. In other words, the finding has to be the same if the measures are used in other occasion, if other research that use the same methods can produce similar result and if the relationship between data collection and data results is clear (Saunders & Lewis, 2018). Pandey & Patnaik (2014) argue that reliability demonstrates that the operation of a study-such as data collection and procedures-can be repeated with same result. There are some factors that can negatively affect the reliability of a research. These are:

- Subject error, which is related to the time taken into consideration during the measurement
- Subject bias, that occurs when research subjects give to the researcher unreliable information
- Observed error, it happens when the say question can be asked in different way
- Observed bias, it is linked to the way by which an interviewed can interpret the question

(Saunders & Lewis, 2018).

The term validity refers to “the identification of the correct operational measures for the concepts being studied” (Pandey & Patnaik, 2014: 5745). The notion is linked to the plausibility of research results and conclusion. It is concerned with whether the findings reflect the reality and it is a crucial element in research strategy design (Saunders & Lewis, 2018). According to Yin (2009), the quality of a research is assessed testing both internal and external validity. The first “seek to establish a casual relationship whereby certain condition are believed to lead to other condition”, while the second one “defines the domain to which the finding of the study can be generalized” (Pandey & Patnaik, 2014: 5745). There are some factor that can negatively affect the internal viability of a research. These are:

- Subject selection, it is linked to the selection of an unrepresentative sample of population
- History, is connected to specific events that can occur in the history of the research process and that can affect the final result
- Testing, that is any affects that the data collection can have on the research subject
- Mortality, it is linked to the lost of research subjects during the development of the research process
- Ambiguity, it occurs when the researcher has no a clear idea in which the flow of cause and effect runs

(Saunders & Lewis, 2018).

In order to increase the construct validity of this Thesis, I conducted an in-depth review of the literature before designing the interview questions. Secondly, the questionnaire that I produced was first read by my coordinator and then by another person working in the business field who then has knowledge about the subject. This preliminary analysis was carried out to ensure that the questions were understandable and that there were no misunderstandings. In addition, notes

were taken during the interview so as not to lose any important information. Furthermore, I informed the respondents in advance about the main content of the interviews and gave them a copy of the interview guide in advance so that it can give them the chance to prepare themselves and give accurate answers.

However, my data collection fell into the unfortunate time of the CoronaVirus outbreak, during which the quarantine regime was set up. This meant various bans on movement and intrapersonal meetings imposed by the Government. In this situation, I was not able to have a direct contact with the interviewees. The impossibility of performing all the interviews face-to-face can be considered as a disadvantage as it is more difficult to develop a fluid conversation, which can increase the construct validity.

4. Case description, findings and discussion

In this section, I will present the quality data collected through semi-structured interviews. The structure of presenting the empirical data is as follows: first I will introduce the principal information of each case-company analysed. Secondly, I will provide the information gathered through the interviews to demonstrate in detail the relationship between the theoretical framework and the real data.

4.1 Basic information of the start-ups

In the following part, I will present the basic information regarding the case companies. Case companies being: WOIMA Corporation, Arcteq, CleanerFuture and Heliostorage.

- WOIMA Corporation is a Finnish start-up that operates as a supplier of waste-to-energy power plant. WOIMA Corporation offers practical solution to recycle waste into valuable raw materials and energy. The company was established in 2017 and the headquarters is based in Vaasa. The team is composed by 8 people with deep experience in the development of industrial project and international sales.
- Arcteq is a Finnish company whose principal business is related to the design, production and sale of protection relays for electrical power generation. Moreover, the firm sells arc flash protection system and measuring and monitoring equipment for electrical utility but also traditional and renewable power generation for industrial, institutional and commercial customers. Arcteq was established in 2010 and the headquarters is based in Vaasa. The team is composed by 35 industry experts. This number has increased considerably over time, as the company had a team of 5 people at the beginning of its business.
- CleanerFuture is a Finnish start-up that operates in the so called Solar-Power Business. The venture creates and produces a dynamic power system that uses solar panels with gas or diesel generators that are able to improve the electronic systems. Through the system developed, CleanerFuture provides an efficient electric grid. The start-up was established

in 2016 and the headquarter is based in Sastamala. The team is composed by four people with deep knowledge in the solar power sector and international marketing.

- Heliostorage is Finnish start-up that produces metallic roof solar collector and solar control-systems. The start-up was founded in 2019. The headquarters is based on Kokkola and the team is composed by 7 members mainly expert in the engineering and product development.

Table 4 summarizes the key information about the selected firms:

COMPANY NAME	WOIMA Corporation	Arcteq	CleanerFuture	Heliostorage
YEAR OF FOUNDATION	2017	2010	2016	2019
HEADQUARTERS	Vaasa (Finland)	Vaasa (Finland)	Sastamala (Finland)	Kokkola (Finland)
TYPE OF BUSINESS AND PRODUCT OFFERED	Supplier of waste-to-energy power plant, to recycle waste into valuable raw materials and energy	Design, production and sale of protection relays for electrical power generation, sale of arc flash protection systems and measuring and monitoring equipment for electrical utility and power generation	Creation and production of a dynamic power system that uses solar panels with diesel or gas generators that are able to improve the electronic systems.	Producer of metallic roof solar collector and solar control-systems
TEAM COMPOSITION	Eight people	Thirty five people	Four people	Seven people

Table 4. General information

4.2 Reasons to internationalize

The first aspect that is necessary to analyse is the reason why the new ventures studied decided to extend their business beyond the national borders. In general, the responses obtained are similar and in particular reflect the need to internationalize rapidly as the energy sector is constantly expanding and innovating. Indeed, the responses obtained through the interviews reflect how much exposed to a theoretical level from several authors, about the necessity for companies to

internationalize their own business in order to survive to increase their level of competitiveness. (Joensuu-Salo, Sorama, Viljamaa, & Varamäki, 2018). Moreover, another crucial reason that forces new business to start the internationalization journey is the fact that the size of the domestic market in the energy sector does not allow to an adequate growth of the business in particular for young companies. Indeed, according to the information that I collected during the interviews, *“the Finnish market is small and the energy field is conservative. New ventures need a convincing business model to become competitive in the sector”* (Henri Kinnunen- CEO of WOIMA Corporation). Correspondingly, Robert Olander, CEO of Arcteq, argued that young businesses such as start-ups need to operate across national borders because the Finnish market does not provide the same opportunities for expansion compared to a global marketplace. In addition, he stated that *“the energy field in Finland is a niche market, in which the creation of international networks plays a key role for the survival of the company”* (Robert Olander – CEO of Arcteq). Moreover, Joni Lepistö, CEO of CleanerFuture declared that *“the energy sector is traditionally composed by large companies and only in the recent period start-ups start to develop their business through the use of innovative technologies”*. The presence of a conservative market and restricted possibilities to expansion are also main reasons why also according to Timo Sivula (Heliostorage), *“the presence of start-ups in the Finnish energy sector is limited”*.

