Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Economics and Management
Dept. of Industrial Economics and Technology Management

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Headwind & Tailwind: Norwegian Industrial Developers Entering the Italian Offshore Wind Market

Master's thesis in Industrial Economics and Technology Management
Supervisor: Øyvind Bjørgum
June 2023

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Preface

This master's thesis is associated with the 5-year Master of Science programme in Industrial Economics and Technology Management at the Norwegian University of Science and Technology (NTNU) in Trondheim. The author, K. J. Kirkeberg, has been specializing in strategy and international business development, previously having exchanged one year to the University of Padua (UniPd) in Italy.

The idea behind the thesis was built up during the author's traineeship at the Royal Norwegian Embassy in Rome, Italy, in 2022. At that time, Norwegian companies seemed to become increasingly interested in offshore wind opportunities around the Mediterranean Sea. If taking a company perspective, entry to this market would combine disciplines of technology development, strategy formation, legal regulations, and even international languages – all appropriate for the programme's multidisciplinary base.

Throughout its conception, the thesis has leaned on academic guidance from associate professor Ø. Bjørgum at NTNU and would like to extend its best regards for always rewarding supervision and assistance on scientific conduct, academic literature, and empirical investigations.

In large parts, the thesis has been written from Rome during the first half of 2023. Further regards are therefore sent to the Norwegian Embassy in Rome, as well as the Italian branch of Innovation Norway, holding offices in Milan, for always rewarding meetings on the latest market developments, also consulting the thesis' empirical research.

At last, a warm regard must be sent to the Norwegian Institute in Rome, for kind allowance of a chair and desk in their library.

By NTNU's motto, hope persists that the thesis' studies and final discussion are able to take part in "*knowledge for a better world*" – theoretically as empirically.

Thanks! / Takk! / Grazie!

Oslo, 13th June 2023.

Knut Jørgen Kirkeberg

Abstract

Companies engaged in industrial development repeatedly come across options to enter new markets. Many of these markets will be international and demand vast financial capabilities in correspondence with technology-intensive industries. Such industries are emerging before maturing. To date, much of the entries to emerging industries have come characterized by uncertainty, turbulence, and complexity. This study takes the perspectives of market entrants, aiming to grasp how companies strategize entry towards a contemporary international emerging market with strong technology-intensity. The research takes a qualitative and empirical approach by using a multiple case study. More specifically, the research takes the perspectives of Norwegian offshore wind developers and how they strategize entry to the emerging Italian offshore wind market. By itself, this market currently resides in an initial phase with outlooks to possibly become *the* global leader for early floating offshore wind commercialization. Thus, the study also conducts an empirical Italian market study, carrying both optimism and doubt. In all, the research finds the case companies' strategic perceptions to both align and challenge theory on market entry to international emerging industries. Data suggests entry success being a result of maintaining- and developing entry investigations on and towards the market at hand, eyeing co-development partnerships by overcoming especially regulatory barriers. Resources take a stronger spotlight than costs, legitimizing the resource-based view. Given the type of entrant, different suggestions for the timing of entry follow. The study further suggests new research to develop the case parameters for comparison, as this study seems alone of its kind by the chosen market *product*, *-entrants*, and *-context*. New research should also follow the maturement of the Italian offshore wind market to better grasp how the entrant's strategies develop accordingly towards the notion of success.

Keywords: Emerging Industry; Market Entry; Entry Investigation; Entry Mode; Entry Barrier; Offshore Wind; Italy.

Sammendrag

Bedrifter engasjert i industriell utvikling kommer gjentatte ganger over alternativer for å gå inn i nye markeder. Mange markeder vil være internasjonale og kreve vide finansielle evner i sammenheng med teknologiintensive industrier. Slike industrier vokser før de modnes. Til dags dato har mange av de voksende industriene kommet til å bli preget av usikkerhet, turbulens og kompleksitet. Denne studien benytter seg av bedriftsperspektiver og tar sikte på å forstå hvordan bedrifter utformer sine inngangsstrategier mot et nåværende og internasjonalt fremvoksende marked preget av sterk teknologiintensitet. Forskningen følger en kvalitativ og empirisk tilnærming ved å bruke en "multiple case study". Mer spesifikt tar forskningen for seg perspektivene til norske havvindutviklere og hvordan de planlegger inntreden i det fremvoksende italienske havvindmarkedet. I seg selv befinner dette markedet seg for tiden i en innledende fase med utsikter til å muligens bli *den* globale lederen for tidlig kommersialisering av flytende havvind. Studien gjennomfører derfor også en empirisk italiensk markedsanalyse, som bærer på både optimisme og tvil. I alt finner forskningen case-bedriftenes strategiske oppfatninger til å både enes med og utfordre teori om markedsinngang til internasjonale fremvoksende industrier. Data tyder på at inngangssuksess er et resultat av å opprettholde og utvikle markedsundersøkelser på og mot det aktuelle markedet, samt anspore samarbeidsutviklingspartnerskap ved å overvinne spesielt regulatoriske barrierer. Ressurser har et sterkere søkelys enn kostnader, og legitimerer følgelig et ressursbasert syn hos bedriftene. Gitt type bedrift følger forskjellige forslag til tidspunktet for markedsadgang. Studien foreslår videre ny forskning for å utvikle case-parametrene for sammenligning, da denne studien virker alene i sitt slag av det valgte markeds*produktet*, *-bedrifter* og *-kontekst*. Ny forskning bør også følge modningen av det italienske havvindmarkedet for å bedre forstå hvordan bedriftenes strategier utvikler seg tilsvarende mot ideen om suksess.

Riassunto

Le aziende impegnate nello sviluppo industriale incontrano ripetutamente opzioni per entrare in nuovi mercati. Tanti di questi ultimi avranno un taglio internazionale e richiederanno reali capacità finanziarie in corrispondenza alle industrie ad alta intensità tecnologica. Queste industrie stanno emergendo ancor prima di maturare. Ad oggi, gran parte delle entrate alle industrie emergenti sono state caratterizzate da incertezza, turbolenza e complessità. Questo studio si pone l'obiettivo di analizzare le prospettive dei mercati emergenti, per comprendere le strategie di ingresso alle aziende verso un mercato internazionale contemporaneo e a grande intensità tecnologica. La ricerca adotta un approccio qualitativo ed empirico utilizzando un "multiple case study". Nello specifico, la ricerca prende le prospettive degli sviluppatori eolici offshore norvegesi e il modo in cui essi pianificano l'ingresso nel mercato emergente dell'eolico offshore italiano. Questo mercato, singolarmente, risiede ancora in una fase primordiale con l'obiettivo però di diventare il leader globale della prima commercializzazione dell'eolico offshore galleggiante. Pertanto, lo studio conduce anche un approfondimento empirico del mercato italiano, portando da un lato sia ottimismo che dubbio. La ricerca trova percezioni strategiche aziendali sia per allineare che per sfidare la teoria concernente l'ingresso ai industrie emergenti internazionale. I dati suggeriscono che il successo dell'ingresso in questione è il risultato del mantenimento e dello sviluppo di indagini circa l'ingresso nel mercato, osservando le partnership di sviluppo e superando soprattutto le barriere giudiziarie. Nelle aziende, le risorse occupano più spazio dei costi e legittimano una visione focalizzata appunto sulle risorse. Data la tipologia di concorrente, seguono diversi suggerimenti riguardanti la tempistica di ingresso. Lo studio suggerisce inoltre una nuova ricerca con lo scopo di sviluppare i parametri do confronto, poiché il seguente lavoro sembra unico nel suo genere, cioè con i parametri Italia, eolico offshore e aziende norvegese. Infine, nuove ricerche dovrebbero seguire la maturazione del mercato eolico offshore italiano per comprendere al meglio come le strategie di concorrenza si sviluppano conseguentemente verso la nozione di successo.

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Key Abbreviations

OW – *Offshore wind*

FOW – *Floating offshore wind*

NOW – *the Norwegian offshore wind (cluster)*

Team Norway – *a network-based collaboration between various Norwegian public and private actors, working to promote Norwegian business interests internationally. For Italy, the team is primarily made up of the Royal Norwegian Embassy in Rome, Innovation Norway, and the Norwegian Seafood Council, the latter two being based in Milan*

PNRR – *il Piano Nazionale di Ripresa e Resilienza (known in English as "the National Recovery and Resilience Plan", then abbreviated NRRP)*

PNIEC – *Il Piano Nazionale Integrato per l'Energia e il Clima (known in English as "the Integrated National Energy and Climate Plan", then abbreviated NECP)*

IRENA – *the International Renewable Energy Agency*

GWEC – *the Global Wind Energy Council*

IEA – *the International Energy Agency*

S.r.l. – *Società a responsabilità limitata (common Italian company type, where liability is limited to the amount of capital paid into the company)*

S.p.A. – *Società per Azioni (common Italian company type, where liability is limited to the amount of capital issued through shares)*

AU – *Autorizzazione Unica (known in English as the "Single Authorization")*

VIA – *Valutazione d'impatto ambientale (known in English as the "Environmental Impact Assessment")*

CDM – *Concessione Demaniale Marittima (known in English as the "Maritime Concession")*

LCOE – *Known industry calculation for preliminary financial assessment of an energy plant, measuring the costs necessary to build, operate and maintain an energy plant*

PART 1: INTRODUCTION

1. Motivation

Many industrial companies will come to consider entry to international markets, either by opportunity or need. Per se, international market entry is far from neglected when researching business strategies. Even so, no market *product, -entrant*, or *-context* are alike, meaning a single generalization on successful entry is far from easy to come by (Johnson & Tellis, 2008). Adding to the complexity, markets are normally emerging before maturing, meaning companies will have varying outlooks for growth and earnings given the state of the market. If the emerging market is of industrial art, entry often involves unexpected setbacks, costly detours, and recurring uncertainty (Markman, et al., 2019). Research on such markets remains scattered and has usually been done solely post-emergence (Gustafsson et al., 2016; Forbes & Kirsch, 2011). As such, scholars and managers alike may find it useful to better grasp how successful entry to contemporary international emerging industries can be strategized, as even the notion of success has been surprisingly hard to link with the companies' growth and earnings (e.g. MacMillan & Katz, 1992; Sapienza et al., 2006).

Given dire need to reduce global greenhouse gas emissions, a prevailing political measure will persist in fostering stronger dependence on, and development of, renewable energy sources. Offshore wind (OW) has emerged as a strong contender in this mix (IRENA, 2021). The technology comes in two forms, either being fixed to the seabed or float. Floating offshore wind (FOW) has in contrast to fixed OW not entered early growth phases. In fact, FOW is still awaiting early commercialization, with industry standards yet to be set and large operational farms yet to be built (GWEC, 2022). By these accords, OW installations, regarding especially FOW, serves as interesting and broad market *products*.

One emerging OW market is Italy, where most outlooks lean on FOW development. To date, the country holds the Mediterranean's only inaugurated OW park, located outside the city of Taranto in the south of the country (Wind Europe, 2023). The OW aspirations in Italy are moving fast, as 2022 alone saw a 200% increase in connection applications from OW developers to the country's national onshore electricity grid, equalling close to 100 effective GW of capacity (Terna S.p.A., 2022). Hence, Italy might become leading for FOW development and serves as an interesting market *context*.

Developing OW will require large investments in advanced technology, often demanding international expertise. As political targets and legal regulations in the Italian OW market are progressing by the day, Norwegian OW developers have come forward as possible drivers for the emerging market. By themselves, many Norwegian companies carry success stories for entering emerging industries offshore. Accordingly, more and more developers have launched value propositions concerning OW, directing Norwegian OW actors as interesting market *entrants* to study.

In all, by using OW installations as market *products*, Italy as market *context*, and Norwegian OW developers as market *entrants*, this thesis sets out to investigate how industrial companies may strategize entry to international emerging industries. The thesis will constitute yet another study on market entry but clearly distinguish itself by studying contemporary entry strategies and -market dynamics, put up against an emerging technology-intensive industry. Ultimately, the thesis aims to reach implications for both theory and management after discussing theoretical- and empirical findings jointly.

2. Research Questions

Studying how industrial companies strategize entry to international emerging industries should not be done without aligning the strategies towards specific objectives. Thus, a problem statement directing the companies' strategies towards successful entries was raised as stated below, with the cursive text signalling the market *products*, *-entrants*, and *-context*.

- What does successful entry to *an international technology-intensive emerging industry* entail for *industrial companies*?

Besides elevating relevant theoretical findings on market entry to international emerging industries, the thesis used an empirical- and qualitative research method, split between an Italian market study and a multiple case study into Norwegian OW developers. In all, the three parts would be combined for a discussion, aiming to identify strategic advice for managers but also correspondence with theory. To reach that point, the thesis needed to postulate more specific research questions.

At first, a general interest as to how the entrants are investigating entry to an emerging industry arose, wanting to understand if the strategies at large diverge or converge, and the extent of depth they possess when confronting a contemporary emerging market. Thus, the first research question was raised as:

I) How are *Norwegian offshore wind developers* managing strategies that pursue entry to the *Italian offshore wind market*?

Pursuing entry with the goal of success may entail proposals for some entry procedures to adjust or even halt. Understanding how the industrial companies want to enter, and not only investigate, an emerging industry rose as equally important, leading to the second research question, raised as:

II) How do *Norwegian offshore wind developers* aim to enter the *Italian offshore wind market*?

Entering an emerging industry is synonymous with facing barriers, as it can be argued that neglecting them hinders business opportunities to materialize. As such, the third and final research question was raised as:

III) What are the key entry barriers portraying the *Italian offshore wind market*?

An explanation for the discovery of the problem statement and research questions is given attention in Chapter 5 on the thesis' research methodology.

3. Structure

The thesis is structured in distinct chapters under distinct parts. A theoretical background on market entry to international emerging industries will initiate Part 2 in the coming Chapter 4. A presentation and review of the thesis' chosen research methodology will follow in Chapter 5. Then, Part 3 revolves around the thesis' two empirical studies, at first the market study on the Italian OW market in Chapter 6, and the multiple case study on Norwegian OW developers in Chapter 7. In all, the thesis' investigative outline is split into three main parts, as shown in Table 1.

Table 1: Investigative outline (own creation).

Topic	Market Entry to International Emerging Industries	The Italian Offshore Wind Market	Norwegian Offshore Wind Developers
Chapter	4	6	7
Type of analysis	- Conceptual. - Literature study.	- Empirical. - Market Study.	- Empirical. - Multiple case study.
Findings obtained from	- Research papers (quantitative and qualitative). - Other academic publications (e.g. books).	- Italian/EU regulation and political policies. - Third-party reports. - Industry events. - Research (quantitative and qualitative).	- Semi-structured interviews. - Publicly available company information.

From Part 4 in Chapter 8, prevailing findings from the various investigations will be summoned for a discussion on how Norwegian OW developers should pursue entry to the emerging OW market in Italy. This chapter will also discuss some of the thesis' encountered limitations and implications for further research and managerial practise. The thesis is concluded in Chapter 9, aiming to address the problem statement. In all, the thesis' structure can be seen in Figure 1, where it should be noted that the problem statement holds throughout the thesis, whereas the research questions have guided the thesis through the investigative parts and discussion.

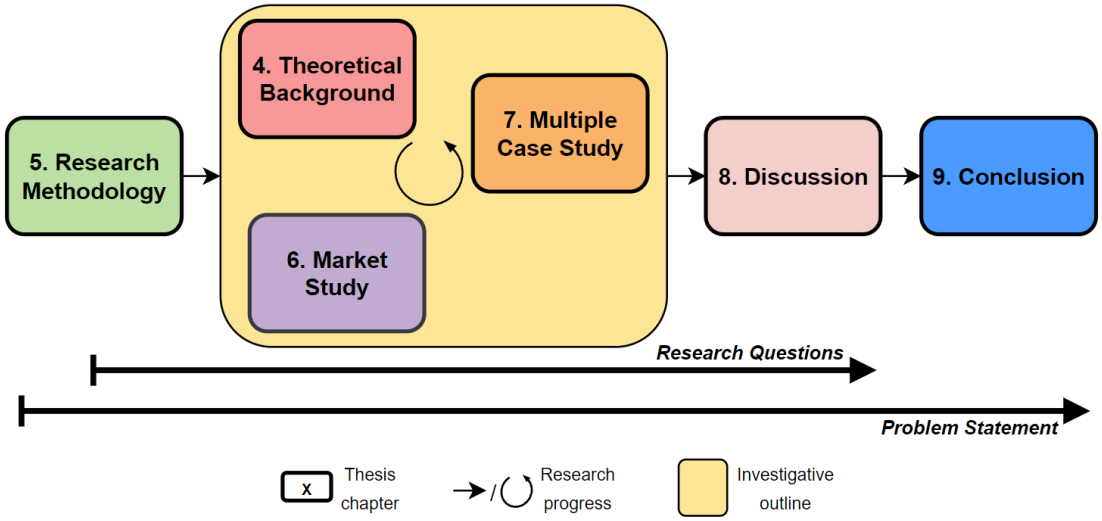

Figure 1: Thesis structure (own creation).