In the explanation of the reasons why the start-ups decided to become international is also essential take into consideration the product provided by each venture and its condition of use. For example, WOIMA Corporation is a supplier of waste-to-energy power plant and the CEO of the start-up declared that *“for WOIMA's business the South-East Asia is the best place due to the amount of waste produced”*. Furthermore, the aim of WOIMA Corporation is a constant expansion, due to the importance that the sustainable energy sector has worldwide. In the same way, the purpose of Heliostorage is the developing and sale of emission-free products in East Europe and China, since *“both markets present significant opportunities to growth and the necessity to improve the air quality”* (Timo Sivula). The reason of internationalization of CleanerFuture is linked to the great possibility of business development in the solar power field. Indeed, the manager director of the start-up, justified his strategic decision to sell abroad the solar panels produced by the venture, explaining that *“there is the need for international markets to have the product that we are offering, since a number of foreign countries complain about this lack. In addition, a business like our presents the necessity to operate in different environments compared to Finland”* (Joni Lepistö). Lastly, Robert Olander CEO of Arcteq, argued that *“the company's goal is to grow*

and increase the collaboration worldwide thanks to the use of technologies that can guarantee better result compared to the competitors, included multinational firms". According to the information collected during the interviews, the theoretical resources in the field of internationalization have a solid real foundation, as all the start-ups analysed have as main business goal the expansion across national borders. Several scholars argue that the process of internationalization has been described as a dynamic phenomenon in which a company enhances its presence in international markets over time (Casillas & Acedo, 2013), and the creation of a dynamic market and the elimination of trade barriers between States lead to new business opportunities. This commercial opening is given by industrial changes resulting from the development of globalization and the use of new and innovative technologies has triggered changes in the economic system that have fostered the internationalisation of start-ups. (Sipola et al., 2016).

4.3 Speed of Internationalization

After analysing the reasons that drove the start-ups studied to internationalize, it is essential to define which are the elements that are related to the speed of an internationalization process, since it is considered as a multidimensional concept (Hilmersson, Johanson, Lundberg, & Papaioannou, 2017). Several scholars (Oviat & McDougal 1994; Hilmersson & Jansson, 2012, 2017) stress the concept that time plays a key role in the success of an internationalization strategy in terms of speed. The importance of the time highlighted by a number of researches in the international field find real evidence in the information collected during the interviews. In fact, Henri Kinnunen explained that the start-up WOIMA Corporation began expanding across the national borders a year after its founding, and at the moment the domestic market has not been considered for the sale of the product offered. Correspondingly, Arcteq started its international transaction already in 2010. In the same way, Joni Lepostö (CleanerFuture) stated that *"the process of internationalization of the company started from the beginning, in 2016"*. As the other ventures, also Heliostorage has added foreign countries from inception. Furthermore, the speed of internationalization depends on several decisions taken by the firm inside the internationalization process, such as choice of location and modes of operation (Casillas & Mendéz, 2014). The first decision is related to the target market established by each start-up. As I have already stated in

the previous section, all ventures were primarily aimed at internationalization due to the limited size of the domestic market. Indeed, the team of WOIMA Corporation has developed a sales strategy aimed at hitting three main markets that are Africa, South-East Asia and East Europe. The CEO of the start-up also explained that their business cannot expand into foreign markets such as China, India and the USA as the competition is too high and they would need a "strong partner" to be able to achieve sales. Moreover, currently the new venture is trying to address Countries in which there is the opportunity to deliver a number of plants. Developing Countries are also the target market for the other start-ups analysed. In fact, Robert Olander declared that the first international markets addressed were Asia and South America, because of good commercial connection and the presence of partners. At the present time, the company has established sales relationships also in Europe and Africa. CleanerFuture's target market is Chile, since according to the CEO "the Country is the best geographical area in terms of solar irradiation". Other two Countries considered relevant for the business are Somalia and Kenia, even if currently the new business is mainly in Finland thanks to creation of cooperation with electric installation companies. Joni Lepistö explained that in international markets the time of installation of the product is longer than in Finland, for this reason decided to develop its business also domestic level to secure revenues. East Europe and China are also the target market of the venture Heliostorage, because of the presence of thermal energy.

Moreover, the relationship between domestic and international sales and the number of Countries addressed abroad have great importance in the international speed, since the growth of a company derived from business relationships abroad is one of the decisive elements in the speed of internationalization (Casillas & Acebo, 2013). All respondents stated that foreign trade relations began immediately after their foundation. WOIMA Corporation claims that the production of waste-to-energy plants is aimed at foreign markets, while in the Finnish market at the moment the sales ratio is 0%. The new venture has implemented international activities in about 20 countries. Similarly, Arcteq exports the 92% of its products. The number of Countries addressed at the beginning of international affairs was 20, while today the company is present in 50 States. Joni Lepistö of CleanerFuture also explained that the company's goal is to have a ratio of 30% of the operations developed nationally and 70% in foreign Countries. The start-up has already a connection with more than 10 Countries abroad. Finally, Heliostorage has links with 5 Countries at the moment, which is the reason why the start-up decided to start sales activities in the domestic market. Indeed, the recent Coronavirus-related emergency has made the development

of commercial operations more difficult and slow. The purpose of the CEO is to convert all the affairs to an international level, in mod to have 100% of the revenues from international markets.

The results obtained are clearly illustrate in the following table (Table 5):

COMPANY NAME	WOIMA Corporation	Arcteq	CleanerFuture	Heliostorage
TARGET MARKET	Africa, South East Asia, East Europe	Asia South America Europe Asia	Finland South America Africa	Finland East Europe China
NUMBER OF FOREIGN MARKETS ADDRESSED	20	20 at the beginning 50 currently	10	5
FIRST COUNTRY/COUNTRIES ADDRESSED	Africa South East Asia Est Europe	Asia South America	Chile	Est Europe China
SALE-RATIO BETWEEN INTERNATIONAL AND DOMESTIC MARKET	100% international 0% domestic	92% international 8% domestic	Currently: 100%domestic Future: 70%interntional 30% domestic	Currently: 100% domestic Future: 100% international 0%domestic

Table 5. Business information

4.4 Link between digital marketing and speed of internationalization

In order to give evidence to my research and provide an answer to my research question, the key topic that has to be examined is the link between the digital marketing and the speed of internationalization within each start-up. First, I will explain how digital marketing has influenced the acceleration of the internationalization of the start-ups analysed. Subsequently, I will present specifically the main digital tools used by each venture to develop a digital marketing strategy and how these are implemented into the business of each venture to promote the international speed. All respondents recognized the importance of digital tools, in particular because they give to companies real opportunities for expansion. In particular, the development of digital business activities has revolutionized how organizations establish value-based commercial trading within national markets and abroad (Ojalaa, Evers & Rialp, 2018). Despite this, not all start-ups studied

evaluated the relationship between digital marketing and speed of internationalization in the same way.