PART 2: WAY OF CONDUCT

4. Theoretical Background: Strategic Market Entry to International Emerging Industries

In this theoretical chapter, the thesis aims to grasp how research on market entry to international emerging industries can direct companies' strategies. To do so, the chapter begins by investigating emerging industries before key aspects regarding foreign market entry are put forward. The perspective from *core companies* is taken, these being the actors whose business output, either main or secondary, concerns the very product or service constituting the emerging industry. As such, the core companies are also the possible entrants considered in later empirical studies. Further, this chapter will see some other theoretical interpretations relevant to the thesis' research direction.

4.1 Emerging Industries

4.1.1 Researching Emerging Industries

During the last twenty years, the "general emerging industry" has come to carry modern technological connotations in correspondence with the increasing presence of disruptive technologies[1] (Kirkwood & Srai, 2011), or even technological discontinuity (e.g. Hargadon & Douglas, 2001; Munir & Phillips, 2002). Even so, research on emerging industries should not be attributed to recent research trends alone. For example, already between 1982 and 1983, Calori (1985) conducted an extensive field study of close to 60 industrial companies' strategies to enter emerging industries. In later years, highly cited works from Lieberman and Montgomery (1988) and Anderson and Tushman (1990) connected strategic studies to emerging industries, where Lieberman and Helfat (2002) later re-connected emerging industries with the simple introduction of fundamentally new products or services.

According to measurements by Gustafsson et al. (2016), research on emerging industries has risen in recent years, specifically those taking the empirical perspectives of core companies (e.g. Russo, 2003; Giarratana, 2004; Spencer et al., 2005; Santos & Eisenhardt, 2009; Sine & Lee, 2009; Dobrev & Gotsopoulus, 2010). The rise can partly be attributed to a high rate of emerging industries per se, again being related to technology development (Gustafsson et al., 2016). Some authors have focused on other stakeholder interests in emerging industries, often on an institutional level where policies and regulations are set (e.g. Grossman, 1990; Eliasson, 2000; Hung & Chu, 2006; Breznitz, 2007).

According to Gustafsson et al. (2016), not many systematic literature reviews have been conducted on emerging industries. This has, by their argumentation, led to individual research findings on such industries to remain scattered and not as easy to gather as other topics within strategic business literature. Studying such industries can be hard until after they have matured, at least if understanding or measuring some form of stakeholder success, often revolving around core companies' entries, is the prevalent research goal (MacMillan & Katz, 1992). Difficulties with theory generation on emerging industries can follow from such empirical difficulties, possibly leading to a cyclical problem when studying emerging industries which generally has led scholars to other research topics (Forbes & Kirsch, 2011).

[1] Defined as "a new technology that completely changes the way things are done" per the Cambridge Dictionary (2023).

4.1.2 Defining Emerging Industries

Having recalled the work by Calori (1985), one should not overlook one of the earliest and most important definitions of "emerging industries" by now well-renowned Harvard professor Michael E. Porter. In work from 1980, Porter (1980) defined emerging industries as "newly formed or re-formed industries that have been created by technological innovation, shifts in relative cost relationships, emergence of new consumer needs, or other economic and sociological changes that elevate a new product or service to the level of a potentially viable business opportunity", further describing that such industries come constantly alive in free economies.

As research on emerging industries has developed, so have the definitions. In the 1990s very concise definitions arose, simply identifying an "emerging industry" as an industry in its earliest stages of development (Low & Abrahamson, 1997; Van de Ven & Garud, 1993). Persisting until today, the very label of an "emerging industry" has been challenged (Bjørgum, 2016). The adjective "emerging" has, for instance, been replaced by other synonyms as "embryonic" (e.g. Klepper, 1997), "nascent" (e.g. Santos & Eisenhardt, 2009), "introductory" (e.g. Mazzucato, 2002) and "growth" (e.g. Agarwal & Tripsas, 2008).

On the other side, the term "industry" has not been sheltered from discussions (Srinivasan, 2008). Porter defined industry as "a group of companies producing products that are close substitutes for one another" (1980). Van de Ven and Garud (1993) later challenged this definition by stating how it lacked the inclusion of other actors than the companies. Thus, they argued Porter's definition being too narrow, themselves rather suggesting an industry to be a wider social system of many stakeholders, as customers, other companies, public institutions, and more.

Additionally, "emerging markets" and "emerging industries" have been used interchangeably (Sarasvathy, 2001). Nonetheless, a separation should arguably be maintained as "emerging markets" alone have been mostly used concerning economic growth in developing countries (Baena, 2009). This thesis uses emerging industries if not denoted to a specific market context, taking further inspiration from those that are technology-intensive. Thus, the thesis aligns itself with the research trend, following a definition by Day and Shoemakers (2000) on "emerging technologies", revitalized by Srinivasan (2008), understood as science-based innovations, both radical and incremental, that potentially can create or transform existing industries.

4.1.3 Characterizing Emerging Industries

Amongst posed characteristics of emerging industries, turbulence may be *the* most relevant (Virany & Tushman, 1986). The rate of both company entries and -exits in emerging industries can fly high, something that according to Peltoniemi (2011) creates turbulence. Turbulence can also be attributed to the high introduction of technology-intensive products and services, or more precisely the lack of technological standards, as this often results in varying stakeholders praising different solutions, creating turbulence in the progress towards becoming a mature industry (Bjørgum et al., 2013).

Just as prominent as turbulence, uncertainty characterizes emerging industries (Gustafsson et al., 2016). The uncertainty often takes many faces, as lack of a clear picture of involved stakeholders and actors, financing problems, and the often-non-standardized technology (Aldrich & Fiol, 1994; Forbes & Kirsch, 2011). Commonly, uncertainty is most seen in the earlier stages of an emerging industry, as larger and

more stable actors often enter at later intervals. The entry of such actors may imply how the emerging industry can be moving towards more mature phases. Bjørgum (2016) also highlighted how the industry under review may become trapped in a domino effect where changing political ambitions for the industry can affect investments, raising uncertainty. Following uncertainty, complexity is often a general characteristic. Aldrich and Fiol (1994) state, for instance, how the complexity may increase as technological solutions from varying companies fight to become *the* standard post-emergence.

Recent works by Kirkwood and Srai (2011) have stated extra general characteristics of emerging industries, all based on work by Porter (1980), as i) strong technological and strategic uncertainty, ii) high initial costs followed by steep cost reductions, iii) many embryonic companies and spin-offs, iv) first-time uninformed buyers, and v) state intervention (in the form of legislation or subsidies). Low external legitimacy due to the industry's missing success stories can also be stated (e.g. Aldrich & Fiol, 1994; Zimmerman & Zeitz, 2022).

This also holds for commonly encountered entry barriers to emerging industries in early growth, at large identified by Porter (1980) as i) proprietary technology, ii) access to distribution channels, iii) access to raw materials and other inputs (as skilled labor), iv) cost advantages due to experience (made more significant by the technological and competitive uncertainties), and v) risk (evidently increasing effective capital barriers).

4.1.4 Growing Emerging Industries

There is no final consensus among scholars on how to separate varying phases of an emerging industry's growth (e.g. Agarwal & Bayus, 2004). For example, Phaal et al. (2011) even argued it would become difficult to detect at what point in time an industry should get called "emerging". Adding to the complexity, Forbes and Kirsch (2011) stated how the emergence of an industry, in the end, may constitute *most* or *all* of its history. Gustafsson et al. (2016) took both these concerns into account when they proposed three key phases for an emerging industry.

The coming paragraphs elaborate on these three stages in condensed form, with reasonings also supported by other works. Through the stages, dominant company goals will revolve around each stage's challenges and opportunities, but always with company survival as the underlying objective (Calori, 1985), arguably implying that *success* can entail withdrawing from the industry altogether.

The Initial Stage

The first key stage of an emerging industry is characterized by disruption to the existing industrial order, dominated by innovative R&D-activities, often by entrepreneurial companies supported by strong stakeholder ambitions (Gustafsson et al., 2016; Möller & Svahn, 2009)[2]. Often, this results in challenging the existing order in place in the bigger marketplace, for example in a specific country (Van de Ven & Garud, 1993). Additionally, the overall number of companies may increase, though not necessarily in large quantities (e.g. Mezias & Kuperman, 2001; Sine & Lee 2009). Powell et al. (2005) suggest these companies often not possess all the necessary resources, these being technological,

[2] Also to be understood as the "embryonic phase" proposed by Phaal et al. (2011), the "pre-founding stage" proposed by Forbes and Kirsch (2011), and the "pre-company take-off stage" proposed by Agarwal and Bayus (2004).

organizational, or financial, to fully commercialize early in the industry. Srinivasan (2008) states emerging technologies will have limited, if any, functionality.

The rise of an emerging industry may be attributed to varying factors. In general, scholars agree that some sense of technological development is the main driver (e.g. Abernathy & Utterback 1978; Van de Ven & Garud, 1993, Malerba & Orsenigo, 1996; Murmann & Frenken 2006; Phaal et al. 2011). Other catalysts exist, like demand shifts (e.g. Mitchell, 1989, Agarwal & Bayus, 2004), regulatory changes (e.g. Madhavan et al. 1998; Lounsbury et al. 2003), or changes in the corresponding socio-economic environment, all arguably being dependent on larger shifts in the market, for example in the specific country at hand (e.g. Rao et al., 2000; Lounsbury et al., 2003; Sine and Lee, 2009).

In the initial stage, core companies are often not alone to blame for further industry growth, as stakeholder involvement may become necessary. Looking to the wind industry, Sine and Lee (2009) exemplified how companies got easier access to necessary resources and were generally met by more beneficial regulation for growth in the U.S. market, all after vocal support from the environmental movement. Regarding a relatable industry, as the marine energy industry, Bjørgum and colleagues (2013) showed core companies, facing a period of complex technological development, will grow dependent on the co-development of technological solutions with other companies.

The Co-Evolutionary Stage

Progressing to a co-evolutionary stage incorporates the co-development between varying elements by varying stakeholders and their convergence to gradually form the industry (Gustafsson et al., 2016)[3]. Mezias and Kuperman (2001) argue these elements are organizational, technical, product- and service innovations, and the convergence between them being implied by both contagion and imitation. It should be noted that co-development may not necessarily be understood as direct formal collaboration, but also as competition, for instance, on technological designs, still towing the industry in the same direction (Möller & Svahn, 2009). Bjørgum and Netland (2017) also highlighted supporting supply chain generation for the emerging industry to progress, these often being dependent on existing chains in similar industries.

In this stage, scholars seem to agree that more companies, both established and entrepreneurial, will enter the industry (Agarwal & Bayus, 2004; Calori, 1985). Still, Klepper and Grady (1990) diverged on this in their argumentation for the equivalent "shakeout stage". Just as important is the increasing level of competition between stakeholders, especially in-between core companies and companies along the supporting value chains. Normally, a lot of the competition, anew, revolves around the hunt for a standardized technology (Calori, 1985; Gustafsson et al., 2016). For example, Garud and Karnøe (2003) exemplified that the co-evolution of testing standards related to aerodynamics helped facilitate the growth of the at-the-time emerging wind industry in Denmark, while the lack of it did the opposite for the U.S. market, arguably leading to relatively later growth.

[3] Also to be understood as the "emerging stage of industry development" proposed by Forbes and Kirsch (2011) and the "nurture phase" proposed by Phaal et al. (2011).

The Growth Stage

Increasing sales numbers often mark the transition to a final growth stage[4]. Gustafsson et al. (2016) argued this stage will observe the first leading positions to be grabbed by certain core companies. In that regard, the stage may see the exit of some involved companies and other stakeholders as competition becomes sharper and clearer. This competition will often revolve around distribution channels and entry timing (Möller & Svahn, 2009). This is supported by Calori (1985), who again argued dominant company goals are seizing market shares, added by the generation of profits. Reaching this growth stage is often characterized by the appearance of a dominant technological standard, at least some sort of design (e.g. Abernathy & Utterback, 1978; Anderson & Tushman, 1990). Overall, increased quality and credibility *should* follow the market product (Agarwal & Bayus, 2004).

In work by Forbes and Kirsch (2011), they point to earlier work by Low and Abrahamson (1997) who marked the end of the emerging stage as the beginning of an industry's growth stage. In this regard, this growth stage does not necessarily correspond to the growth stage identified by Gustafsson et al. (2016). Klepper and Grady (1990) even labelled the first stage of industry emergence as the growth stage. Other scholars further extend the emerging stage past the growth stage (e.g.Klepper & Graddy, 1990; Aldrich & Ruef, 2006). Forbes and Kirsch (2011) portrayed a timeline with this growth stage and the periods before and during the industry's emergence, fetched as Figure 2 below.

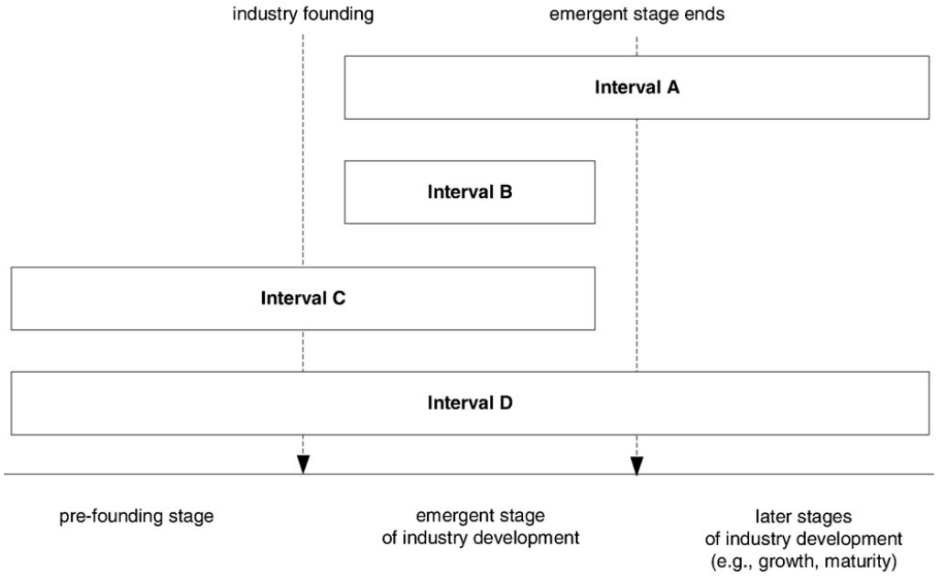

Figure 2: Alternative temporal intervals associated with theories of industry emergence *(Forbes & Kirsch, 2011)*.

In Figure 2, each interval comprises the time at which emerging industries *could* be studied. For this thesis, interval C becomes most relevant as it is concerned with all the events and processes that are truly emerging in the present, taking into account that the emerging stage *might* yet to be reached, i.e. interval B. This interval does not make direct measurement of successful entry possible, as has been a dominant focus in the research field to this day (e.g.Geroski, 2003; Dinlersoz & MacMillan, 2009).

[4] Also to be understood as what Phaal et al. (2011) called the "stage leading to sustainable industrial growth", or what Möller, and Svahn (2009) called "coordination for dissemination".

Still, the three-staged development of emerging industries may be too narrow. In work by Porter (1980), he divided industry evolution into stages as "introduction, growth, maturity, and decline". Considering the last two stages come too wide off this thesis' focus on contemporary processes. Such stages further involve competition between companies to shift strategic focus from entry to prices (Phaal et al., 2011). Phaal and his colleagues (2011) further introduced a model, reused as Figure 3, based on the divisions by Porter, where emerging industries were further split into six stages.

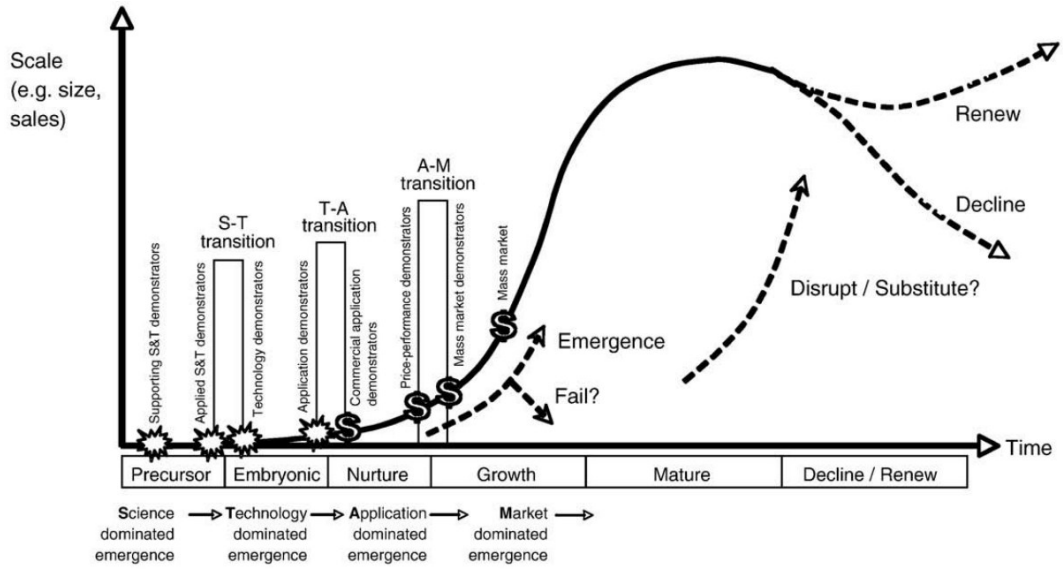

Figure 3: Phases, transitions, milestones, and trajectories of technology-intensive industrial emergence (Phaal et al., 2011).

By this categorization, and to align with interval C, the thesis will not consider activities beyond the nurture phase. Until this stage, scientific- and technological development occurs, aligning with the graph for further emergence, as shown in Figure 3.

4.1.5 Entering Emerging Industries

Calori (1985) states that the main strategic choice companies need to consider when entering emerging industries is how they time their entry, originally emphasized by Porter (1980). Porter discussed advantages and disadvantages with mainly early- and late entry. By his accounts, early entry is associated with risks when, for instance, development costs for the industry are high, often falling to earlier entrants, and secondly if the emerging industry's new technology can be easily imitated.

Regarding early- and late entry, Suarez and his colleagues (2015) identified a "window of opportunity" companies should consider when conducting their entry approaches towards an emerging industry. The window lies between the top accumulation of product categories under development and the number of companies entered. The top amount of company entries align with the appearance of a dominant product design. After the dominant design has leaped forward, the number of companies in the industry will dissolve, as they acknowledge their competitive positions are not aligned with this design. Figure 4 illustrates the reasonings and is fetched directly from Suarez et al. (2015).

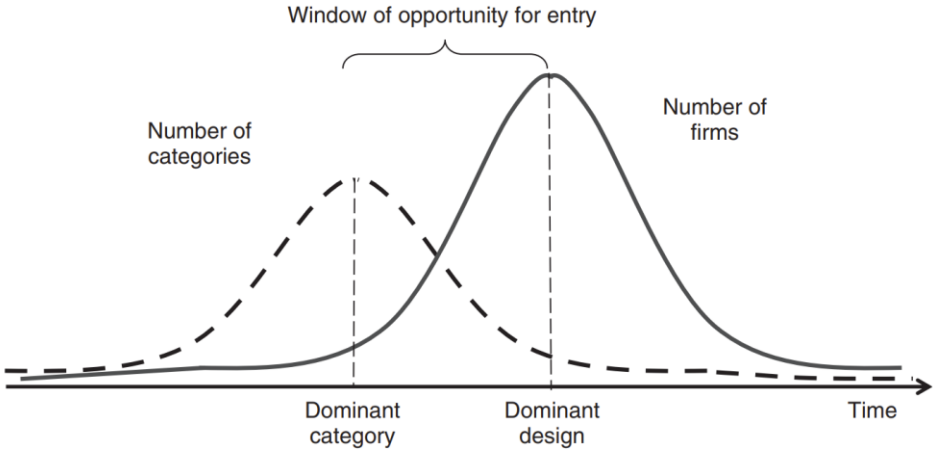

Figure 4: The window of opportunity (Suarez et al., 2015).

The "window of opportunity" aligns well with what Markides and Geroski (2004) found to be the most ideal point of entry for established companies. Established companies operating in emerging industries are often called diversifying entrants (Zachary et al., 2015). By using Ansoff's growth matrix (1957), diversification can be understood as the strategy to pursue when both products and markets are new, as seen in Figure 5. According to York and Lenox (2014), will such entrants cherish the emerging industry if financial barriers are manageable and possible earnings justify associated risks, such as those related to regulatory demands. General motivation for diversification can further be attributed to companies responding to specific market opportunities or desiring growth.

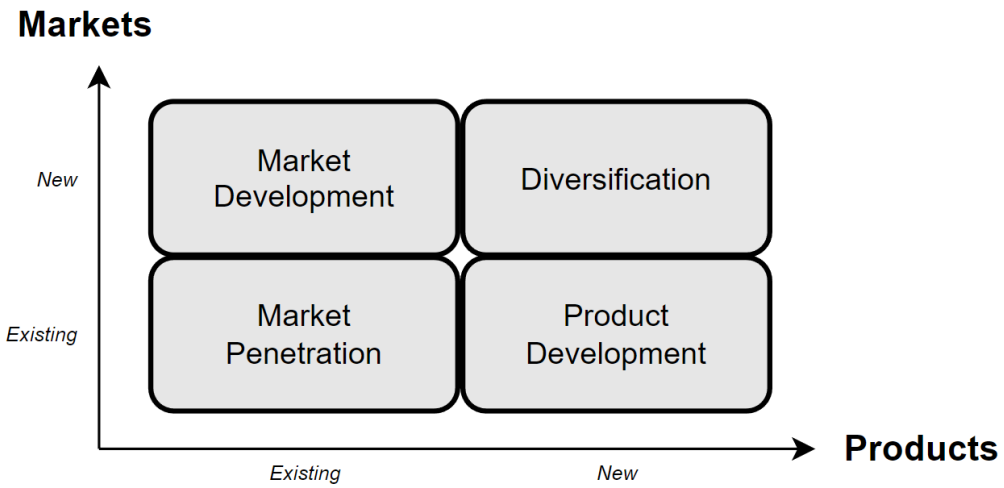

Figure 5: Ansoff's growth matrix (based on Ansoff (1957)).

4.2 Market Entry

4.2.1 Entry Modes

What type of entry mode a company wants to pursue may arguably be *the* most extensive entry aspect for every entry investigation. Holtbrügge and Baron (2013) define entry mode as "the institutional arrangement that is used to conduct an international business activity, such as the manufacturing of goods, servicing customers, or sourcing various inputs". Identifying and selecting one fitting entry mode will constrain or enhance varying company functions (Johnson & Tellis, 2008). Additionally, the chosen entry mode will come to influence the companies' varying stakeholder dependencies, operational scale, and position, which may all affect the companies' performance and survival (Zachary et al., 2015).

One or more entry modes may be used. This follows the argumentation of Johnson and Tellis (2008), who modernized and narrowed a former classification by F. R. Root from 1994. In all, Root presented 15 arrangements, which Johnson and Tellis scoped down to five from having studied close to 200 foreign entries to industrial markets. The arrangements were listed by the level of control the entrants may exhibit. With descriptions cited directly from their work, the five classes are listed in Table 2 as the main entry modes to foreign markets[5]. Foreign markets are here interpreted as host markets/countries, where the entrant's original, and often main market, is considered as the home market/country.

Table 2: Main entry modes to international markets by level of control (own creation).

Name of entry mode	**Level of company control over entry mode**	**Cited description of entry mode** (Johnson & Tellis, 2008)
Export	Low	"A company's sales of goods/services produced in the home market and sold in the host country through an entity in the host country".
License and franchise	Low / Medium	"A formal permission or right offered to a company or agent located in a host country to use a home company's proprietary technology or other knowledge resources in return for payment".
Alliances	Medium	"Agreement and collaboration between a company in the home market and a company located in a host country to share activities in the host country".
Joint ventures (JV)	High / Medium	"Shared ownership of an entity located in a host country by two partners, one located in the home country and the other located in the host country".
Wholly owned subsidiaries (WOS)	High	"Complete ownership of an entity located in a host country by a company located in the home country to manufacture or perform value addition or sell goods/services in the host country".

Two opposing theories suggest alternative outcomes as the level of company control increases, these being the resource-based view (RBV), and the transactions cost view (TCV). These two views, shortly explained below, are some amongst many underlying perspectives used when explaining company

[5] NB: These five entry modes are by no means a final identification of *all* entry modes, as it can be argued that new modes will arise as the nature of conducting international business activities emerge, or diverge, towards varying standards.

decisions[6], for instance, in strategic decision-making towards entering markets and, especially, which entry mode(s) to pursue (Das & Teng, 2000).

The Resource-Based View

Das and Teng (2000) explain that "unlike traditional industrial organization economics, which relies heavily on the analysis of the competitive environment, the RBV focuses on the analysis of various resources possessed by the firm". Resources can here be understood as "those (tangible and intangible) assets which are tied semi-permanently to the firm" (Wernerfelt, 1984). The RBV regards the level of company control over the entry arrangement(s) and control over such involved resources as equal (Johnson & Tellis, 2008). Thus, as the company's level of control increases, the RBV argues that the company's chances of successful entry increase accordingly, especially if key resources become more accessible (Wernerfelt, 1984). If the company desires a certain partnership for entry, the RBV state that these are more likely to occur when all the parties need such key resources, or even when they all control valuable resources (Eisenhardt & Schoonhoven, 1996).

The Transactions Cost View

On the other hand, the TCV regards the entrant's involved costs in market entry processes to increase as the company's level of control over the entry arrangement increases. Thus, the higher the resource commitment and desired control over the entry mode, the higher costs will rise (Johnson & Tellis, 2008). In later decades, the TCV has been popularized through various works by Oliver E. Williamson (e.g. 1979; 1981; 1989), who essentially regarded companies' primary decisions to revolve around minimizing overall incurred costs. Research by Bjørgum (2016) argues that companies aligning with the TCV will favour control over flexibility, which comes opposite that of real options (RO) logic, itself being based on future investments through small initial investments. Bjørgum (2016) further identified that an entry strategy posited on a high level of control to be agile when facing sudden opportunities.

Regarding the five main entry modes, a selection amongst them should not necessarily be made solely according to the company's wanted resource commitment. For example, Holtbrügge and Baron (2013) argued that the choice of entry mode could be understood as choices of other company preferences, like wanted activity level, ownership mode, and whether direct foreign operations should be established or not. More trivial, may the choice of company activity level simply be distinguished between export and foreign production (Dikova & Van Witteloostuijn, 2007). Export is, contrary to direct foreign operations, often used as a means of introducing oneself to the foreign market and is often characterized by low profit earnings and lower control of arising- or sudden business opportunities in the foreign market (Johnson & Tellis, 2008).

A separation between JV and WOS is important. Amongst the two, WOS have the highest degree of hierarchy, as opposed to JV where ownership is shared between the entrant and the collaborating company in the host country (Johnson & Tellis, 2008). Nonetheless, the two entry modes give the entrant a choice between setting up operations through greenfield investments or direct acquisitions. The latter can be interpreted as brownfield investments, which occur when the company purchases an existing

[6] To exemplify *some*; game theory (e.g. Parkhe, 1993), social exchange theory (e.g. Blau, 1964; Axelrod, 1984), the business network perspective (e.g. Håkansson & Snehota, 1989), and the strategic behavior model (e.g. Porter, 1985; Hagerdoorn, 1993).

facility in a foreign market. By contrast, greenfield investments characterize the build-up of a company's own facilities in the foreign market. Such investments can further be understood as a means of internal development[7].

In general, acquisitions tend to be more expensive, take shorter time and come with higher risks than internal development. Bjørgum (2016) showed that both types can be understood as equity modes, being especially relevant for companies entering emerging industries focused on new technologies (e.g. Ahuja & Morris Lampert, 2001; Van de Vrande et al., 2009). According to Helfat and Lieberman (2002), acquisitions and internal development may be used by diversifying entrants. Researching 1500 entry processes, Lee and Lieberman (2010) later found companies to be more likely to enter foreign markets that relate to their home markets by using internal development and unrelated markets via acquisitions.

If considering a phase of technological development, as R&D, entrants tend to develop internally as opposed to the acquisition of foreign companies (Lee & Lieberman, 2010). Still, acquisitions can be useful to overcome entry barriers to emerging industries, especially those that are technology-intensive, as it gives the entrant swift chances of progressing in the technological race (Bjørgum, 2016). Alliances between companies, which vary greatly in structure, are also emphasized to be important for the technological development in an emerging industry to spark. Gustafsson et al. (2016) even indicated that larger established companies seem to lead coalitions *enhancing* innovations, whereas smaller diversifying entrants seem to lead coalitions focused on *disruptive* innovations.

4.2.2 Entry Timing

Throughout many seminal pieces on the drivers for success and pitfalls for failure when entering markets, Lieberman and Montgomery's "first-mover advantage" (1988), i.e. early entry vis-à-vis late entry, from 1988 has arguably set a trend. Since its publication, entry timing has been *the* entry factor under most considerations, at least according to an extensive literature review by Zachary et al. (2015)[8].

In defence of early entry, Johnson and Tellis (2008) identified four main reasons, which all may result in higher market shares for early entrants, and raise their survival- and success chances in comparison with later entrants (Park & Kang, 2010).

At first, early entry often implies better opportunities to grip key competitive resources within the market, such as distribution channels and suppliers (Johnson & Tellis, 2008). This is supported by Park and Kang (2010), who add resources as locations, employees, and customers. In general, Helfat and Lieberman (2002) stressed entrants to base their timing decisions on how their resources match those required by the aspired foreign market.

Second, the market-consumer-preference pattern may be set by early entrants (Johnson & Tellis, 2008). This is again supported by Park and Kang (2010). Rodríguez-Pinto and his colleagues (2008) even argued early entrants will come to have the opportunity to "define the [market, Ed.]", and shape customer preferences in their favour. Then, early entrants may arguably not only be able to grasp key resources better, but also grasp the better side of regulation and governmental incentives. It is reasoned that this

[7] Explained by synthesizing definitions from the Cambridge Dictionary (2023) and the Corporate Finance Institute (2023).

[8] Considering 105 published research articles (of which 91 were empirical and 14 were conceptual) between 1989 and 2013 on entry timing relationships within the fields of management and marketing from 15 top-tier journals.

holds especially true for emerging industries, as early entrants can become well-perceived by local governments, customers, and suppliers (Rodríguez-Pinto et al., 2008).

In an extension of that, the fourth and last point for early entry revolves around how entrants will have the benefit of learning from the emerging industry more efficiently. This implies early entrants being better positioned for adapting to market attributes and possibilities, at least for a longer period than later entrants (Johnson & Tellis, 2008). Holtbrügge and Baron (2013) support this by stating how early entrants will become better positioned to overcome possible hazards the longer their local presence is. The argumentation behind centres on early entrants being more prone to have accumulated market knowledge, maybe even what is not available to yet-entered companies.

If considering the entrants' capabilities, Zachary et al. (2015) highlighted how those companies occupied by R&D activities often favor early entry. Those occupied with manufacturing activities can be early *followers*, commented to may be more successful than the earliest *pioneers*. Regarding later entries, Zachary et al. (2015) emphasized that companies solely occupied with support activities will favour this. Still, Johnson and Tellis (2008) also identified three main general reasons why late entry should be pursued.

At first, earlier entrants may become more exposed to market shortcomings regarding regulation, customer base, supplier deliveries, and more (Johnson & Tellis, 2008). Thus, entrants may save costs and stress by waiting, which is supported by Rodríguez-Pinto et al. (2008) but who also emphasize that later entrants generally may be faced with higher costs. Still, they argue later entrants can capitalize on the positioning mistakes made by earlier entrants.

Further, it can be argued that companies should enter later when market development costs are high (Shen, 2014). In this way, later entrants may have the benefit of not losing on investments made by early entrants to not only *enter* the market but to some extent also *initiate* the market (Johnson & Tellis, 2008). To exemplify, later industrial entrants may not need to invest in areas such as dire infrastructure and local supply chains. Additionally, they may save costs by not having to invest in areas such as R&D and marketing, rather being able to leverage on the investments made by earlier entrants (Rodríguez-Pinto et al., 2008). In the extension of this argumentation, a third and final point in defence of later entrants may be how they simply can learn from the earlier entrant's errors (Johnson & Tellis, 2008).

Besides the distinction between early- and late entrants, the speed of entry should also be considered. According to Coeurderoy and Murray (2008) is the speed of entry inseparable from the selection or identification of a market. They argue that certain market conditions related to technology and industry motivate or discourage the acceleration of entry. For example, Zachary et al. (2015) emphasize how companies with talent for swift entry can wait longer to enter emerging industries without bearing large negative consequences.

4.2.3 Entry Barriers

Companies will encounter varying types of barriers when entering markets. These barriers, most often ascribed to the aspired foreign market, may differ in complexity, nature, and frequency, and may even arise from the entrant's home market. This thesis will emphasize host market barriers and those most in the institutional arena. These kinds of barriers institute the nature of a foreign market and require the entrant's activities to conform to both regulations and norms. These may differ a great extent from those

known in the company's home market (Holtbrügge & Baron, 2013), and can typically be summoned as regulatory/political, economic, or sociocultural (York & Lenox, 2014).

The host market's regulatory environment will inevitably influence the entrant (York & Lenox, 2014). Regulations may not only concern what types of products are legal or not, but how business operations must be conducted, which standards must be met, and maybe even demands of local fabrication/content[9]. The latter is often a point of interest for technology-intensive emerging industries. Thus, an entrant's network relations with regulators and official political bodies become increasingly important as the level of regulations, measured both by those currently in place and those in pipeline, increase (Markman, et al., 2019).

Economic barriers are especially emphasized by Johnson and Tellis (2008). They argue that such barriers may be characterized as the economic disparity between two countries. With this definition, entrants may find it easier to set up operations in host markets whose economic environment is closer to their home markets'. Such economic similarity appears to often imply similarity in other key areas influencing business activities, such as competition laws and especially consumer patterns (York & Lenox, 2014).