Henri Kinnunen argued that *“digital marketing influences the speed of WOIMA internationalization because it is effective, so it has a huge impact. It allows to reach faster the address market and concentrate the marketing activities. It is an excellent tool”*. Indeed, he explained that the use of digital tools to share information about the product and conduct a marketing campaign has helped significantly the international speed of his business. Moreover, since the customer segment is abroad, a marketing campaign developed through digital marketing tools allows logistic cost saving and allows the new business to reach in a fast and simple way the target customers. Lastly, the content provided via social media and other digital channel is *“easier to analyse and modify”*. The development of a digital marketing campaign affected the internationalization process of WOIMA Corporation as it allowed more direct contact with customers, and prompted consumers to contact them quickly and easily. In conclusion, according with the CEO of WOIMA Corporation, the development of a digital marketing campaign allows an acceleration to entry foreign market compared to the traditional marketing strategy. In the same way, also Robert Olander considered digital marketing as a crucial strategy to reach big audience. In fact, digital tools *“are able to facilitate the speed through the creation of connection and the improvement of brand awareness”*. The manager director of Arcteq shown to me with real example how digital tools bring benefits to the speed of internationalization of the company: *“possible clients can find direct information about the company thanks to the use of SEO. This facilitates the creation of commercial relations, because the customers visit the company's website and contact the team”*. Joni Lepistö has also confirmed the great potential that digital tools possess to speed up the internationalization of companies, especially for new ventures. In fact, *“it is easier to find potential customers and enter fast in foreign markets”*. Through the visit of the website and the social media mainly used, the clients can always stay up to date about the business and the solution offered by the start-up, and this increase the possibility for the customer to create a direct contact with the start-up. The opinions shared by Timo Sivula are in line with those expressed by the other CEOs interviewed. In fact, he believes that digital marketing tools can positively influence the internationalization of a company, as they promote a rapid expansion beyond national borders. However, he added that for his business a digital marketing campaign must also be supported by traditional marketing activities such as participation in exhibitions and physical meetings with customers. Indeed, he stated that the development of only digital

marketing within the company's strategy is not significant. All the answers cited above confirm what is also analysed at the theoretical level. In fact, in accordance with several scholars the incorporation of the use of digital technologies in a marketing strategy, increase and improve their performance in the domestic as well as in the international markets. Such an improvement is possible since the digital tools allow the ventures to optimizing the organizational processes and create in a fast way business relationship both domestically and abroad (Pagani & Perdo, 2017). Moreover, another benefit provided by the implementation of a digital marketing strategy is the cost saving in the developing of a marketing campaign, as expressed by the people interviewed. This assumption is in line with what is also presented at the theoretical level, since according to Lee et al (2019: 2) companies that develop digital marketing can increase their awareness and market their products at a lower cost, "if the target market has a suitable online infrastructure".

Furthermore, digital tools enabling opportunity recognition and capture. This is possible because through digital technologies companies can analyse faster the market and consequently reduce entry time into a foreign market. Indeed, with the help of digitalization the information can be rapidly processed, stored and sent through digital circuit, devices and networks (Kannan & Li, 2017). In order to give evidence to these assumptions, I investigated how each new business used digital devices within the entry process. According to the people interviewed, digital tools are easily combined to the other instruments for market analysis. For instance, the CEO of WOIMA Corporation stated that the team is able to analyse the opportunity or strategies by following other firm's examples and monitoring the competition in social networks such as LinkedIn. In addition, digital channels represent the direct way through which potential clients establish the first contact with the start-up. The commercial connections constituted through digital tools are the basis for the opportunity recognition and capture also for Arcteq, according to what has been stated by the CEO Robert Olander. Correspondingly, Joni Lepistö explained that he mainly uses Internet sources for market analysis and digital tools to get the first contact with the potential clients and partners. Then, he usually conducts interviews with local professionals to understand more in detail how can be the development of the business according to the limitation and opportunities of the target markets. These interviews are normally conducted physically, by telephone or by other digital devices for video-call. The only answer that does not reflect the trend of relying on digital tools to speed the market opportunity recognition and capture was provided by Timo Sivula from Heliostorage. Indeed, he explained that the study of the market is not largely based on the use of digital devices, since they are primarily used to build the customer loyalty.

4.5 Digital Marketing Strategy

To analyse the digital marketing strategy of each start-up in detail and acquire a deep knowledge about the development of it in the organization business to accelerate the internationalization of the venture, I decided to create an additional questionnaire to the one aimed at the CEO, with more specific questions addressed to the digital marketing manager. I was in particular interested to understand which are the main benefit provided by the implementation of a digital marketing strategy in the organizational business, but also the major risks that each star-up has to face with. The main advantages in develop a digital marketing strategy, shared by all start-ups, is linked to the efficiency provided by this approach and the possibility to target a big audience with a small investment in terms of money. Indeed, Joni Lepistö (CEO of CleanerFuture) stated that "*digital marketing is a cheap strategy that brings to crucial advantages in terms of efficiency and efficacy*". Another important motivation which shows the great potential of digital marketing, is provided by Timu Sivula from Heliostorage. In fact he argued that "*there is the exigency to implement such a procedure in every business model, since a company needs to exist in the digital world to exist in general*". It means that a digitally-promoted marketing campaign must be leveraged by a company, particularly if recently founded as a start-up, to increase its visibility towards potential customers. Henri Kinnunen (CEO of WOIMA Corporation) also emphasized the popularity gained by digital tools, both in the private and corporate sectors, so a marketing strategy based on digital platforms "*is useful to reach people faster and with cost saving*" (Henri Kinnunen). Robert Olander from Arcteq also highlighted the key role played by digital marketing to "*enter foreign markets and address big audience*". The information collected through the interview give evidence compared to what is dealt with at the theoretical level. Indeed, the increase in the use of digital tools and the relevance that a digital marketing strategy has in the company's success is the fact that new ventures operate in a digitalized environment. Digitalization and the techniques related to it, such as digital marketing, is positively connected to new commercial trade expansion, execution and competition because it provides new possibilities to reach potential clients more efficiently (Spurge & Roberts, 2005; Galloway, 2007; Shideler & Badasyan, 2012).

On the other hand, companies face with risks and they have to the able to manage them. The major obstacles experienced by the start-ups interviewed are in line with those most explained in the literature, namely the fast change of tools, the great level of competition in digital platforms

and a smart management of Privacy and Security (Deepa & Anirudh, 2020). In order to understand how each new venture faced with these types of problems, I included in the questionnaire aimed at the digital marketing manager a specific question related to the management of risks in the development of a digital marketing campaign. Timu Sivula admitted that *"the General Data Protection Regulation is a big issue for a small start-up, as sanctions applied by the European Union can have a heavy impact on the organization's budgets"*. Jari Kangasmäki, digital marketing manager of WOIMA Corporation, explained that the start-up is able to use those risks to turn them into the business's strength. In fact, the start-up focuses a lot on the continuous analysis of the marketing sector and the personal passion developed by the marketing manager has meant that WOIMA Corporation can always *"keep up with the new digital tools"* so that it can address the most number of possible customers. In addition, the company follows a strict scheme regarding the processing of the personal data of the individual customer as well as about the choice of channels on which to publish content related to the business of the company. Through this practice, the start-up has created a stable trust-relationship with its catchment area. Another important challenge linked to the development of a digital marketing strategy is the fact that digital tools allow a company to be faster known by others compared to a traditional approach. Of course, this can be considered an advantage but also a disadvantage since it increases the level of competition. The risk is that *"competitors can steal the business idea of a company, or copy its marketing strategy. The only way to avoid this problem is to provide innovative solutions and create high quality content"* (Henri Kinnunen – WOIMA Corporation). The CleanerFuture team also pays attention to the protection of data disseminated on the internet, in fact Joni Lepistö pointed out that *"the company does not share any potentially sensitive data except through authorization from customers"*. In addition, he highlighted the risk to start a business relationship with fake customers, created by competitors to get hold of sensitive information. An efficient solution to this problem, according to Joni Lepistö is *"to pay attention and analyse the type of message received by a potential client, as well as, conduct internal research"*. According to Robert Olander, the main challenge is *"to measure the effect of digital marketing"*, it means to measure the financial return of the digital marketing campaign.

The use of the correct digital tools plays a crucial role in the success of a digital marketing strategy, especially for new ventures, as they need to create their own catchment area and increase their visibility. As a result, the company must be able to manage the customer relationship, for long-term value optimization for the organization. Indeed, digital tools are employed to identify,

attracting, satisfying and maintaining a good relationship with their partners and potential and existing customers. (Al-Homery, Asharai & Ahmad, 2019). In the following section I will describe the strategy put into practice by each individual start-up and how digital channels are used to attract customers and promote the new venture's product. I will also give evidence of how the new business manages and combines online and offline marketing and how it finances the development of a digital marketing campaign.

4.5.1 WOIMA Corporation: digital marketing strategy during internationalization

According to the information provided to me by the CEO Henri Kinnunen and the digital marketing manager Jari Kangasmäki, the start-up is very active on the social network LinkedIn, as the team creates and shares contents on it 2 days per week. Moreover, the new venture boasts of having a well-structured website, with a section entirely dedicated to the description of the solution proposed by the company, one that explains how the system provided can be implemented and three different sections dedicated to news, blogs and videos. Another strength of WOIMA is the fact that the content is published in several languages, including Russian, Spanish and Arabic. The new business has established its presence also through the use of social media channels such as YouTube, since it is an effective tool to share information about the company and other soft or technical content related to the business. Finally, WOIMA has also created a Twitter and Facebook profile, although they are used marginally as "*they are not useful specifically for their business*" (Henri Kinnunen). In addition, the start-up is able to take advantages from the SEO tool. This is possible because WOIMA publishes content on its digital channels on a weekly basis, carefully choosing the text to offer to customers. The key words related to their business are "*waste-energy, circular economy, modular power plants*" (Jari Kangasmäki). Typing these key words, digital customer can acquire information about the firm and the products provided by it. This tool is extremely useful because allows the new venture is that to reach potential customer in a fast and efficient way.

During the interview with WOIMA's CEO and DMM, an in-depth analysis of customer relationship management was carried out. Henri Kinnunen explained to me that "*the company uses digital marketing tools to contact and reach the client, as well as analyse the engagement of the customer*". One of the main devices used to examine the level of consumers' participation is Google Analytics. This tool, according to the digital marketing manager, is extremely useful in that

it allows the user to study for free the flow of customers in a given time frame, to understand with which devices they were connected and from which State they were visiting the web-page, and finally which pages of the website they were consulting. Moreover, the new business creates direct contact with the customer through the F&Q section on the company's website, and sending monthly newsletters in which they provide technical and soft content and requires feedback about the service provided. At the moment, WOIMA counts with more than one thousands of submission to newsletter. Henri Kinnunen stated that *"digital marketing leads the company to be known by the customer and understand the level of clients' presence, but we usually close the contract face to face"*. Since the customer's involvement is extremely important for the success of a business, I analysed more in detail this aspect. During the interview, Henri Kinnunen stressed the need for the company to adapt its message of description and sale of the product depending on the country to which the company is addressing. He also argued that *"the firm has the duty to respect foreign culture and tradition. For example in Russia we use white people in pictures. We are polite with Arabian people and we usually make jokes with English customers. Is essential have cultural sensitivity, for instance Russian and Latin American require that the content is published in their languages"*. Moreover, the new venture is able to share its value by publishing a series of soft content linked to the business, such as the mission of the company, which are the core-values, the description of the team with a focus on describing the experiences and tasks developed within the company. Beside this, the company publishes also articles from the main newspapers or blogs related to the economic context in which they work with positive message, such as success stories, new findings that allow company to increase their innovativeness.

The last element analysed concerns to which extent the start-up uses digital marketing compared to the traditional marketing in its business activity. Currently, WOIMA develops 80% of its marketing campaign at the digital level and only 20% with a traditional method, which mainly includes participation in seminars and speech at the Universities. The digital strategy developed by WOIMA Corporation involves a greater effort because *"there is the need to keep up with the times, to be up to date with the new digital means and to constantly analyse how the needs of customers change."* Jari Kangasmäki explained that the strategy employed has changed over time, following the trends and continuous changes of digital devices. The company first started its campaign through the creation of the website, then expanded to the main social networks and social media. In addition, being a young company with a limited level of resources available, the budget spent

on the development of a digital marketing campaign is almost zero, as free tools such as LinkedIn are mainly used.

4.5.2 Arcteq: digital marketing strategy during internationalization

The need for the Arcteq team to implement a digital marketing strategy is given by the possibility to reach a big audience and enter foreign markets more efficiently. The main channel used by the venture is LinkedIn, since according to the CEO *“it is the most used tool for develop business activities”*. In addition, Arcteq counts with several key words linked to the business e this allows the company to take advantages from the use of digital tool such as SEO to be in the first page-result. Robert Olander explained that the creation of key words is the result of the analysis of the business and the customer preferences, which is why the company has *“300 key words which are modified constantly depending on the result”* (Robert Olander- CEO of Arcteq). In addition, Google Ad Words is used by the venture to increase the success of the brand. Arcteq implemented the marketing strategy as a support to the web-page, which contains all the most critical information about the product and the ways of use. In fact, the venture's website is focused on providing the consumer with a detailed description of the product, in terms of capabilities and functions. The CEO stated that *“we pay attention to the website as being the source information that all digital marketing will lead to”*. Moreover, Robert Olander explained that the decision about the use of some specific digital tools is related to the fact that they are considered the most useful according to the business and the most used in the professional work.

The creation and management of customer relationship plays a crucial role in the business developing of the firm. First, Arcteq interacts with the potential and current customers through the web-page, combining technical explanations of the product, soft contents about the progress of the company and team stories. This operation is used to make public the value achieved by the business. In addition, customers have the opportunity to request the submission of news-letters and this procedure is used by the company to collect customer data. In addition, the collection of customer information is carried out through services promoted by search engines such as Google. Robert Olander also stressed the importance of direct contact for the management of customer relationships. In fact, digital procedures are combined with traditional techniques such as physical meetings. Generally, team combines together both digital and traditional marketing activities to assure the best result in term of reaching the target audience and establish commercial

relationship. According to the CEO, the current ratio among digital and traditional marketing is around 50% for the online marketing and 50% for the traditional one. The main physical marketing activities are related to the participation in exhibition and seminar. Robert Olander preferred not to discuss any detailed information about the expense incurred in the development of the company's marketing campaign, but he explained that the company decided to invest more on digital marketing than print marketing.