In its time, the Uppsala school identified sociocultural barriers as very relevant in entry processes to foreign markets (Chetty et al., 2015). As with economic barriers, Johnson and Tellis (2008) argue entrants may find it easier to set up operations in host markets whose sociocultural environment is closer to their home markets'. Discrepancies between home- and host markets in this area have been showed to increase the risk of entry failure (Dikova & Van Witteloostuijn, 2007).

4.2.4 Entry Networking

The presentations of entry modes, -timing, and -barriers imply how relations with other stakeholders along the value chains all become relevant for the entrant. An entry aspect incorporating all these relationships is entry networking, which Lee et al. (2012) defined as the entrants' internationalization process. The same authors argue a company's networking abilities will strongly influence the time used in entry processes. By their reasoning, will networking as interactions between MNCs and key actors in the host market return strong learning *of* and commitment *to* the host market, making entry decisions more attainable in both short- and long-time frames.

A theoretical rationale as "social capital" views a company's networking ability as an asset. By this understanding, companies are inclined to increase networking capabilities as a higher level of social capital can come with relevant or needed information of varying art that the companies may, for instance, utilize in entry investigations (Aspelund et al., 2009). Wang and Lestari (2013) also identified networking as an important company capability, further serving as a prerequisite for entry investigations. More specifically, the authors found good networking abilities at the company level to positively support marketing- and product development capabilities.

Entry networking becomes especially relevant when asking whether the entry processes were planned or unplanned. Even though no simple conclusion can be made, smaller sized companies, typically those of entrepreneurial art, seem to align their goals toward entering international markets through varying

[9] According to the OECD (n.d.), local content requirements are amongst the fastest growing barriers to foreign markets and international trade, at least amongst those prone to direct political rollout, essentially being varying financial policies aimed at supporting domestic products or services at the account of foreign competitors.

network encounters. Such a means-driven business approach is reasoned in several celebrated research pieces by S. D. Sarasvathy (2001). She named this approach "effectuation", which is a more dynamic way of doing business than its opposite, "causation". For example, effectuation strategies allow goals to emerge over time from various actor-network inspirations. A more thorough distinction between the two approaches on how they are used as entry concepts amongst companies follows in Table 3 which itself is based on Table 1 from Chetty et al. (2015).

Table 3: Distinctions between effectuation- and causation strategies (Chetty et al., 2015).

	Causation	*Effectuation*
Decision-making logic	Goal-driven focusing on outcomes.	Means driven focusing on resources.
Attitude towards the market	Company and market are separate.	Create the market through means driven approach.
Strategy	- Competitive. - Exploitation of pre-existing knowledge.	- Collaborative. - Exploitation of continencies.
Attitude towards unexpected events	- Plan and market research to have detailed competitor analysis. - Prediction of an uncertain future.	- Open to surprises and benefit from them. - Control of an uncertain future.
Context	Predictable because reduces risk.	Uncertainty creates opportunities.
Wanted outcomes	Maximize returns.	Affordable loss.
Unit of analysis	Company.	Entrepreneur-individual.

Effectuation leads to repeating loops of business development as varying company encounters may lead to new opportunities. Chetty with colleagues (2015) argued for the effectuation approach, as "internationalizing entrepreneurs need to be flexible and open to surprises to recognize and create opportunities that allow the company to evolve". Clear-cut separations between effectuation- and causation logics should not necessarily be made, as entrants may enter markets with effectuation approaches, by first having chosen their new host market by causation approaches. Traditionally, causation approaches are shown to be cherished by companies entering markets with a high degree of institutional uncertainty (Chetty et al., 2015).

5. Research Methodology

This chapter explains and justifies the thesis' modus operandi, i.e. the research methodology. Essentially, the research process was split into four distinct steps. At first, a research design was strategized. Collection of empirical data from Norwegian OW developers and the Italian OW market followed in the second step. This data was then analysed in the third step. At last, the thesis sat out a discussion between main data findings and research theory on market entry to international emerging industries, driving a conclusion. Figure 6 illustrates how the four steps together returned the thesis' research process. This chapter explains and reasons the first three steps by looking to relevant academic literature on the nature of research management. The chapter ends with a short reflection on the quality of the chosen methodology. A separate reflection on the fourth and last step is given attention in its own specified Chapter 8, being in essence an overall reflection on the thesis' research results.

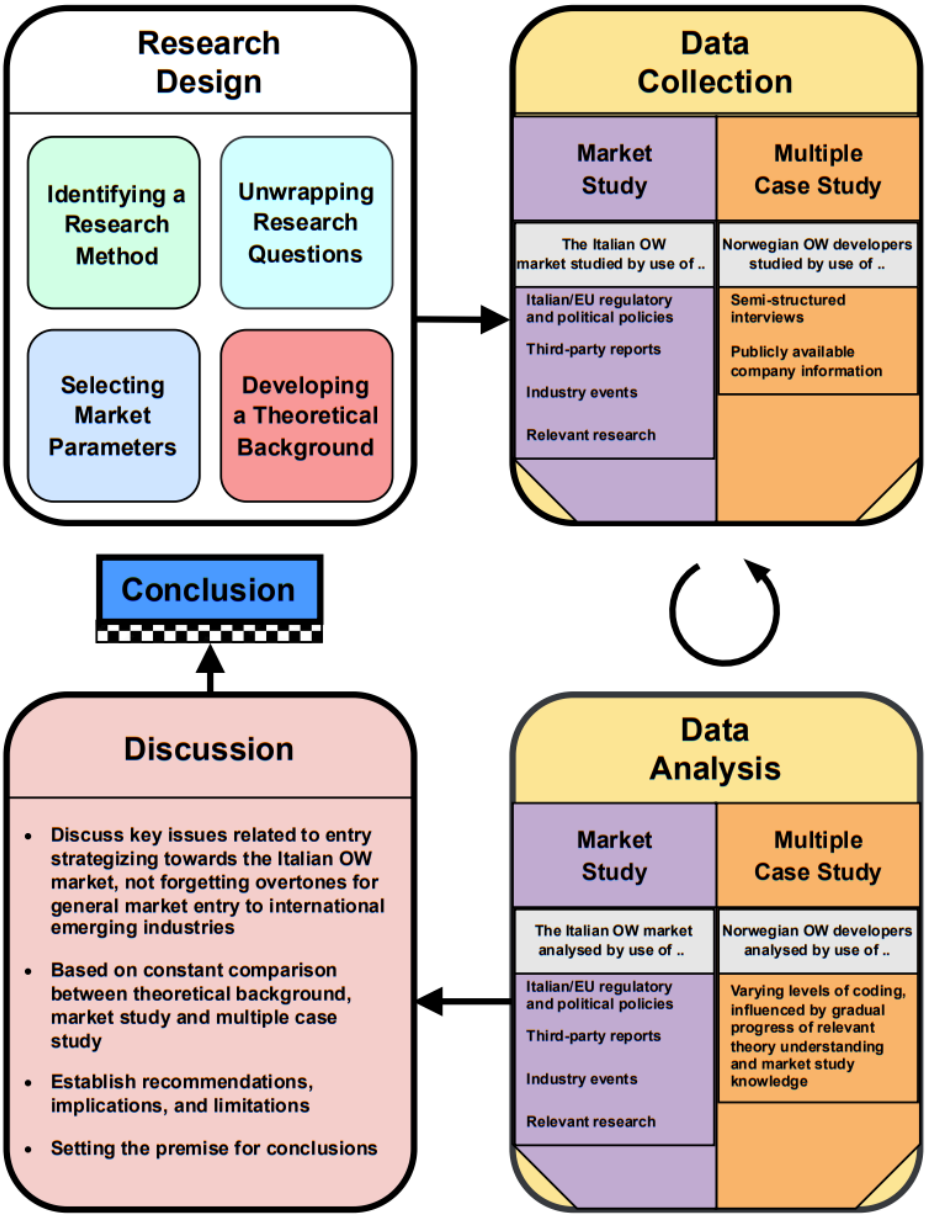

Figure 6: Research process (own creation).

5.1 Research Design

The thesis' thematic origin was in the fields of strategy and international business development. Hunting for a more specific topic, the thesis found most interest in industrial companies' market entry strategies to emerging industries with both international appeal and traits of technology-intensity.

To give the research design a thematic direction, a problem statement was deemed reasonable and necessary. Early on, the thesis understood no generalization on market entry procedures could be identified, given its limitations and focus on emerging processes. Studying entry to such industries, especially contemporary, are yet to be known by success stories as more maturement must first be reached. Still, the thesis favoured at least *directing* the problem statement towards successful entry, as to not institute the statement in a vacuum. As such, the thesis also saw the need to study a specific market *product*, *-entrants,* and *-context* (regarded as the "market parameters") to reduce its scope to a study that could be accommodated and serve as relevant for other entry settings. Thus, the problem statement was raised as indicated in Chapter 2, with the cursive text signalling the market parameters.

Considering the traditional choice between qualitative- and quantitative investigations (Bryman, 2016), the problem statement quickly directed the research design towards a qualitative nature. As will be now shown, included this unwrapping of research questions, selection of market parameters, and lastly development of a theoretical background.

5.1.1 Identifying a Research Method

At its core, the thesis aimed to research contemporary market entry strategies within industrial companies. Taking companies' perspectives, the thesis also wanted to generate theory of strategic art. A qualitative research method looking into specific companies, these being the entrants, would allow direct encounters with such perspectives. This implied a case study, fundamentally understood as a research strategy that focuses on understanding contemporary dynamics within a setting (Eisenhardt, 1989). As the thesis wanted to investigate more than one company, a multiple case study was chosen. Such a method provides a strong basis for generating theory (Yin, 2018). To give deeper meaning to the company data, a second study investigating some specific market product and -context, together, was desired. En masse, the research method used was empirical and qualitative, split between gathering company- and market data. Per the problem statement, the companies needed to be industrial, and the market needed to be foreign and oriented towards a technology-intensive emerging industry.

Bryman (2016) has pointed out how qualitative research is more inductive than deductive; the latter being normally followed by quantitative research. With the goal of gathering company perspectives, using a quantitative method would arguably not serve as the best method. Yin (2018) also took the qualitative side when researching smaller datasets with a wide set of varying variables, something that matched the thesis' scope and problem statement well.

In seminal research articles led by Stanford professor Kathleen M. Eisenhardt (1989; 2007), theory generation from case studies is explained, reasoned, and defended. In Eisenhardt's research, she argued multiple cases enable clarification on whether a data finding is unique or consistently replicated. Thus, the "replication logic" becomes central, which is understood as treating each case company as its own specimen for examination before analysing them separately and finally together. The examinations can be done by varying means, such as archives, surveys, and observations. Eisenhardt (1989; 2007) argued

that interviews with company representatives often become the primary data source. As such, the thesis ambitioned its multiple case study to gather data through semi-structured interviews and follow the replication logic.

More specific, the research method sat out to follow principles laid down in grounded theory[10]. In essence, grounded theory is an inductive research principle where theory generation can occur after data has been collected, in opposition to traditional testing of deductive hypotheses mostly seen in research from the natural sciences (Bryman, 2016; Chun Tie et al., 2019). In grounded theory, theory generation and data collection occur recursively in parallel, meaning as data is collected, coded, and analysed, new theoretical findings may leap forward, which again may elevate the need for new data to be collected, coded, and analysed, and so on in similar loops (Chun Tie et al., 2019). In all, following this theory was deemed fitting to the thesis' problem statement.

Even more specifically, the constructivist branch within grounded theory was used[11]. Without going into too much historical detail, this branch is amongst the newer within grounded theory, claiming research findings and theory generation to be constructed *with*, rather than acquired *from*, the setting under assessment (Chun Tie et al., 2019). This implied how the two empirical studies and the theoretical background should be gradually considered against each other, thus a circular research progress was emphasized in Figures 1 and 6.

5.1.2 Unwrapping Research Questions

Having identified a research method following constructivist principles, the stage was set for unwrapping the thesis' research questions. Here, such questions were understood as issues with yet-to-reach answers, all ought to be related to the problem statement. As highlighted in the statement, did the thesis sat out to investigate a certain market *product, -entrants,* and *-context*. Consequently, it was deemed necessary for the research questions to hold the same market parameters. The final research questions were formulated as stated in Chapter 2, at first without having selected the specific market parameters, implying that they were first unwrapped in generic form like the problem statement. It should be further noted that the questions were slightly altered as the empirical analyses progressed in accordance with academic supervision.

5.1.3 Selecting Market Parameters

According to grounded theory, may researchers select data sources purposively by how probable their contribution to the research questions can be (Chun Tie et al., 2019). Thus, the coming sections individually explain how the market *product, -entrants,* and *-context* were identified. It should be noted that before the research process was set in motion, the researcher had conducted a preparatory literature review on the topic of international market entry to the emerging FOW industry, not having specified a context. This study was again foreshadowed when the researcher worked on the same topic during an earlier traineeship in Italy. As such, an extensive study into possible market parameters was not done.

[10] First presented in detail by Barney Glaser and Anselm Strauss (1967/68), where they challenged the 60s allegedly critique of qualitative research's missing ability to generate theory.

[11] In literature on research management, the defence of the constructivist branch seems mostly associated with Charmaz (2006).

Even so, the final selected market parameters should not be discredited, as other varying parameters were in fact debated and evaluated, as will be shown. It was at this early stage that the selection criteria were made. Consequently, all the criteria were developed without having fully identified the research method and -principles laid down by grounded theory. Neither of these points means the early criteria should be overlooked, as they were made by considering the topic of market entry to international emerging industries, which had already been desired.

Please note that the thesis will not justify its selection of market parameters using thorough empirical argumentation. Rather, the justifications will look to the set and presented selection criteria, different for all parameters. Additionally, the following order of the three market parameters represents the order by which they were identified.

Market Product: Offshore Wind Installations

At first, a clear physical product manufactured through industrial production was aspired. Additionally, the thesis wanted to identify an industrial product not commonly made to stock, rather being more specialized with longer lead times[12], advanced production processes, and high costs. Such distinctions were desired as specialized products often force specific engineering services to get involved from early phases, thus fitting more with the thesis' base in industrial engineering. Without going into too much detail, the thesis wanted to identify an industrial product aligning with ETO-principles. For an overview, a more detailed guide of the main facets of ETO-production can be found in Appendix A3.

The demand of an emerging industry did not directly force the market product to have the same characteristic. Nonetheless, identifying what would then be a mature product in a yet-to-mature market was deemed unnecessary as the market product further needed to be technology-intensive, per the problem statement. Consequently, the market product should have strong growth outlooks compared to the status quo. These estimates were envisaged to primarily concern the number of produced units.

At last, the market product needed to have an international appeal. This could be understood as product development demanding international co-operation, both in management and production, or by favourable estimates for international export.

In all, the selection criteria for the market product were summarized as stated below.

- The market product must,
    - be physical and align with ETO-manufacturing principles.
    - be characterized as both emerging and technology-intensive.
    - have strong outlooks for the number of produced units.
    - have an international appeal in terms of management, production, and/or sales.

In all, four market products were considered, these being OW installations, modern battery technology, carbon capture and storage technology (CCS), and contained hydrogen from renewable industrial production. The latter two were first eliminated, as they were both deemed to have a stronger focus on process rather than product. Between OW installations and batteries, they were both found to match all the criteria. In the end, OW installations were selected as it was understood to follow ETO-principles

[12] According to the Cambridge Dictionary (2023), "the time between the design of a product and its production, or between ordering a product and receiving it".

more closely, see higher degrees of corresponding international activities and currently be ambitioned on several political agendas across varying markets. These assessments were all done superficially by online searches and informal consultations with relevant stakeholders.

Market Entrants: Norwegian Offshore Wind Developers

Having the world as stage, the thesis quickly wanted to narrow its company focus to Norway. Companies with clear representation in Norway in terms of offices, employees, owners, or placement on the Oslo Stock Exchange (OSE) were all imagined. Demanding market entrants having sole Norwegian majority ownership by controlling above 50% of the company's stocks or assets was overlooked. This point did not cast away focus on Norwegian ownership but rather disregarded the need for thorough financial investigations into stock distributions.

Further, the companies needed to be industrial, in line with the problem statement. Having selected OW installations, varying industrial companies could be identified as the formation of OW installations demand vast industrial contributions. The thesis wanted to narrow its focus to industrial developers, either active or soon-to-be, of OW installations, as these kinds of companies arguably will become *the* drivers for the formation of OW parks. Industrial developers were simply intended as companies that engage in industrial processes, either through manufacturing or management of manufacturing processes. Developers solely involved in support activities, like e.g. steel manufacturing, were avoided as these companies arguably do not face the same competition nor market as direct OW developers.

Lastly, entrants with active or passed interest in the market context were permitted, as investigating why some companies may have shifted their focus from the market context could still serve the problem statement, possibly even more.

In all, the selection criteria for the market entrants were summarized as stated below.

- The market entrants must,
    - have a clear link with the Norwegian market in terms of stock placement, ownership, leaders, employees, and/or offices.
    - be directly involved in the industrial development of OW installations, or plan to be.
    - have shown interest in the specific market context, either through wishes to enter *or* not enter.

Combining the criteria, the thesis needed to identify Norwegian OW developers with current or past interests in a specific market context. The process for how these case companies were identified is given attention in the next subchapter, while a presentation and analysis of the companies and their strategic perspectives follow in Chapter 7.

Market Context: The Italian Offshore Wind Market

Selecting the market context meant choosing a specific country or region where the market product could come into practise or be sold to. A European market was envisioned, as the researcher had little experience working with other markets. Having selected Norwegian entrants, limiting the pool of possible markets to European also suggested data could be easier gathered, as the E.U. is Norway's leading trade partner (SSB, 2023). The thesis further chose to exempt Nordic- and purely anglophone markets, as to engage with somewhat harder contexts in terms of language and cultural distance.

Further, the problem statement sat the last selection criteria for the market context to be characterized as emerging. This meant all highly-, medium- and lowly industrialised markets could be chosen, here not having any link with the phrasing "emerging", as long as the market product was emerging in the relevant market.

In all, the selection criteria for the market context were summarized as stated below.

- The market context must,
    - be a country or region in Europe outside the Nordics, the U.K., and Ireland.
    - be emerging concerning the choice of market product, and not necessarily emerging concerning the country's or region's current state in terms of broad economic- and industrial development.

Only one market context was in essence considered - the Italian. This market leaped forward for varying reasons. Most importantly, the market was understood to be highly emerging for OW development. The researcher also had a strong link with Italy, having both conducted a university exchange and a traineeship in the country, thus having relevant knowledge of the language and business culture, as well as knowing some relevant stakeholders with key insights and wishes to assist in the research.

Final Problem Statement and Research Questions

Having selected the three necessary market parameters, the thesis' problem statement and research questions all took their final form, as presented in Chapter 2.

5.1.4 Developing a Theoretical Background

The last measure in the thesis' research design was the development of a theoretical background. Regardless of the chosen market parameters, the theoretical background was always prefigured to consider research on international market entry to emerging industries in general. As stated, was a preparatory literature review conducted, investigating the same thematic by considering state-of-the-art research. Because of its limitations and a stronger focus on empirical analysis, the thesis did not have the resources nor time to conduct an updated version of this literature review, something that could be considered the most thorough. Nonetheless, this thesis' theoretical background makes use of key findings from this previous literature review, as well as gathering some extra and other research articles.

5.2 Data Collection

The Market Study

The chosen market parameters laid the direct path for the empirical market study, specifically on the Italian OW market. Several different sources were envisioned for gathering key information and outlooks on this market; stakeholder reports, Italian governmental policies and -plans, signed climate rulings through the E.U., industry news, with more. Additionally, a handful of meetings in both Norway and Italy in the régi of various stakeholders were attended, revealing some of the latest roaring industry trends and -outlooks. Table 4 list these attended meetings in chronological order, while Table 5 list the

main investigated Italian governmental policies, and Table 6 list the main third-party reports used. It should be emphasized that besides the three listed events in Table 4, informal meetings with representatives from i) Innovation Norway's local office in Milan, Italy, and ii) the Royal Norwegian Embassy in Rome, Italy, were held at regular intervals, assisting the thesis to understand more of the Italian OW market.

Table 4: Attended conferences and events for market study (own creation).

Name of meeting	**Time and location**	**Details**	**Reference**
The Italian Offshore Wind Market	14th February 2023. Oslo, Norway.	Workshop organized by the Norwegian Offshore Wind cluster. Presentations from • The Royal Norwegian Embassy in Rome • The Italian Embassy in Oslo • Watson Farley & Williams • Aker Solutions • Mainstream Renewable Power • Innovation Norway	(NOW, 2023a)
K.EY (KeyEnergy) 2023	March 22nd - 24th 2023. Rimini, Italy.	Yearly occurring conference, known in Italy as the most important related to the energy sector. Besides showcasing technology and services from domestic and international companies, Italian political institutions are represented. Team Norway hosted a small pavilion with some Norwegian companies, led by Innovation Norway.	(K.EY, 2023)
Visit Now: Italy	April 11th - 13th 2023. Rome/Bari/Taranto, Italy.	Study trip organized by the Norwegian Offshore Wind cluster, with support from Innovation Norway and The Royal Norwegian Embassy in Rome. The visit included meetings with a vast amount of companies and stakeholders, primarily Italian.	(NOW, 2023b)

Table 5: Main policies by Italian officials used for market study (own creation).

Name of policy	**Publication date / Language / Nr. of pages**	**Reference**
Piano Nazionale di Ripresa e Resilienza (PNRR)	April 2021 / Italian / 273	(PNRR, 2021)
Piano Nazionale Integrato per l'Energia e il Clima (PNIEC)	December 2019 / Italian / 294	(PNIEC, 2019)

Table 6: Main third-party reports used for market study (own creation).

Name of report	Source	Publication date / Language / Nr. of pages	Reference
Floating Offshore Wind – A Global Opportunity	GWEC	March 2022 / English / 64	(GWEC, 2022)
Wind Energy in Europe – 2022 Statistics and the Outlook for 2023-2027	Wind Europe	February 2023 / English / 58	(Wind Europe, 2023)
Tracking the Impacts of Innovation – Offshore Wind as a Case Study	IRENA	June 2021 / English / 56	(IRENA, 2021)
World Energy Transitions: Outlook 2022 - 1.5°C Pathway	IRENA	March 2022 / English / 352	(IRENA, 2022a)
Renewable Power Generation Costs in 2021	IRENA	July 2022 / English / 204	(IRENA, 2022b)
Renewables 2022: Analysis and Forecast to 2027	IEA	December 2022 / English / 159	(IEA, 2022)
Offshore Wind Outlook 2019	IEA	November 2019 / English / 98	(IEA, 2019)
Global Wind Report 2023	GWEC	March 2023 / English / 120	(GWEC, 2023)
Italy 2023: Energy Policy Review	IEA	May 2023 / English / 186	(IEA, 2023)

The Multiple Case Study

Before the semi-structured interviews with Norwegian OW developers, an interview guide was deemed reasonable and necessary. The guide was based on some main topics found from the previous literature review relevant for strategic market entry to international emerging industries. Developing the guide could therefore take many approaches, leading the thesis to set some mild conditions, stated as:

- The questions should,
    - aim for answers beyond “yes” and “no”.
    - be formulated in manners that prioritize presentation of current activity above perspectives about the future or stories about the past.
    - be formulated in manners that promote detailed explanations.
    - be easy to update as new company perspectives arise with the progress of conducted interviews.
    - not concern detailed company information nor experience which may be easily gathered from publicly available sources.

Considering these conditions, the thesis made an early, yet thorough, draft. The draft was knowingly made too long, as it was to be reviewed both by the researcher and an academic supervisor. As more theoretical and empirical understanding progressed, a second round of conditions for the guide was made, listed below, not cancelling the already stated conditions.

- The questions should,
    - address the most important topics first.

- be able to adapt to the specific company's situation, by beforehand having conducted short informal investigations into the company's main history, details, and self-stated outlooks for growth.
- have concise and easy language.
- give the company representative(s) room for explaining their reasonings and outlooks by examples.
- always aim to answer the research questions.

Having reviewed the first round of questions and supplemented them with the second round of criteria, the final interview guide was formulated as stated in Appendix A2. The questions are listed by numbers but were by no means, besides the first and last, asked in that order, nor were all asked to all companies.

Having the interview guide at hand, arranging interviews with case companies could begin. The specific case companies were found in varying ways, mostly by first meeting them in person at various events, mostly during the ones listed in Table 4. Initiating contact with the companies, a list of preferred companies was made, also having some listed as backup companies. In all, seven case companies accepted invitations to interviews, none being backups. Correspondence was won with four other companies, but who in the end, unfortunately, did not respond to interview invitations. Two extra interviews from i) an eight company and ii) a representative from one of the seven case companies were conducted, but abandoned for use as, unfortunately, the company representative's answers contained too little detail and quality.

Table 7 lists the seven companies chronologically by interview date. More information, as type of interview, i.e. digital or physical, interview language, i.e. English, Norwegian or Italian, and more detailed descriptions of company representatives' roles, have all been avoided due to a common wish amongst most case companies to have anonymity preserved. OW, and especially FOW, is currently characterized by many patent applications at various stages of development and approval across various bodies, in Norway and beyond (NOW, 2023a). Thus, company representatives were not only incentivized from having their full information made available because of regulations but also for direct competitive reasons.

It should be mentioned that this point arguably made identifying, interacting, and arranging interviews more challenging than anticipated. Writing the thesis during a semester of intense development for the OW industry in Norway and abroad, with different conferences across the globe, made the ambitioned 1-hour interviews not feasible for some case companies, instead suggesting 30 minutes. Thus, the thesis changed its overall approach to request 30-minute interviews to match the case companies' wishes.

Table 7: Overview of conducted interviews for multiple case study (own creation).

Name of company	**Role of interviewed company representative**	**Date**	**Duration**
A	Top Management	30th of March, 2023	1 hour
B	Technical Manager	31st of March, 2023	30 minutes
C	Business Developer	31st of March, 2023	35 minutes
D	Business Developer	21st of April, 2023	35 minutes
E	Business Developer	24th of April, 2023	35 minutes
F	Business Developer	28th of April, 2023	45 minutes
G	Business Developer	28th of April, 2023	30 minutes

5.3 Data Analysis

The Market Study

Having gathered varying information and insights on the Italian OW market, the thesis needed to narrow the gathered data into a manageable number of key topics. At this point, certain disclaimers needed to be underlined, as much of the information concerned topics too far off the thesis' thematic base. As this information was, is, and continues to be relevant for market entry investigations to Italy, it is put forward as empirical disclaimers in Appendix A1. Besides narrowing the data, no specific analytical approach was used for the market study, thus Figure 6 states analysis to be done by the same means as it was collected. It should be noted that general OW positions and -outlooks were included, as it was deemed as a prerequisite to present data on the Italian market context and pursuing discussion.

The Multiple Case Study

Before analysing qualitative company data from the market entrants, the semi-structured interviews needed to be conducted and handled. By this handling, is meant the simultaneous recording and full transcription of the interviews. Then, coding was used to categorize the data. It should be noted that the interviews could first be arranged after empirical understanding of the Italian OW market reached a certain level, meaning that the events listed in Table 4 were as important for the multiple case study as the market study.

According to Chun Tie et al. (2019), coding should be interpreted as an analytical process where the researcher categorizes the data under short labels. Often, the labels follow a thematic nature, in line with that of the research. Thus, coding involves the re-arrangement of company data from question answers to, for this thesis, strategy elements in entry procedures. Such coding would give the thesis better changes to detect a pattern across collected company data, and finally generate theory when considered vis-à-vis known theory and other empirical findings, as the market study (Saldaña, 2015)

If again considering Chun Tie et al. (2019), their work being a literature summary on research management following grounded theory, coding may be split into three different parts, these being initial-, focused-, and theoretical coding. Really, these parts shadow what can be stated as levels, resembling the Gioia method (e.g. Corley & Gioia, 2004; Gioia et al., 2013). At first, initial coding may result in numerous specific labels. The data can then be narrowed under focused coding, where some labels can be subsumed beneath others. Theoretical coding involves a further reduction of labels, now into some main concepts, often being quite abstract.

The thesis ambitioned coding by three levels but, as initial coding began, understood two levels would be enough. The verdict arose when the depth of data and the number of case companies were considered against the research questions. What then came to be the first of two levels of coding followed a guideline attributed to Charmaz (2006), with keeping labels in terms of phrasing, "as similar to the data as possible". This first level returned just over 20 labels, listed below in Table 8, some being directly attributable to the Italian OW market. In the end, three abstract labels regarding entry strategizing were identified (regarded as the "entry issues"). The entry issues further corresponded well to the three research questions presented in Chapter 2, as also shown in Table 8.

Table 8: Coded levels from the multiple case study's data findings (own creation).

Resulting labels from first level of coding	- Ambitioned competitive advantage. - Current competitive advantage. - Ambitioned value proposition. - Current value proposition. - General market ambitions. - Italian market ambitions. - Anticipated entry timing. - General future considerations. - Local foreign support. - Learning the Italian OW market to know. - Company representative role and experience. - Push- (as opposed to pull-) dynamics.	- Importance of partnerships. - Networking statements. - Successful entry, what is this? - Corporate structure. - Company structure. - Company resources.	- Handling uncertainty. - Unforeseen challenges. - The Italian regulatory framework. - Other various perceived Italian market barriers. - Pull- (as opposed to push-) dynamics.
Resulting labels from second level of coding	Entry Investigations	Entry Modes	Entry Barriers
Relevant research question	I)	II)	III)

As stated in Figure 6, did the coding occur under the simultaneous progress of relevant theoretical understanding of market entry procedures to international emerging industries, *and* market study insights on the Italian OW market. This was done so the coding could have the clearest direction toward the problem statement, at least all the time company answers diverged off topic. This is in line with grounded theory, which requires the research to maintain a balance between identifying labels from collected data and data yet to be generated (Chun Tie et al., 2019). The technique can also be condensed to the cross-case analysis proposed by Yin (2018). Eisenhardt (1989) further stated that such a technique arguably increases the probability of theory generation from more precise and reliable data, as well as increasing the chance of unique findings to leap forward, that could otherwise be concealed.

5.4 Quality of Research

Having navigated through the research process, some short reflections about the method's quality should be included. This is done in the coming subchapters, using the qualitative indicators of credibility, transferability, confirmability, and dependability, as proposed by Krefting (1991), added by the inclusion of transparency.

5.4.1 Credibility

Credibility can be interpreted as believability, meaning to what degree the research can be trusted. This means, for instance, that findings can be recognized by stakeholders operating in the same or relevant industry. Credibility can be argued to be the most important quality indicator when evaluating qualitative research (Krefting, 1991). The thesis' research method took various steps to strengthen this quality mark. As the research was managed alone, sharing of drafts, data, and interpretations with industry collaborators and an academic supervisor was done at regular intervals, envisioning the concept of triangulation or peer examination (e.g. Breitmayer et al., 1993). This concept allows multiple perspectives from other viewpoints than the researcher's alone to have a say in the collection and analysis of data, but also on other parts as theoretical understanding (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). For data collection, the researcher met with company representatives and industry stakeholders in person at varying events, at these instances introducing the problem statement and getting to know relevant players, as well as learning the industry to know. For the market study, such encounters were deemed necessary to gather correct and relevant information. For the multiple case study, it was important to get what Lincoln and Guba (1985) stated as "prolonged engagement" with company representatives before arranging interviews, possibly making them more comfortable to share the truest insights and even accept interview requests.

5.4.2 Transferability

Transferability is how research findings can be transferred to other settings. Thus, in other words, how general the findings may be interpreted with time (Lincoln & Guba, 1985; Krefting, 1991), resembling the notion of external validity by Yin (2018). Traditionally, this has been challenging for qualitative research (Sandelowski, 1986). To counter this, the thesis aimed at using an industry context and entry setting that could serve other markets. For instance, the selected market parameters required selection criteria. According to Krefting (1991), may the transferability of a study increase by having such criteria stated, also supported by a detailed presentation of the studied context. For this thesis, the latter point would be the market study, which also attached some empirical disclaimers for securing both credibility and transferability. Then, Lincoln and Guba (1985) argue that other researchers can evaluate the findings' possible contribution towards, an unlikely, generalization better.

5.4.3 Confirmability

Confirmability is concerned with the research's neutrality, thus how objective and free from researcher bias it can be (Lincoln & Guba, 1985; Sandelowski, 1986). Researcher bias might arise from varying reasons and is by many accords hard to fully renounce, especially in qualitative research (Bryman, 2016). As such, the research process should arguably contain elements in place to handle arising biases. In the thesis' defence, the use of an external academic supervisor and frequent meetings with collaboration partners often re-directed the research process, keeping research bias in check. Even though criteria were used upon the selection of market parameters, the researcher's interest in the chosen market context was foreshadowed early. Still, the research aimed at being just as sceptical as enthusiastic about opportunities in the Italian OW market during the multiple case study, but also when conducting

the market study. After all, the problem statement ambitioned successful entry, which might entail advice for entry procedures to halt altogether.

5.4.4 Dependability

Dependability should be understood as consistency or stability, and to what degree findings may be reproduced in other studies (Krefting, 1991; Sandelowski, 1986). For this thesis, dependability must be measured on the collection and analysis of empirical data. The research process focused on explaining these parts in detail, making replication possible. This aligns well with the reliability proposed by Yin (2018), recommending having proper documentation of research procedures in order. Still, it should be emphasized that the nature of qualitative studies, especially on an emerging market and contemporary strategic procedures within companies, arguably change with time. Also, as emphasized in the market study and further stated in appendix A1, are varying facets with the Italian OW market set to soon take new directions, making absolute replication unlikely.