4.5.3 CleanerFuture: digital marketing strategy during internationalization

CleanerFuture has mainly developed its marketing campaign on the social network LinkedIn, as well as developing a website containing detailed information about the solution offered and the innovative technology used. As the start-up is a manufacturer of solar panels, the target customer is not only composed by other companies but also private entities. For this reason CleanerFuture has considered appropriate to create its presence on other digital channels such as Facebook, since it is a type of social network that has dramatically increased in the current period and it is mainly used by individual instead of companies. In this way the new venture has the opportunity to increase its visibility effectively and can address a large amount of people. The company mainly uses English to publish the content on LinkedIn and Finnish on Facebook. Furthermore, the organization creates and shares two different messages, one for the international market and the other for the domestic one. The content used to address the international market is mainly published on the LinkedIn account and the message is more technical, since this type of digital channel is mainly used by professionals and businesses. While the information provided on Facebook serves primarily to carry out the activity of B2C, it means that "*the message is not technical and aims to make it easy and direct to understand the functionality of the product and the benefits it brings*" (Joni Lepistö). The choice of channels and content to be shown is made following an analysis of market conditions and the evaluation carried out by industry experts, so that the start-up can address the correct customers. The key words linked to the business are "*sustainable living, solar energy, recycling energy efficiency*" (Joni Lepistö).

The tasks described above are also used to create and manage customer relationships. In fact, the customer search is mainly developed through the analysis of databases set up by government organizations such as Business Finland. The customer is then attracted through a digital marketing campaign on the social media and in a second moment via email and phone call. Joni Lepistö also

highlighted the importance of being able to share corporate value with its users-base. According to him "*this is a big challenge of each organization*". CleanerFuture is primarily concerned with conveying to the customer the potential of its product in terms of efficiency and effectiveness. The shared message is used to highlight how solar panels designed and produced by the start-up are able to drastically reduce the use of fossil fuels and to provide comfort and reliability of power.

Lastly, CleanerFuture mainly uses digital marketing to increase its visibility and presence in the market, not only national but also international. In fact, 80% of the marketing is developed through the use of digital tools and 20% following the traditional method of publishing articles on the newspaper or participating in conferences and fairs. Developing a digital campaign "*requires more effort even if it is easier to do comparing to a physical presentation*" (Joni Lepistö). The digital campaign spending is around 20 euros per week, which is used by the start-up to obtain an advertising space on the social network Facebook. Joni Lepistö said that the other channels are used by the start-up at no cost. In addition, the CEO stated that "*the way we approach customers has not changed over time*".

4.5.4 Heliostorage: digital marketing strategy during internationalization

In accordance with the data shared by Timo Sivula, the Senior Vice President of Heliostorage, the company mainly uses social media, in particular on Twitter, Instagram and LinkedIn. These channels are used as support to the company's website, which clearly displays information about the company and the product. In addition, to make the content shared even more direct, Timo Sivula has made an explanatory video, also in order to add multimedia content for customers who visit the web-page. The customer-target of the venture is mainly composed of private individuals real estate owners. For this reason, the team decided to be present on such digital channels, since these allow the elimination of geographical barriers and more direct contact between companies and private entities. The approach used by Heliostorage to attract customers is developed through the use of open source software or through access to the database provided by government organizations such as Business Finland. Secondly, the team is responsible for posting on the most used social media posts related to the business and the potential of the product offered. This strategy was adopted as a result of "*the experience gained in the customer digital environment and market analysis*" (Timo Sivula). In addition, the content shared on the platforms is always the same and does not need any particular changes. Customers normally interact with the company

by sending emails, calls, or commenting the content posted on social media. Through this approach, the start-up is able to transmit business value. Again, the CEO confirmed his preference for the development of digital marketing compared to that which is based on interviews given to periodicals. The benefit is due to a zero expense to create a digital campaign. However, Timo Sivula highlighted the need to meet the customer personally to conclude the contract, which is the reason why the digital marketing strategy promoted by the start-up is not as articulate as that of the new ventures analysed above.

According to the respondents, the most widely used digital tools for the development of a digital marketing strategy aimed at speeding up the international expansion of start-ups are the web page and the social network LinkedIn. Pocinho, Rodrigues & Oliveira (2019), define the web marketing as a creative and interactive tool that companies use to communicate with their customers and increase their fidelity. In fact, the main purpose of the development of a web page structured according to the CEOs of the new ventures analysed, is to provide the customer both technical and soft contents. The first are used to provide detailed information about the product, its composition and modes of use, while the second ones serve to share with the client the value proposition and the mission of the company. In this way the company allows the potential and actual customer to acquire full knowledge about the business and increase loyalty. Furthermore, the information I've collected shows that CEOs consider the social media LinkedIn to be the most suitable for sharing the marketing campaign as it is the most used tool by professionals. This reason reflects what is claimed by a number of scholars who highlight the importance that social media currently has, as they are the most used means by people to interact each other (Boyd & Ellison, 2008).

4.6 Link between digital marketing tools and the four forces of internationalization

As shown in the literature, companies are driven by 4 main forces towards the realization of the processes of internationalization, which are the enabling force, the motivating force of competition, the mediating force and the moderating force (Oviatt & McDougall, 2005). In order to understand in detail the influence that each force plays in the development of the international

speed and how these forces are related to the digital marketing strategy of each start-up, I will present the results case by case. As I already mention in the section linked to the digital marketing strategy implemented by each start-up, the advent of new technologies and digital tools has allowed the breaking down of geographical barriers between states and to reach in a faster and easier way both domestic and international clients. The use of social media and digital channels by all the new ventures studied, allows a rapid dissemination of information related to the business and sale of the product, thus accelerating the process of internationalization. In fact, according to the results of the interviews conducted, the main tools used to implement the digital marketing strategies are social networks such as LinkedIn and Facebook, digital channels such as YouTube and a structured website.

The second force cited by the main scholars is the motivating force of competition. Indeed, the presence of competitors pushes companies to look for new opportunities to expand their business even abroad (Oviatt and McDougall, 2005). The analysis of this force was carried out by asking both the CEO and the DMM two specific questions. The first is associate to the ability of the venture to build its presence on the digital platform used for the development of the digital marketing strategy. The second one refers to the level of competition within the platforms. WOIMA Corporation built its presence on the main social network used, such as LinkedIn, through publishing content at regular and frequent intervals, so that the new venture can also be among the first sections of major search engines such as Google. Currently, the company profile on LinkedIn has more than 1200 followers, mainly composed of other companies including multinationals, and professionals. The marketing activity is carried out entirely by the team with an economic cost of zero euros. Henri Kinnunen argued that the marketing strategy is carried out without the use of cookies and spam and that the content posted on their site exceeds in terms of numbers and quality those of competitors. The DMM Jari Kangasmaki also explained that WOIMA is very active in publishing content and text quality, thanks to the constant search of the trending and novelty team. For this reason, they remain competitive despite the high level of competition into the channels used. On the other hand, The CEO of Arcteq, stated that his company's presence on social media can be compared to that of competitors, as the channel most used for sharing content and information – beyond the company's web-page – is Facebook. This tool allows for greater visibility but also a greater risk of exposure to competitors. As for the other businesses, the managing director of CleanerFuture explained that the company's presence on digital platforms is the result of analyses carried out by him and other collaborators, as well as the creation and

publication of content. In addition, Joni Lepistö stated that the level of competitiveness is in the average, and that therefore the start-up has the opportunity to reach customers. Lastly, the CEO of Heliostorage declared that *“the level of competition is very high. It is difficult to get attention with a billion of other service providers shouting out their messages at the same time”*. For this reason, the company does not rely solely on digital marketing strategy, but also attempts to create direct connection with the customers through face to face or telephone meeting.

In addition, the mediating force is centred on the figure of the entrepreneur. Indeed, this force refers to the knowledge acquired by the entrepreneur and his personal characteristics that are used to analyse the market and investigate the opportunities for expansion of the business. The entrepreneur's background is therefore essential to ensure an acceleration of the internationalization process of the company (Oviatt & McDougal, 2005). For this reason, during the interview I considered appropriate to analyse the digital and international knowledge and experience of CEO and DMM. In general, all respondents have a level of knowledge in the digital and international markets that allows strategies to expand the business beyond national borders. Another crucial finding from the responses obtained during the interviews concerns the personal characteristics of entrepreneurs. In fact, they all shown a strong interest in both digital marketing and international business. This interest has led each owner to increase the awareness in this area, in order to improve the skills and increase the level of competitiveness of the company. Henri Kinnunen, CEO of WOIMA Corporation, stated that he possesses average abilities in the fields cited above. He created his knowledge through a deep analysis of the tools mainly used in the business, in particular LinkedIn. The study developed concerns activities that allow for greater efficiency in terms of results, such as *“understand the perfect media in which publish the content, which type of soft and technical text is the most appropriate, what is the level of customer interaction needed to ensure the company's visibility on social networks and social media”*. Moreover, Henri has a reputable international business experience due to the work activities previously carried out. However, the start-up also relies on the specific knowledge of the DMM, Jari Kangasmäki. His knowledge is based on academic studies in marketing and communication. In addition, Jari Kangasmäki stated that he has a strong interest in the study of foreign languages and new trends in terms of digital tools. Finally, the DMM also has previous work experience in international business. Similarly, Arcteq's team is composed by digital and international experts. The CEO has developed knowledge in these areas, but he also relies on external agents working for the start-up. Moreover, the other team members can count with previous experience both into digital and

international sectors as well as the participation of training courses to acquire a deep knowledge in the fields of interest. Additionally, Joni Lepistö has a deep international knowledge, particularly in sales and marketing. Furthermore, his previous work experience allowed him to enhance his technical skills in the planning and development of marketing and sales strategies for power electricity products. His knowledge in the digital field was acquired through an intensive study. In fact, the Manager Director of CleanerFuture stated that "*the tools used by the company are easy to implement and with the help of experts and self- studies I have been able to increase my skills in the digital sector*". The key skills of Timo Sivula are linked to the development and management of new business operations. Indeed, he count with "*Master's degree in International Marketing and Business Strategy, as well as 25 years of international marketing experience*". This knowledge has been the driving force in the expansion of the start-up. Digital activities were developed with the help of assistants.

The last force analysed during the interview is the moderating force. It refers to two main concepts that are the knowledge intensity and the creation of international networks. The combination of both brings to crucial benefit in terms of speed of internationalization of a business, in particular for the new ventures that present a limited amount of tangible resources. According to the theory, the knowledge intensity is linked to the application in a specific activity of the knowledge and the abilities acquired by the entrepreneur. In the start-ups analysed, the intensity of the knowledge is connected to the implementation of a digital marketing strategy in order to recognize and capture market opportunities. Moreover, digital tools can be utilized for the creation of international networks and partnership and not only to develop a marketing campaign (Oviatt & McDougal, 2005). For these reasons, I felt it appropriate to delve into the role that digital tools play in the creation of international partnerships. In accordance with the answer provided by Henri Kinnunen, digital tools are significant to investigate the opportunities in a market in order to establish businesses partnerships. However, the CEO declared that the creation of international networks has to be analysed case by case, since it can append that "*they come through some already existing partnership that we have*". For example, Robert Olander explained that digital marketing is useful for the opportunity recognition and capture because of the connection that a business is able to create through digital tools. Indeed, technological devices allow the entrepreneur to analyse the foreign markets rapidly compared to the traditional tools. Moreover, the CEO of Arcteq argued that social networks such as LinkedIn is helpful to attract new partners. Nevertheless, he highlighted that in this stage a digital activity of creation of partnership

has to be supported by traditional activities such as the participation in exhibitions or other events. Furthermore, he stated that *"some of the partnerships are based on relationships in previous companies of people at Arcteq"*. During the interview conducted with Joni Lepistö, he confirmed the necessity to implement digital activities in the business of an organization to increase the possibility to establish international networks. In point of fact, the team of CleanerFuture utilizes digital tools to get the first contact with possible partners, in particular LinkedIn that is mainly used by other companies and professionals. After this first approach, the company usually arrange an interview to discuss about the business and the potential of the product. Timo Sivula also acknowledged the benefits of using digital tools, but he declared that the start-up still opts for traditional approaches of researching and creating partnership. In fact, he usually participates to fairs and exhibitions such as Slush and Energy Storage in order to meet potential partners. Furthermore, he explained to me that the new venture is implementing new management and evaluation strategies for the business.

To conclude the interviews, I was highly interested to know the opinion of the people interviewed concerning the link between digital marketing and the speed of internationalization. From my point of view, the judgement of the CEO of each start-up about this topic is particularly interesting since future developments in digital marketing and speed of internationalization also play a key role in the development and growth of the new ventures analysed. Generally, the responses obtained indicate that the importance of apply digital marketing tool in a business organization to address faster foreign markets, will become the critical factor of success for a company. According to the CEO of WOIMA Corporation, *"digital tools will be the mayor instruments implied in the marketing campaign of future business, because people are always more connected"* (Henri Kinnunen). Robert Olander also believes that digital marketing will become more important in the future, particularly for the creation and share of business's values and to reach big audiences. He stated that *"it will be necessary to don't lose any possible sell activities and creation of business relationship"*. For the future, Joni Lepistö expects that the use of digital tools in every organization will grow exponentially, as digitalization in general will become increasingly important. Lastly, in accordance with to Timo Sivula, digital marketing is effective as it can increase customer interest in the product and the company in general, so he believes that the role of digital tools will become dominant in the process of Internationalization.