5.4.5 Transparency

Last, a research's level of transparency should be emphasized. The term can be understood as how much researchers make their data, analysis, and methods visible for readers, or in other words; publicly available. Modern standards argue these parts to be FAIR, i.e. findable, accessible, interoperable, and reusable (Moravcsik, 2019). The thesis has aimed at meeting these demands by delivering a thorough research methodology. Absolute data transparency is not accommodated, as the final recorded interviews nor their transcriptions follow the thesis' publication. Still, the multiple case analysis explains and shows varying statements by the case companies, ensuring relevant data transparency.

PART 3: ANALYSIS

6. Market Study: The Offshore Wind Market in Italy and Beyond

In this chapter, the thesis aims to recognize some key barriers *with* and required practises to operate *in* the Italian OW market. To do so, varying facets related to OW in Italy and beyond will need to be elaborated and contextualized, as the Italian market does not exist in a vacuum vis-à-vis the current strong global development of OW, at least measured by wide stakeholder ambitions. Thus, general positions and outlooks for OW globally will inaugurate the chapter before more specific facets related to OW in Italy come alive.

6.1 The Global Offshore Wind Industry

6.1.1 Current Positions

The GWEC (2023) states the total global OW capacity to be 64.3 GW, where 8.8 GW of new installations were recorded in 2022[13]. Since 3 GW of total global OW in operation in 2010, the industry has grown more than tenfold until today, with the global market growing around 30% year-on-year, benefitting from rapid technology improvements (IRENA, 2021; IRENA, 2022b; IEA, 2019). Considering Europe alone, the total OW capacity has reached around 30 GW, where almost 50% is reported to lie in British waters. In the meantime, China has taken a leading position, with domestic installations accounting for 82% of global OW additions in 2021 (IRENA, 2022b).

During the last 10 years, OW has grown rapidly and by varying means. The industry has, for instance, seen significant cost reductions[14], technology advancements[15], and corresponding supply chain breakthroughs (IRENA, 2021). At large, OW is today a multi-billion-dollar business, where projects and supply chains span engineering activities as construction and installation, operation and maintenance, and decommissioning activities (IEA, 2019). In a report by the GWEC (2023), they state OW to have been commercial for at least 15 years. Thus, the report argues related costs will slow down and fluctuate according to underlying commodity-, logistics-, and capital costs in the years to come. Additionally, some challenges seem to persist for OW development, as lack of grid connections, suitable areas, and supporting infrastructure, as well as unpredictable weather conditions, public opposition, outdated regulatory frameworks, shortages of skilled labour, and effects on marine life and -business (IRENA, 2022a).

On average, OW projects have taken up to nine years from early development to full commissioning. Generally, once permitted, largescale OW projects can be constructed very quickly (GWEC, 2023). Compared to onshore wind power, it should be emphasized that costs, lead times, obtaining permits and environmental consents all involve higher complexity for OW. On the other hand, OW may benefit from

[13] Measured to be 58% lower than new installations in 2021, itself being 21 GW according to IRENA (2022b), reported to mainly come from strong Chinese OW policies to normalize (GWEC, 2023).

[14] If considering the global weighted average LCOE, OW costs declined by 60% between 2010 and 2021, from $0.188 pr. kWh to $0.075 pr. kWh. In 2021 alone, there was a 13% reduction year-on-year. In Europe, the weighted average LCOE of newly commissioned OW projects fell almost 30% between 2020 and 2021, from $0.092 pr. kWh to $0.065 pr. kWh (IRENA, 2022b).

[15] For instance, scientific publications related to R&D on OW technology surpassed 12.300 from 2010 to 2019, where Norwegian researchers seem to have been among the leaders (IRENA, 2021).

economies of scale, possibly to a larger degree, which means that some of these expenses are not significantly greater than those for onshore wind (IRENA, 2022b).

OW is often reported to have become a mature industry, though the FOW branch is still emerging in early phases. As 80% of the world's OW potential lies in waters measuring depths below 60 meters, the wish to establish FOW at large has come under heavy discussion in recent years (GWEC, 2022). According to Esgian, a Norwegian data analytics company, above 120 patent applications for commercial FOW technology is currently under development (NOW, 2023b). Smaller floating technologies have been tested in pilot projects[16], which are yet to reach full industrialization, meaning FOW as an industry has arguably entered a pre-commercial phase (GWEC, 2022). FOW has grasped most attention in Europe, where most markets seem to prioritise areas less than 15 km from the coast, albeit with a very wide spread of water depths (IRENA, 2022b).

6.1.2 Projected Outlooks

Less than five years ago, OW wind provided only 0.3% of the world's total electricity supply (IEA, 2019). In the time coming forward, wind power is anticipated to take over as one of the largest sources, potentially providing 24% of the world's total electricity supply come 2030 (IRENA, 2022a). Looking at installed capacities, the total global OW capacity may surpass 35 GW by 2027 (GWEC, 2023). Such estimates rely on reaching political agendas for especially full-scale launch of FOW in Europa. If considering the goal of keeping the rise in the mean global temperature below 1.5°C as set by the famous Paris Climate Agreement from 2015, total global OW capacity will need to grow over ten times that of today by 2030, which will require yearly additions of around 35 GW (IRENA, 2022a).

In 2023, BloombergNEF (2022) estimated OW investments to reach new records. Still, no final investment decision was made regarding large-scale OW farms in 2022, generally caused by high inflation and regulators failing to ease various permitting bottlenecks (Wind Europe, 2023). Until 2027, long lead times and grid connection difficulties are stressed as persisting barriers, hindering the industry's accelerated growth (IEA, 2022).

In a report by the IEA (2019), they state how the LCOE for OW in general is projected to decline by nearly 60% come 2040. Additionally, they found that the direct cost to build an OW project at 1 GW capacity was over $4 billion in 2018, which is argued to decrease by more than 40% by 2030. This includes transmission costs, which are set to increase their part in the equation from around 25% to around 50%. Other cost components, such as turbines, are foreshadowed to decline by close to 60%. Nonetheless, the future for OW will need continued policy support from regulators and private investors to accelerate industrial development and the corresponding growth in value chains. Interesting, around 40% of the costs enduring from early development to physical installation are argued to have large synergies with the offshore petroleum sector, thus becoming especially relevant for the development of FOW (GWEC, 2023).

In a designated report for global FOW opportunities, the GWEC (2022) expect annual FOW installations to surpass 1 GW a year from 2026. From this point on, it is expected that project size will grow and costs decrease, putting FOW in a commercial phase. This phase is argued to be led by projects in Scotland, South Korea, and Japan. Full commercialization is argued to correspond with the launch of

[16] Some of the first FOW MW-plants being developed by Norwegian side Equinor through Hywind Scotland and other projects (Wind Europe, 2017).

the first multi-GW project, most probably coming close to 2030. Until that point, the FOW industry is anticipated to increasingly consolidate as more patents have enough opportunity to compete. Even though company competition in essence will drive the industry from a technological viewpoint, it is argued OW companies should find partners of various art along the value chains to be able to take part in the first cluster of commercial OW projects, holding primarily in Europe. If not, it is argued companies should be certain they can produce substantial innovation and cost savings for a second phase, where competition may be harder (GWEC, 2022).

6.2 Italy at a Glance

If considering only the energy sector, Italy generates about 11% of the E.U.'s total greenhouse gas emissions. Since 2005, Italy has managed to reduce these emissions at a faster pace than the average EU-Member State (European Parliament, 2021). Compared to the rest of the E.U., Italian households and -industry have amongst the highest electricity prices[17], even higher than most EU-trade partners (IEA, 2023). Conversely, gas prices are more aligned with both EU- and OECD averages, as Italy traditionally has been one of Europe's largest importers of natural gas (European Commission, 2017). In fact, natural gas covered around half of Italy's total electricity generation in 2021, of which 23% was imported from Russia (IEA, 2023). Figure 7 shows how Italy's electricity generation has remained stable since 2005, with the energy mix slowly abandoning coal and oil in favour of gas and various renewables[18]. In 2021, Italy had the second highest dependency on Russian gas amongst EU-Member States but is now fully committed to phasing out this dependency by 2025 (NOW, 2023a).

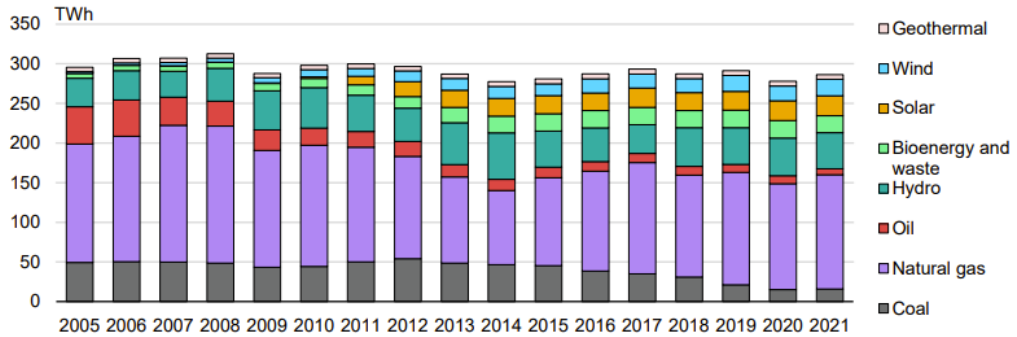

Figure 7: Electricity generation by source in Italy, 2005-2021 *(IEA, 2023)*.

According to Italy's national wind association, ANEV[19], and the country's largest power company, ENEL, Italy lies in the European top in terms of overall installed wind power capacity (K.EY, 2023).

[17] The high prices are often argued to derive from high related energy taxes, especially VAT, having a rate of 22% for all fossil fuels and electricity. Household electricity consumption not reaching certain thresholds benefits from a reduced rate of 10% (IEA, 2023).

[18] IEA-statistics (2020) state Italy's total wind electricity generation around 2020-2021 to, for instance, double that of Norway (20 789 GWh vs 11 769 GWh).

[19] A new association, called AERO (Associazione Energie Rinnovabili Offshore), to deal solely with offshore renewable energy development was recently inaugurated on the 25th of May 2023 by 13 large energy companies (Press release - Italian stock exchange, 2023).

Of the approximately total 12 GW of wind power capacity, close to 0.5 GW were installed in 2022[20]. Still, the country fell behind Germany, Spain, the U.K., and France by overall capacity. If considering capacity concerning landmass area and per capita production, Italy falls vastly further behind (Wind Europe, 2023). ANEV states that the country's wind industry approximately employs 17.000 people across 900 farms in 400 municipalities. In a shared analysis with the Italian Labour Union (UIL), ANEV (K.EY, 2023) states the potential of almost 70.000 new Italian OW jobs (1/3 direct and 2/3 indirect) if national goals are met, stated further below. Most of these jobs will be in Southern Italy, as Italy's wind resources are predominantly concentrated in the six southernmost regions. Figure 8 places these regions on a map and lists their total installed wind capacity at the time of writing. Additionally, OW deployment is by far ambitioned exactly outside these six southern regions, with the highest wind speeds appearing off the coast of Sicily and Sardinia[21] (Cassola et al., 2006).

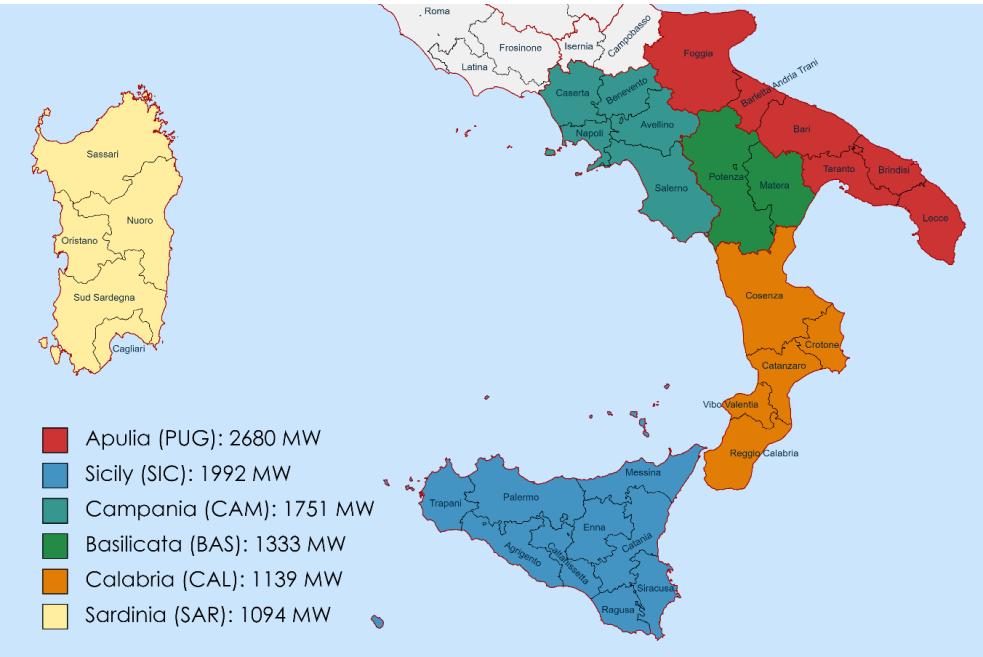

Figure 8: Southern Italy's installed wind capacity to date (data: K.EY (2023) / map: own creation).

According to Italy's PNIEC (2019), may new technologies for renewable electricity production, primarily related to wind power and solar PV, lift the country's share of renewables in gross final electricity consumption to 55% by 2030. The same plan sets a growth target for wind power to reach 19.3 GW of installed capacity by 2030, of which 0.9 GW is wanted offshore[22]. In connection with this, Italy expects to increase its electrical interconnectivity to neighbouring countries by 10% by 2030[23], and phase out all domestic coal-based electricity production from 2025 (European Commission, 2020).

[20] After having reached 10.6 GW in 2019 by growing 0.4 GW from 2018 and 0.5 GW from 2017 (K.EY, 2023).

[21] Sicily and Sardinia, known colloquially as "the islands", are two among five autonomous Italian regions that under Article 116 of the Italian Constitution are granted home rule, granting them extra legislative-, administrative- and financial power (The Italian Senate, n.d.), such as the allowance to keep above 50% of paid taxes (NOW, 2023b).

[22] By today's average OW size, this corresponds to two-three farms (Serri et al., 2020).

[23] Below the latest EU-target of at least 15% by 2030 (European Commission, 2020).

The current assessment of Italy's PNIEC (2019) by the European Commission (2020) finds that the type and number of existing policies will not support ambitioned capacities, which itself lacks descriptions between *new*- and *repowering* capacities. Still, Italy received praise for having managed to double public funds used to research clean energy sources, as wind power, by around €220 million in less than 10 years. The IEA (2023) recently commented that institutional reforms within the energy sector should be ambitioned, as well as improving transmission capacities between the north and south of the country. Regarding transmission, the GWEC (2022) still remarked positively that given Italy's geography the power grid is quite extensive, for example including HVDC cables from Sardinia to the mainland.

The split between Northern- and Southern Italy is further important to stress. To date, the larger part of Italy's electricity consumption is in the north where economic output per capita is amongst the highest in the E.U. (Eurostat, 2021). Regarding renewables, hydro- and bioenergy are far more used in northern- than southern regions, themselves domestically leading in the use of solar- and wind energy (NOW, 2023a). In between lies a relatively narrow land with much mountainous terrain, also prone to earthquakes, at least measured relatively in Europe, where the electricity is transferred. Additionally, newly educated workforce from Southern Italy has traditionally been prone to relocate to other northern regions for better job opportunities (NOW, 2023b).

Currently, Southern Italy has a strong momentum for economic development across many sectors as the regions there are budgeted to receive 40% of the country's total reception of covid-19 recovery funds from the E.U. Amongst all EU-countries, Italy is the biggest recipient with €191.5 billion, by 2018-monetary values. These funds are set to regain economic development, supporting the implantation of various reforms and investments. Even though the plan to use these funds, i.e. PNRR (2021), contains few specific points on wind power development in terms of growth ambitions, almost 40% of the total funds are set aside for climate objectives regarding technologies as OW. Some relevant outlines in the plan are the strong wish to simplify and standardize authorization procedures companies developing renewable energy, especially offshore, will have to endure. The same holds for environmental impact assessment procedures. As all funds must be invested by Italian administrative levels, i.e. state/region/municipality, before 2026, a strong moment for energy diversification into renewables, especially for the southern regions, arguably persist through this decade. All data from the PNRR (2021).

6.3 Status Quo and Prospects for Offshore Wind in Italy

In Italy, OW developers are free to send applications to the country's national electricity transmission grid operator, called Terna, to secure access to sea areas. This practise is different than the Norwegian, where the authorities control which areas can be opened for applications and not. By the end of 2022, applications for OW power plant connections to the national grid approved by Terna grew by 200% year-on-year (Terna S.p.A., 2022). This amounted to approximately 95 GW of ambitioned OW projects[24], where around 80% of the submitted requests revolved around Southern Italian seas. The top three regions by ambitioned capacity were Sardinia with 24 GW, Sicily with 19 GW, and Calabria with 4 GW (Terna S.p.A., 2022; NOW, 2023a). On their side, Terna has launched plans to invest around €4 billion in Southern Italy over the next five years and around €18 billion across the country over the next 10 years, all with the ambition to increase the connection between Northern- and Southern Italy (Reuters,

[24] Commented by a senior secretary at the Ministry for the Environment and Energy Security ("MASE") to result from a current non-efficient practise where *thus* more projects a company applies for *thus* higher their chance will be at gaining successful concession (NOW, 2023b).