4.7 Propositions development

In order to provide a clear overview about the principal information collected through the interviews and to make the content easier to read and understand, I will present the data of each start-up related to the main tools implemented in the digital marketing campaign and the relation between the digital marketing campaign and the four forces of internationalization (see Table 6):

COMPANY NAME	WOIMA Corporation	Arcteq	CleanerFuture	Heliostorage
MAIN DIGITAL TOOL/S USED	LinkedIn Website YouTube	LinkedIn Website	LinkedIn Facebook Website	LinkedIn Twitter Instagram Website
ENABLING FORCE	Use of social media and SEO	Use of social media and SEO	Use of social media and SEO	Use of social media and SEO
MOTIVATING FORCE FOR INTERNATIONALIZATION SPEED	High competition, managed through constant publication of quality content	Average level of competition, similar presence on the main platform	Average level of competition, similar presence on the main platform	High level of competition, managed combining DM and TM
MEDIATING FORCE FOR INTERNATIONALIZATION SPEED	Deep experience in the development of industrial project, international sales and marketing knowledge	Expertise in sales and software development, digital field and international business	Deep knowledge in the solar power sector and international marketing	Expertise in engineering and product development. Deep knowledge in International, Marketing and Business strategies
MODERATING FORCE FOR INTERNATIONALIZATION SPEED	Use of LinkedIn and previous relationships	Use of LinkedIn and previous relationships	Use of LinkedIn and physical meeting	Mainly participation at fair and exhibition

Table 6. DM tools and four forces of internationalization

Based on the findings shown above, among the various digital tools that a company can use for the development of a digital marketing strategy, the most efficient are LinkedIn, Facebook and a structured Website. Indeed, through these devices there is the possibility for the new venture to reach in a easier and faster way a relevant amount of potential customer, not only nationally but also internationally. Another crucial element used to increase the visibility of a start-up beyond national borders is the search engine optimization. In fact, creating and publishing quality content within a company's web-page is a very effective tool in formulating keywords that will then be

used by potential users through search engines, and to ensure the presence of the business's website on the first page of the result. Furthermore, alongside the implementation of specific digital marketing tools, three other main elements have an influence on the speed of international success of a start-up. Hence the following propositions:

Proposition 1: *the presence of high competition within the energy industry in foreign markets serves as a motivating internationalization-speed force for start-ups to use digital marketing tools.*

Indeed, entrepreneurs are encouraged to take advantages of technological opportunities in foreign countries to increase their presence and competitiveness on the market (Oviatt & McDougall, 2005). In addition, according to the responses obtained during the interviews, the presence of several competitors stimulates the creation of high quality marketing campaigns that are published using the digital marketing tools in order to increase the visibility of the venture internationally.

Proposition 2: *Knowledge and expertise in the digital marketing field and in the international section serves as a mediating internationalization-speed force for energy-sector start-ups to use digital marketing tools.*

Owners' personal skills and previous experiences play a key role in the discovery of the best opportunities beyond national borders (Ibrahim, 2004), in terms of communication and technology. In point of fact, expertise and experience gained by entrepreneurs in the international sector along with an intensive knowledge of the use and the advantages of digital marketing tools, improve the business skills and enhance the new venture's presence on the international markets. For instance, all the respondents declared that the creation of the digital marketing strategy beyond national borders is based on the knowledge and experience acquired in these fields. Moreover, the interest in both digital marketing and international business allowed the start-ups analysed to reach greater efficiency in terms of results.

Proposition 3: *the creation of international partnership and active networking serves as a moderating internationalization-speed force for energy-sector start-ups to use digital marketing tools.*

In point of fact, according to the people interviewed, the social network LinkedIn is mainly used by professionals and other companies. Moreover, the findings give evidence to the crucial role played by digital devices in the investigation of market opportunity and creation of international

commercial networks. Digital technologies allow new ventures to establish commercial connection with a number of international partners that can help the internationalization speed of the organization (Oviatt & McDougall, 2005).

5 Conclusions

The following chapter will provide a concise summary of the research and describe the theoretical contribution as well as the managerial implications of this study. Furthermore, both limitations in the development of the research and propositions for future analysis are exposed. In particular, I will provide suggestions regarding the energy sector and the implementation of a digital marketing strategy to speed the internationalization of a start-up.

5.1 Summary

The objective of this thesis is to analyse how digital marketing affects the speed of the internationalization of a start-up. In other words, the aim of the thesis is to study the influence exerted by the implementation of a digital marketing strategy in a start-up to accelerate its process of entering international markets. The investigation focuses on start-ups in the Finnish energy sector. Furthermore, through the results of the interviews addressed to the CEO of each start-up, the research also examines the development status of the energy market and which are the principal players. Also, the empirical results allowed to find the most likely explication for the research question. The research strategy consisted in a qualitative research, in which data was collected through five in-depth interviews that were addressed to the CEO and the DMM of four start-ups that operate in the Finnish energy sector. As a consequence, the research was treated as a multiple case study.

The empirical findings show that for the Finnish start-ups operating in the energy sector, being international is an imperative to survive and increase the organizational business. Indeed, the interviewees validated that the Finnish market size is limited for them to be profitable in and, therefore, they proactively looked for new markets. Moreover, all respondents recognized the key role that digital marketing tools play to allow faster expansion across national borders but pointed out that this must be combined with traditional marketing activities such as the participation at fairs and other events. The different strategies used by each venture highlight the need to carry out a preventive analysis of the target customer, in order to understand which digital channel is the most efficient in terms of attractiveness. Among social networks, LinkedIn is the most efficient tool used to promote a marketing campaign, as it is mainly used by professionals. Also, the social network Facebook allows new businesses to reducing the distance and it allows an easier

dissemination of information. This is possible as the spread of digital channels has greatly changed the geography of individual States. In addition, another crucial element that brings to the success of a digital marketing campaign is to effectively structure the company's website. According to the CEOs of the start-ups analysed, a 'successful' website must contain not only technical information about the product and its features, but also soft content such as mission and business value and description of the team members. Lastly, the information collected through the interviews give evidence of the theoretically exposed about the greatest benefits brought by the implementation of a digital marketing strategy in the organizational business in terms of internationalization and increased visibility. These benefits primarily refer to the ability for the company to reach a large user-base faster and more effectively, saving on marketing costs. Developing a low-cost marketing campaign is especially important for young companies such as start-ups, since they are characterized by limited financial resources. Lastly, all the new businesses, except Heliostorage, present a clear structured digital marketing strategy and, even if the respondents had favourable view towards digital marketing not everyone was using the various channels to the fullest potential.

5.2 Theoretical contribution

The research conducted gives the evidence to and confirms the existing academic literature. In particular, within the theory three principal notions are stressed: digital marketing and main tools, speed of internationalization and the major business characteristics of a start-up. Lastly, the relationship between these concepts has been presented. The theoretical contribution mainly regards the deep understanding of the major digital tools used by the firm to accelerate the process of internationalization. These devices has been deeply analysed during the developing of the research, trough the interviews addressed to the CEO and the DMM of each start-up. The digital channel primarily examined is the web page of the venture and how the new business can establish a marketing campaign. Furthermore, social networks such as LinkedIn, Facebook and Instagram have been studied to understand in details their potential. Indeed, all the start-ups analysed have founded their DM strategy through the publication of content on these digital platforms. Another aspect evaluated is related to the several benefits of creation of a digital marketing campaign but also the main risks. The former concerns the possibility of containing costs and at the same time address a big audience, within the national borders and abroad. On the

other hand, the latter one relates to increased competition, as well as privacy risks and the dissemination of sensitive data. These points were explained at the theoretical level and confirmed by the results of the interviews conducted. Second, the theory of speed of internationalization focuses mainly on the development of four forces that, if adopted by the company, can influence the success of this process (Oviatt & McDougall, 2005). Each force was assessed by asking the interviewees specific questions about the level of technological development in the business, the entrepreneur's experience in the international field and in the digital marketing sector, the level of competitiveness in the industry as well as the active networks and partnerships created internationally. The results obtained through the interviews give evidence to the importance shown at the theoretical level of the relationship between the forces and the use of digital marketing tools to accelerate the international entry of new ventures. The theory was the basis of the research of business cases to be studied, as a company to operate as a start-up, must comply with certain characteristics. These features relate to the changes in the venture and the product offered on the market, which must be highly innovative.

5.3 Managerial implication

The DM tools as social media, a structured web-page or a developed SEO campaign can be considered useful in the creation of new commercial connection both nationally and internationally. In particular, among the social networks principally used by firms, LinkedIn plays a key role to find business partners as well as potential customers who could be interested in the product offered by the company. Indeed, this tool is principally used by professional and companies that are the first catchment area addressed by the start-ups in the energy sector. Managers of new businesses will benefit from the knowledge of various traditional and entrepreneurial digital marketing channels available to them and can determine what channels are most useful to them.

The thesis also outlines how the digital marketing strategy should be developed and what things should be considered while marketing on different channels and how the message should be made compelling. Indeed, it can be useful to adapt the content of the message shared to address a foreign country, due to the differences in culture and traditions. Cultural dimensions can help

companies understand how people in certain countries might behave to certain kinds of advertisement. Moreover, a significant element to consider is to have a content marketing plan which should exclude messages focusing on the product or service alone. So, the companies should think about what information a user would most likely be looking for when they search for their companies. Then the message should be presented in the form of a story that makes it easier for the prospect and customers to remember. Posting content doesn't mean one's job has been finished. It is important to engage with the audience. So, the posting time should be adjusted so that there is someone to respond to customer queries or feedbacks. In fact, such an approach is useful to increase the visibility of the company and increase customer loyalty.

5.4 Limitations of the research and suggestion for future researches

Despite the fact that the research question was addressed, there are specific limitations that need to be mentioned. First of all, the thesis focused entirely on start-ups operating in the energy sector. As a consequence, the generalization of new ventures' theories should be taken into consideration with great prudence. In addition, the new business analysed within the research are based in Finland and for this reason, the results cannot be automatically generalized to companies that have the headquarters located in other countries. With regard to the methodology used in the development of the research, as already outlined above, this is a multiple case-study performed through semi-structured interviews mainly addressed to the CEO of each new venture. The sample's size is composed by five interviews from four organizations and this fact influences the possibility to generalize the findings obtained. Furthermore, certain data collected are related to personal skills and experiences of the entrepreneur, thus they are subjective. Another limitation concerns the language used to conduct the interviews. As I explained in the Methodology section, all the interviews were conducted in English. This choice is based on the fact that, although English is not the mother language of neither the interviewer nor the respondents, both parties presented a good level of English communication. In any case, misunderstanding can be verified between interviewer and interviewees in the explanation of questions and answers, and this can cause a lower level of validity. Additionally, the lack of previous experience in conducting an interview and in general in the research development using a foreign language, may have led to a deficiency in a proper formulation of the question needed to carry out the research. This can lead to insufficient study and evaluation of useful data in the formulation of final results. Lastly, I decided to

concentrate the research analysis considering the four forces of internationalization related to the speed of internationalization, and without giving relevance on the differences between first entry and post entry speed of internationalization.

Based on the limitations cited above, is possible to notice the presence of several opportunities for the development of future researches. For instance, through the analysis of the interviews, it was found that all CEOs complained about the presence of a very conservative industry in which it is a challenge to sell because the number of start-ups is lower than the established companies. For this reason, an advice for future researches is to examine how the energy sector is developing in terms of start-up growth and increased competitiveness. In addition, another interesting research point is the analysis of the opening up of energy markets through digital marketing, which makes start-ups and their innovative products more visible. In general, future studies could analyse cases from other economic sectors, and other countries, industries and markets. Lastly, another element of particular importance that can be used as an object of study in future researches, is the influence of specific digital marketing tools in terms of ROI. It means to analyse which are the principal digital tools that have a great influence in the generation of economic benefits and in the increasing of sales.

6. References

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APPENDIX 1. Questionnaire to CEO

The purpose of the questionnaire is to analyse the digital marketing strategy of the start-ups interviewed and its influence on the speed of their internationalization process, in order to answer to the research question.

General information of the start-up

1. Type of business.
2. Year of constitution of the organization.
3. Size of organization (team composition).
4. Description of the product/service offered.
5. What are the company's goals, strategies and focus?
6. Why did you decide to start a business in Finland?
7. Why did you decide to start a business in the energy sector? Which are the main advantages/disadvantages?
8. How much is the level of industry development regarding the start-up in the energy field?

Reasons to internationalize

9. Which are the principal reasons to enter an international market?
10. When and how did your process of internationalization start?
11. Which States did you address first and why? Which countries do you consider as the most important ones?
12. What is the number of international markets in which your company operates/sell to?
13. What is the ratio between domestic sales and international sales?
14. What is the time-scope between opportunity recognition and first market entry?

Reasons to use Digital Marketing

15. Why did you choose to use digital market as a strategy of internationalization? Which are the main benefits in your opinion?

16. Which online channels/tools do you use to conduct your marketing activities in foreign markets? Why did you choose them in particular?
17. Which are your personal abilities as an entrepreneur regarding the use of new digital marketing tools? Which are your personal knowledges in the international sector?
18. How can you manage the customer relations though digital marketing?
19. How have you built your presences on the platforms that you use for the development of DM strategy? How does it compare to the social presence of your major competitors?
20. How does digital marketing facilitate opportunity recognition and capture?
21. Please describe the process how you decide about such marketing activities.
22. How do you use DM tools to capture specific customers' needs or deliver an unique message to a specific target market? Are your messages same across all digital mediums abroad or do you adapt these?
23. Which are the main risks that are taken in digital marketing practices? How are these risks managed and minimized while developing digital marketing strategies?
24. How is value of the company created and shared in digital marketing activities?
25. To which extent do you use digital marketing compared to the traditional marketing in your business activity? (How do you divide marketing activities in traditional and digital activities).

Link Digital Marketing and speed of internationalization

26. How has digital marketing influenced your internationalization process? How has digital marketing accelerated the speed of internationalization? -Did it facilitates a faster entry into foreign markets? How? – Did it help to enter fast various states abroad? How?
27. How does the future look like regarding digital marketing and internationalization in your opinion?

APPENDIX 2. Questionnaire to Digital Marketing Manager

The aim of the questionnaire is to examine in detail the digital marketing strategy, through the information provided by the start-up's marketing manager.

1. How is developed your digital marketing strategy? (description of market analysis to understand which digital marketing approach is the best).
2. Can you describe the process of implementation of a digital marketing strategy into your business? Did you need to modify it over time?
3. How did you decide and create the content to share? Which are the key word/s linked to your business?
4. Can you describe the costumers' involvement in terms of -time to reach customer and - time to customer's reaction?
5. Which is the level of competitiveness into the channel/s used?
6. Which is the amount of financial resources used for the implementation of a digital marketing campaign?
7. Why a digital marketing campaign is the best approach in your business to internationalize?
8. Which are the main risks linked to the development of a digital marketing campaign and how can you manage them?
9. Do you use digital tools to promote the creation of international partnerships?
10. How do you combine online and offline marketing? Which one require more effort in the implementation?
11. How did you developed your knowledge in the digital marketing sector?