2022). Based on an analysis of current and foreseeable technology improvements as these, ANEV estimates the potential for the Italian OW market to exceed 5 GW by 2030 (K.EY, 2023).

The Mediterranean's first and only fully operational OW farm, called "Beleolico", is located around 100 meters from the shore of Taranto in the Apulia-region. The plant was inaugurated in 2022 and consists of 10 MySE3.0-135 wind turbines from Chinese producer Mingyang. The farm is small, having a total capacity of 30 MW, being able to produce over 58.000 MWh, equal to the annual energy needs of around 60.000 people (GWEC, 2023; Wind Europe, 2023). Beleolico uses fixed-bottom technology, in contrast to well-known perceptions that OW development in Italy will, by large parts, revolve around FOW technology, as the Italian waters generally are quite deep. In large, Italy is identified as one of top five emerging markets for FOW globally (GWEC, 2022). By considering parameters as technical potential, land constraints, and renewable policy, Italy comes out as number three, behind Norway and Ireland.

In general, the report by the GWEC (2022) finds four main challenges for FOW development to catch track in Italy. First, the Italian power grid needs to be developed. This is the only challenge that with a good degree of certainty is expected to be resolved. The last three challenges are characterized by lower levels of such confidence, and these involve long unmodern permitting procedures and unambitious government targets for development. The last point revolves around high price competition with other energy sources, especially solar PV. If all challenges are quickly resolved, as wanted by companies and authorities alike, Wind Europe's (2023) daring estimate of Italy having its first FOW installation by 2026 might turn out correct.

Even though no data has formally been published by Italian authorities, the Italian OW industry seems unified in totalling the current number of OW projects under investigation to surpass 100 (K.EY, 2023). Of these, none have currently reached a construction phase, as most are currently stuck in approval stages. In a dedicated study, the majority of Italy's coming FOW installations were argued to come located within 25 kilometres from shore at a depth ranging between 100 and 200 meters, being within 100 kilometres from a main port[25] (Maienza et al., 2020).

6.4 Key Legal Procedures for Developing Italian Offshore Wind

The first step companies need to make when wanting to develop larger renewable energy sources for electrical consumption in Italy is to apply for grid connection with Terna. Currently, companies can expect an answer within 90 days. Then, companies will need to accept within 120 days by also paying 30% of the expected minimum technical installations Terna themselves need to launch. Within the same time span, or 60 extra days if the connection application regards very high voltages, the companies must start authorization procedures (NOW, 2023a; K.EY, 2023).

Currently, three main authorizations are required for OW development in Italy (NOW, 2023a). First, a "Maritime Concession"[26] (Concessione Demaniale Marittima - CDM) is necessary to make use of state areas asea and ashore, with the development of OW plants and interconnecting works, respectively.

[25] If selecting amongst larger Southern Italian ports, the most suitable for OW development are commented to be Cagliari (Sardinia), Gioia Tauro (Calabria), Augusta (Sicily), and Taranto (Apulia) (NOW, 2023a), being amongst Italy's 16 Port System Authorities (AdSP), in Italy being public bodies with legal administrative tasks within their respective areas (Assoporti, n.d.).

[26] This concession is, varying according to specific territory and project duration, granted by the evaluation of the Ministry of Infrastructure and Transport ("MIT"), or a local maritime- or port authority, i.e. AdSP (NOW, 2023a).

Second, an "Environmental Impact Assessment"[27] (Valutazione d'Impatto Ambientale - VIA) is necessary[28]. At last, and most importantly, obtaining the "Single Authorization"[29] (Autorizzazione Unica - AU) will allow the company to start developing OW physically. Procedures for this last authorization may only commence with the positive outcome of the former two.

Between 2017 and 2020, the AU took on average 7.5 years to obtain for OW- and solar plants, far above the legal limit of 1-2 years. The IEA (2023) states that this often derives from local opposition and missing interest by regional authorities, implying they also hold legal stakes for development. If considering the wind park Beleolico, it is now known that the full issuance of the CDM took about five years and that physical construction started around 13 years after the developer, Renexia S.p.A., applied for the CDM. During this time, the Municipality of Taranto challenged Renexia's acquisition of the AU in front of both regional- and state courts, ultimately losing both places (NOW, 2023a).

Currently, Italian authorities have made use of feed-in-tariffs, especially for smaller plants, where they have guaranteed a fixed price for a certain amount of renewable energy being fed into the national electricity grid (Serri et al., 2020). For larger plants, sliding feed-in-premiums have been used. In all, the tariffs are awarded through competitive procedures, which looking forward are ambitioned to be set in new auction programmes spanning five years (IEA, 2023). In March 2023, Italy's government proposed a price cap of €165 pr. MWh in a draft regulation, something ANEV challenged by calling for €190 pr. MWh, particularly for projects smaller than 500 MW (K.EY, 2023).

The current practise with tariffs might change, or be complemented, with the final publication of the much anticipated "FER 2 Decree" [30], this being new regulation concerning electricity production from less established renewable energy technologies with high generation costs in Italy (NOW, 2023a). Based on drafts, support schemes might be directed towards competitive tenders and contracts-for-difference[31] models, already being the practise in many other European countries, like the U.K. (NOW, 2023a). Today, for comparison, auctions remain the primary driver of utility-scale solar PV installations in Italy (IEA, 2022). When developing the Beleolico-project, Renexia S.p.A. won the rights to a 25-years feed-in tariff of €161.7 pr. MWh, being at the time much higher than competing renewables, arguably related to it being a pilot project (GWEC, 2022). Regarding FOW, base tariffs ranging between €165 pr. MWh and €185 pr. MWh are foreseen in the new decree. Last year, Renexia S.p.A. said they expected to place a bid in a contract-for-difference auction for the FOW "Med Wind" project in 2023 (Reuters, 2022). Further, developers wanting to install OW in Italy must also consider the LCOE, which is *not* expected to diverge noteworthy from industry expectations, even in long-term pessimistic scenarios with a slight reduction of wind speeds (approx. 0.4 m/s) in Italian seas due to climate change (Serri et al., 2020).

[27] To be evaluated by the newly inaugurated "Technical Commission", sat in January 2022, counting around 40 experts in various fields, overseeing, amongst more, Italy's PNRR- and PNIEC environmental assessment obligations (MITE, 2022).

[28] Projects not exceeding a capacity of 50 MW are in some designated sea areas exempted from the EIA-procedure until the 30th of June 2024 (NOW, 2023a).

[29] Involves the contribution of the Ministry of the Environment and Energy Security, the Ministry of Agriculture, Food Sovereignty and Forestry ("MASAF"), the Ministry of Infrastructure and Transport, and the Ministry of Enterprises and Made in Italy ("MIMIT") (NOW, 2023a).

[30] Deputy Minister of MASE mentioned in a speech at the K.EY Energy fair (2023) that the decree had been notified to the European Commission, implying forthcoming publication, being further discussed at industry gatherings (NOW, 2023b).

[31] Scheme that "incentivise investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, [also protecting] consumers from paying increased support costs when electricity prices are high" (The U.K. Government, 2022).

7. Multiple Case Study: Norwegian Offshore Wind Developers

In this chapter, the thesis investigates strategic perspectives about entry to the emerging Italian OW market from Norwegian industrial developers within the OW industry. A multiple case study into seven case companies served this purpose. The chapter commences with a presentation of key information about the case companies before three main issues about strategizing entry to the Italian OW market are put forward in their separate subchapters. These equals the final three categories from the final level of coding post-data collection, thus also signalling respective research questions as shown in Table 8. In the end, main findings from the seven case companies are summarized.

7.1 Presentation of Case Companies

All seven case companies are differently involved in the OW industry: Some are unique OW companies, some are diversifying from other related industries, and some are ambitioning to fully enter the industry soon. Having conducted the interviews, the foremost observation is how the companies diverge in most answers when strategizing entry to the Italian OW market, arguably reflecting the early emerging phase of the market. For instance, some companies have clear ambitions to enter the market, some are still investigating, and some have decided to not enter any time soon. Some case companies have permanent representation in Italy by a local office or team, some aspire to it, and some have chosen not to pursue this. All companies but one have ties to placement on the OSE. Interesting, some case companies have common financial ties in terms of owners or historic collaboration on projects. Contrary, some companies list each other as rivals.

All case companies have by varying accords been engaged in the NOW cluster. In terms of the OW value chain presented by the NOW cluster, every case company arguably deals with business occupations in the EPCI-phase[32], marked in Figure 9. It should be noted that the NOW cluster's use of the term "OW developers" here diverges from the one previously identified by the thesis, with their definition arguably being much wider by, for instance, including companies in the "ecosystem", as seen in Figure 9.

More revealing company parameters, as specific value chain contribution, financial resources, stock details, Italian representation, etc. could all have been used to present the case companies. Even so, doing so would not support the promises of anonymity. Still, some key public information must be presented, to give enough meaning to their answers and reasonings, and contextualize them for better discussion. Thus, Table 9 lists the case companies according to some key information.

[32] A common industry abbreviation for "engineering, procurement, construction and installation", being an arrangement between a customer and a contractor (NOW, 2023a).

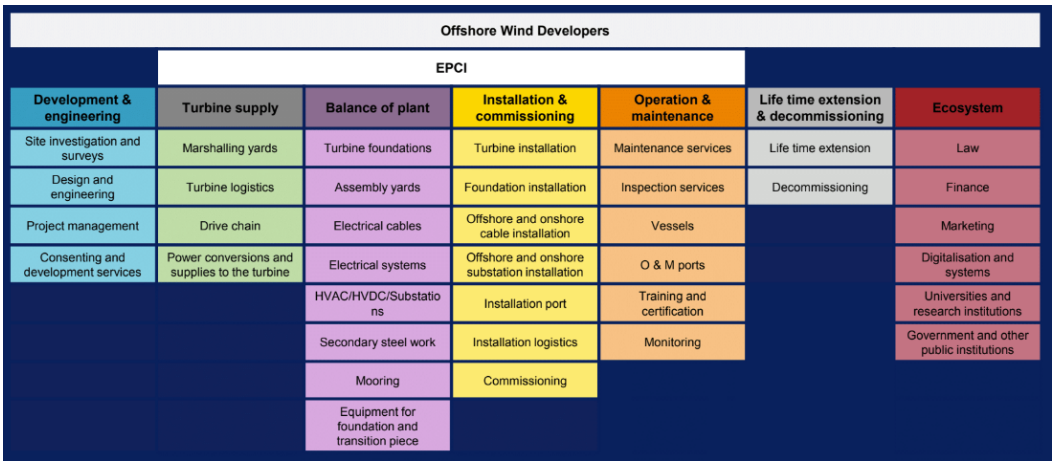

Figure 9: NOW value chain (NOW, 2023a; 2023b).

Table 9: Key information about case companies (own creation).

Name of company	Nr. of employees [range]	Year founded [range]	Main OW activity (current or wanted)
A	1000 – 10 000	Before 2000	OW development, -operation and -ownership.
B	Over 10 000	Before 2000	OW development, -operation and -maintenance.
C	Over 10 000	After 2000	Production of OW mill components and support technology.
D	Under 1000	After 2000	FOW development and -maintenance, also production of varying solutions.
E	Over 10 000	After 2000	Production of turbines, grid connection solutions, and other energy devices.
F	Under 1000	After 2000	Renewable energy developer and -operator.
G	Under 1000	After 2000	Producer of FOW foundations, grid solutions, also occupied with consultancy.

7.2 Entry Investigations

The first strategic issue observed throughout the case companies were varying matters related to their entry investigations, thus fitting to research question I). More specifically, this concerned matters as ambitions for both the Italian market and the OW industry in general (often explained as prerequisites towards each other), ambitioned competitive advantage, entry timing to Italy, development of knowledge, and lastly international support, primarily by the Team Norway-initiative.

7.2.1 Company Ambitions

Regarding entry to the Italian OW market, all case companies characterized the market as emerging. Still, their perceptions varied between confronting this as an opportunity or a challenge. Case company E made an analogy of the Italian OW market equalling a volcano with many eruptions in varying

directions, followed by stressing "*as of now, we have no concrete ambition [to enter the market]. I would like to see the market mature before we start*". Contrary, case company A has started with long-term investments to operate in the Italian market, now growing at rates they did not anticipate beforehand, stating that "*just some years ago we were not considering Italy, as Italy was not even considering itself".* The latter point can arguably be linked to growing domestic OW estimates, especially regarding FOW, which had also captured case company D's attention, them providing floating technology, stating that "*for the time being we are determined to step in Italy – I think it is a market where we must be*".

Case company C, being close to a full-scale product provider for the FOW industry, told they were feeling somewhat ambivalent about the Italian market, on one side not knowing if they could expect an Italian customer, while on the other side already getting requests from other markets, these being at varying stages of maturement. Entry investigations by case companies F and G had a similar division, with the former, for instance, stating their main strategy "*was and will stay to enter emerging markets, but we also look to mature markets, aiming at a split portfolio*". Case company G, aiming to become a leader in FOW designs, repeatedly argued they at this point needed to make themselves relevant by demonstrating their technology in a pilot park in a more mature market, then using this as a reference towards the emerging Italian market. More specifically, they stated a clear ambition of having a design that could be produced efficiently, "*as if we were to build […], typically a GW park,*" so they could leverage scaling effects from production and provide surplus designs in MW-size to an emerging market as the Italian. The desired scaling effects seem to persist throughout the industry.

7.2.2 Future Entry Investigations

Besides entry, all case companies except one wanted to continue investigating the Italian market. The one case company had decided to shift focus to other markets until the allocation of Italian OW projects become more advanced. Case company E pointed out similar concerns by stating

> "*I do not think we are able to give up any [OW] markets or customers now. There are new markets everywhere, not only Italy*", yet saying "*[we are] absolutely not [giving up the Italian market]*".

Case company E said they had not spent very much time investigating the Italian market, but if anything, having directed their investigations to map major players, "*because their commitment is also a sign of how much faith they have in the Italian market*". Case companies C, F, and A all spoke warmly about investigating the Italian market further, with one of the company representatives even stating, "*I would say we have a huge opportunity to be one of the biggest operators in Italy*". Case company F argued Italy will continue to have high priority as the market is arguably to be *the* European contender for FOW commercialization. The market's many shortcomings, especially regarding a clear regulatory framework, should not necessarily hinder market investigation, as it gives companies more time to develop internally, according to case company F. Case company C will continue to investigate the Italian market in detail, as it is a market they can demonstrate FOW technology early, this necessarily not being a sole Italian opportunity.

7.2.3 Competitive Advantages

Across the case companies, the dominant competitive advantage seemed to be a perception of the companies' experiences within the offshore petroleum industry, both in Norway and abroad. While case companies B, E, and C revealed wishes to diversify their products or services into the OW industry, case company G rather explained how the spread of offshore petroleum installations delivers the possibility to develop OW plants early, using existing infrastructure to electrify the rigs. If electricity is the end-product at which a company may generate income, case company A highlighted how the Italian business case becomes quite interesting as Italian electricity prices are relatively high. Regarding their competitive advantage, the company stated that "*as of now, we do not have a big one*", explaining that, if concerning the Italian market, most development will revolve around FOW, where "*we are competing with both big investors and many SMEs from almost the whole world*".

Case company F seemed enthusiastic about its competitive advantage, especially in a market like the Italian, where the development of a single OW mill requires the prior development of many support systems. The company argued the Italian OW market contains a lot of risk, but, as "*our shareholders have a high risk-profile, they value entering [such] markets […] coming with higher risks*". The representative from case company E argued his company's competitive advantage would be non-comparable to that of many other companies if they could finalize a merger with another close collaborator. Doing so would "*de-risk a whole OW project, and […] do the projects bankable*". This comes somewhat in contrast to case company A, which in the wind industry finds itself to be competitive, not having a dire need for subsidy support. Their business projects are more centred on quality than, for instance, quantity, focusing on long-term positions. Such an approach seems to be shared with case company B, which argued company offerings in the OW industry, at least for bigger plant development, in a market like the Italian, soon will see an integrated value proposition to become more important and attractive for authorities and local communities.

7.2.4 Entry Timing

Entering the Italian OW market must happen at a certain time, where most case companies argued for early entry. This might come from what one case company had quantitatively measured to be Italy's relative leading position in terms of FOW development, for instance, ahead of Spain and Portugal. Case company G emphasized early entry repeatedly, especially if solely considering FOW, as the competition with patent applications and news of Italian pilot parks are increasing by the month. By their argumentation, is this the "*way you become a leader at FOW […] and then you have to deliver projects early, and it is not so important that the first project is big*". This was strongly supported by case companies F and D, stating that

> "*I would like to enter the market this year, so as soon as possible*", and "*I think we have to do this quickly. […] I am afraid that if we wait much longer to enter into the market there will be less people and projects available"*.

Still, as stressed by one of the companies,

> *"I see that our management is more hesitant [to enter early], because I think in Europe there are so many markets now popping up with increased OW targets, drafting regulations and working on support mechanisms*".

The other case company supported these concerns by stating that "*if tomorrow there is an [Italian OW auction] things will speed up, […] so I think we need to find a balance between doings things fast and right*". Entry timing could also be stretched, for instance, to learn more about the market, its requirements, and early developments, e.g. towards auction models for allocation of areas, as early projects take place, all emphasized by case company B. Case company E arguably shared this approach, saying they work "*surgically*" with the opportunities presented in the Italian market, having a team on the ground.

7.2.5 Italian Market Insights

Having learned about the Italian OW market, the case companies had rewarding insights for the market's further development. Compared to other emerging markets, case company C argued the Italian FOW market to become *the* earliest competitive market, having a very favourable sea depth (e.g. +/- 300 meters). Case company F argued more mature OW markets have very expensive auction fees, the German, for instance, requiring €1 billion. Still, the Italian OW market has some shortcomings.

Case company D emphasized that as Italian officials are yet to designate special maritime areas for OW applications, overlapping projects have become a norm[33] as "*everybody [i.e. OW companies] are applying and believing once they have got the CDM they are the only ones who can develop there*", leading to Italian projects to be more characterized by communication for investment purposes than actual early development, this even holding for ambitioned GW projects. If wanting to secure long-term partnerships with Italian OW companies, case company D further argued this practise to be a hinder, as most of the companies applying and securing the CDM are not big enough to fully develop the OW project, not even capable of taking it to a middle-stage. These perceptions seemed to also align well with the other case companies.

7.2.6 Local Support

When asked about whether the Team Norway-initiative has been beneficial for investigating entry to the Italian OW market or not, all case companies agreed it had been helpful. Specifically, all case companies had taken advantage of the initiative in early phases

> "*to establish a network with local stakeholders, authorities, and industry players, so it is absolutely a valuable channel to introduce yourself to a new country*", according to case company B.

One case company, whose representative had worked with a similar initiative for other countries, had a much better impression of the Norwegian administration. Case company F highlighted that for capital-intensive industries as OW, which also aligns with vast political renewable agendas, the support and facilitation from the Team Norway-initiative is especially important in early phases when formal market entry is still under investigation. This undeniably forge costs, so leaving early establishment of stakeholder relations at the initiative's desk was argued to be a good separation of duties. Two case

[33] Being especially relevant for sea areas outside Civitavecchia (Lazio), Marsala/Mazara del Vallo (Sicily), Pozzallo (Sicily), and Brindisi (Apulia). For Brindisi's case this, for instance, includes a project, called Kailia Energia (launched by the partnership between Renantis (prev. Falck Renewables) and BlueFloat Energy), on almost 80 turbines surpassing 1 GW and a €3.5 billion investment (NOW, 2023b).

companies put forward that they do not necessarily need the initiative to investigate or enter the Italian OW market, still stating that it is important and that it should be used for what it is worth, especially when investigating new countries where existing contacts might be scarce.

With the development of the OW industry at home and abroad, the NOW cluster is posited to become a more active player in the Team Norway-initiative, also in Italy. When asked about the NOW cluster's strategy[34] some companies raised concerns about it being too wide and not specific enough when organizing meetings between cluster companies and, for instance, Italian stakeholders. Still, case company F, for instance, pointed out that the cluster is very helpful and supportive, with the same reasons as rewarded to the Team Norway-initiative. Some case companies evaluated the NOW cluster's study tours to foreign markets, as the Italian, as rewarding by four main trends: i) promote ourselves, ii) meet new stakeholders, iii) hear the latest rumours and developments, iv) ask Italian support industry if they can satisfy projected OW demands, and in the end v) understand how much reality there is in the market from the perspectives of developers, value chains, regulators, and local communities. Moving forward, case company C suggested, looking to an American market, the NOW cluster to map supply chain companies and possible domestic requirements for local fabrication, presenting this to the cluster's member companies so it can become easy to get in contact with, for instance, local fabrication sites.

7.3 Entry Modes

The second strategic issue observed by the case companies revolved around which entry mode(s) to pursue for entering the Italian OW market, thus fitting to research question II). This entailed matters as company structure, especially the question of finding and establishing partnerships, and what successful entry to an emerging OW market as the Italian could entail.

7.3.1 Struggle for Partnerships

All case companies, regardless of their size, resources, and history, were unison with the importance of having a project partner(s) when entering the Italian OW market. The exact type of partnership and how close the relationship ideally should be, in terms of financial ownership or value offering, still varied a lot. Most case companies agreed on the importance of teaming up with a local Italian company that with time come recognized as a premise for entry.

Case companies F and G presented similar ideas for partnership structure. The former consistently said that to enter Italy "*we need us, a local company and some investment company*". The investor was here exampled as a pension fund or larger insurance company, required to increase their investment portfolio in renewables. This comes in some contrast to case company G, having already set up a strategic and complementary joint venture with a project development company, them being good at ensuring necessary financing. Such an early partnership has, by case company G's argumentation, made them possible to investigate entry to emerging OW markets as the Italian. One case company stated they were a WOS, which by their estimation had been a vital structure to formally enter Italy.

[34] Stated in recurring presentations to be "develop world leading supply chains within offshore wind". The cluster counts 370 member companies, of which 60% comes out as service providers and around 50% have less than 15 employees (NOW, 2023a; NOW, 2023b).

Regarding the local Italian partner, case company F ambitioned them as a co-development partner, already in the wind industry, and having established relations with, for instance, relevant ministries, port- and permitting authorities. Case company G agreed, stating that "*for every country you enter, it is always important to have some locals with you. […] Getting it established is always on the agenda*". A corresponding reason for the local partner was to form a base to create local ripple effects, important for several reasons, for example, to increase possibilities of access and support in the foreign country. When asked about Italian collaborations, case company E stated

> "*No, the focus is rather on whether we can develop the collaborations we have elsewhere with the players who have possibly already entered Italy. This is the easiest way because we know each other*".

If yearning for a local partner, case company C commented that the relationship should be tighter than looser, and maybe even required by law, if Italian regulation will come to demand some degree of local fabrication. If no demand, it was stated that it is "*no reward in setting up an [Italian office] for one project, but rather for more if so*". As OW development and -operation can not be considered without supporting infrastructures as transfer of electricity, one case company lastly emphasized that some partnership with, for instance, the grid operator, i.e. Terna for the Italian market, becomes inevitable.

A co-development partner for each ambitioned foreign market was also emphasized by case company D. According to them, a co-development partner is vital to enter the Italian OW market. By their argumentation, the problem with this market, as opposed to e.g. the Spanish, is how it lacks big domestic developers, the few already being in consortiums with one another[35], and the Italian field rather being characterised by many SMEs with large OW ambitions, but not necessarily containing the track record for success. Case company E supported this, stating "*it is increasingly clear that each developer has unique ways of doing thing, so our strategies may also be shaped by their [capabilities]*". Case company D stated this as problematic, as scoping for long-term partnerships that can financially endure OW development past FDI[36] to COD[37] becomes sparse in possibilities. With demands of local fabrication still in the air, case company D, ambitioning minority stakes, still raised the importance of the co-development partner having

> "*a local structure to develop projects, to do the permitting, to manage stakeholders, to talk to the administration, to apply for grid connection, etc.*", not yet knowing "*if a local company is going to have more advantages than a foreign company*" because of the market's emergence.

Case company B had opposing arguments than case company D, arguing

> "*that [teaming up with larger local companies] is our preferred strategy when entering markets that are near to [us]. If we do not have an established presence or network with local stakeholders, then we see a lot of value with partnering up with companies that can be complementary to our profile*".

[35] Often highlighted, per offshorewind.biz, are i) Renantis and BlueFloat Energy, ii) ENI, GreenIT, and Copenhagen Infrastructure Partners (currently having an application portfolio reaching approx. 3 GW), iii) Saipem, AGNES, and QINT'X, iv) Galileo and the Hope Group, and v) the joint venture AvenHexicon (having obtained authorizations for a portfolio of to date seven FOW sites).

[36] Abbreviation for "foreign direct investment", being an "investment in enterprises across country borders where the investing enterprise plans to establish a long-term economic connection and exercise effective influence on the operation in a foreign enterprise" (SSB, 2023).

[37] Abbreviation for "commercial operation date", known in energy industries as the time at which an energy plant starts to generate power to earn revenue (NOW, 2023a).

According to case companies B and D, may the dynamics in such partnerships, for example, in terms of financial liability, vary from market to market, where the case companies themselves sometimes can hold the majority stake.

7.3.2 Successful Entry

All case companies were asked at what point they would mark their entry to the Italian OW market as *successful*. Quite interesting, all case companies had varying indications. Case company D stated that "*the first milestone will be to announce a partnership. Until we do that nothing is done*". A sole milestone was also declared by case company A, stating that "*we are successful when a financial investment decision on an operational site becomes relevant*".

Other milestones were presented by case company F, stating having i) sole site security, ii) secured a support mechanism, and iii) having started developing the project, would evidently "*show our success in the market*". It was emphasized that to reach the second milestone, site assessment entailed technical evaluations and stakeholder management, for instance, with local tourist industries[38] and relevant ministries to fully grasp expected legal obligations to accommodate.

Further, case company B highlighted that success in the Italian market must be measured in general, where "*success means you have a large enough [energy proposition] to leverage synergies across projects*", thus not only entailing OW development. Case companies C and E stated that to a certain point they were already successful, already being involved with customers and projects in Italy. Still, they raised concerns about their own answers, stating

> "*... but I think there still is a big job to do, because [our company] is not known enough in the international OW market*" and "*... but it can also take longer [i.e. to gain success], like 36 months [if the projects become delayed]*".

Besides brief success points, some case companies had longer explanations for how success in the Italian market could be reached. One case company stated an ambition to start an office solely delegated for OW development in South Europe. Case company E pointed out that the port in Taranto in the Apulia-region with time could become *the* hub for domestic OW development in Italy, but also support close emerging markets as the Greek, as many development plans for the port and corresponding value chains are in spin. Case company A stated that to become long-term operation managers for a branch as FOW, close relations with local communities and stakeholders need to be in effect. Case company G pointed out that reaching technology commercialization, mass production of OW at large will become necessary. To truly leverage such economies of scale, certain production responsibilities might be dispatched to the Italian market. Case company G also emphasized that successful entry might entail leaving an OW project after some experienced maturement, by possibly having used the industry's emerging phase in Italy to introduce the company's OW solutions.

On the road towards successful entry to the Italian OW market, all case companies were asked whether they have had a focus on find new resources or allocate existing, without emphasizing what kind of resources. In all, most case companies replied both measures have been necessary, but that most focus has been on allocating existing resources. Case company F, for instance, emphasized that moving

[38] According to a pre-covid 2020-survey by the Italian National Bank (2020), Italy came fifth in the world for international tourism with €1 322 trillion worth of accounted receipts, where the southern regions accounted for approx. 15% of the sum, in which Sicily and Campania reaped over 60% alone.

forward with investigations, employees working solely on technical engineering and stakeholder management seem particularly necessary. Most of the case companies highlighted that, as case company G argued, using resources from the offshore petroleum industry, primarily from within the company, is and will stay to be the dominant mark on resource use.

7.4 Entry Barriers

The third and final strategic issue observed by the case companies was that of entry barriers to the Italian OW market, thus fitting to research question III). Varying barriers were put forward, of which regulatory uncertainty was the most emphasized.

7.4.1 Regulatory Uncertainty

All case companies mentioned some aspect with Italy's current regulatory framework for OW development as particularly challenging. Case company A aptly stated that "*the problem with the Italian OW market is not a lack of companies nor investors, but rather missing and incomplete authorizations*". Case company D explained that in the term "regulatory uncertainty", they and most industry players mean yet knowing

> "*100% what we need to do to develop a project, when the first auction will take place, what auction requirements will be to participate, and the conditions you need to accept if you win an auction*".

Dealing with regulatory uncertainty, case company F stated that

> "*I think I need to be very close to the risks and understand why it is a risk and understand, when we are talking about the regulation, why it is not yet adopted, why it takes so long, to understand the difficult topics, being close to what is happening, try my best maybe to give an opinion from an international view, and exchange with the Italian stakeholders, because they of course then have another opinion than us, with more insights, so to also listen to the Italian industry and the people that are closer to the topics."*

This uncertainty is primarily driven by the missing final publication of the vital "FER 2 Decree". Still, importantly emphasized by case company D, if most of the regulatory text in the leaked decree drafts become regulatory status quo, Italy will be a country where OW development is sure to take place in the coming years, arguably turning the *barrier* into *security* for developers.

The regulatory weaknesses in Italy are no different from what OW developers experience across other Southern European markets, as in Spain, Greece, and Portugal. Such an opinion was emphasized by three case companies, with case company C stressing that their current business case was easier to prompt in more mature markets as the British, French, and German, where regulatory procedures are conceived overall clearer and easier. Case company G perceived regulatory uncertainty as the biggest barrier with the Italian market, and more specifically the road to obtaining necessary permits through heavy bureaucracy. Case company A agreed, expressing they act very careful in authorization procedures, "*doing everything step by step and using our time*".

7.4.2 Unforeseen Challenges

To grasp whether the case companies' entry strategies towards the Italian OW market had taken all necessary considerations, all case companies were asked if they had encountered any unforeseen challenges. All case companies answered no, with case company A even emphasizing it is too early to tell. Case company F stated that, if to mention anything, how domestic progress in regulation has taken more time than anticipated, especially regarding the vital "FER 2-Decree". Case company E emphasized the same challenge, but rather how this was a confirmation of their anticipations. One case company emphasized a strongly felt enthusiasm in the market, from businesses, investors, and regulators alike, regarding rapid energy transition to renewables, uncommon to their perception about the Italian energy market. One case company put forward scepticism to which degree Southern Italy's history of organized economic crime related to mafia activity[39] could finally be ruled out, regarding especially intrusion into political institutions and businesses along the value chain.

7.4.3 Other Company Perceptions

All case companies also diverged on perceived entry barriers, or at least highlighting some varying barriers besides the ones related to the judicial field. Case company B spoke for more case companies when they pointed out the strong dependency Italian OW development will have on Terna upgrading the national electrical transmission grid and load centres ashore.

Case company B also pointed out that "*... visual impact could be a big [hinder for FOW development] in Italy, which might be the reason why bottom-fixed never really succeeded*." Such anticipated vocal opposition was argued to derive from local communities and impacted industries as tourism and fishing. Taking care of local stakeholder opinions was raised by case company G, stating that

> "*I would like to think that the [analogy] can be applied elsewhere, and it is the same you hear elsewhere; that if one engages a bit with the locals and understand how to involve the supply chain there, i.e. if you manage to engage in a positive and constructive way when you first come from afar and are going to install big things in someone's neighbourhood, it is important to get involved locally. We see that very much spilling over into the regulatory process.*

Managing local stakeholder opinions was further supported by case company A, stating heavy administration costs will bear the Italian case, "*but these are just things you have to do, which could turn out more challenging elsewhere or even smaller with time in Italy*". Further, case company A has presented three core challenges with OW development in Italy to currently be i) lack of relevant national engineering expertise, ii) missing long-term investments in primarily ports, supply chains, and education, and iii) uncertainty about how well domestic manufacturers can adapt from onshore to offshore.

Case company C further raised concern over possible demands of local fabrication from Italian authorities. If so, company strategies will be affected, making entry non-feasible, at least in some

[39] According to the global organized crime index, Italy's most powerful mafia constellations all have roots in the southernmost regions, with the Calabria-based "'Ndrangheta" mafia now having become maybe *the* most influential organized criminal group in the world (SKY, 2023). The "Cosa Nostra" in Sicily and the "Camorra" in Campania are other known organizations. The index argues that especially waste disposal is heavily invoked by such organizations, as well as the construction sector and possibly even *some* renewable energy sectors, the latter not being further specified (The Organized Crime Index, n.d.).

segments and/or for some time. Case company D acknowledged this, stating they strive for a high degree of local content in their OW development. Case company C underlined that current industry rumours state such a demand will not come into practise for Norwegian companies, as Italy is an EU-member and Norway is an EEA-member. Regarding Italy's EU-membership, case company G pointed out that the U.S.' recent introduction of the "Inflation Reduction Act"[40] will put strong pressure on the E.U. to soon curb entry barriers for OW development across the continent.

Continuing the political trail, case company E proposed a barrier to be "*the processes in Italy, which are political. You can have all the right ambitions, but if you don't have government backing, not much will happen*". With regards to authorities, case company C stated a barrier is the large amount of government information solely available in Italian.

A challenging aspect that could potentially deter companies from entering the Italian OW market, regards how successful they are in finding partnering companies. This was indicated by case company D, stating that "*if tomorrow there is an auction, I am not ready to participate because I do not have a partnership*", adding that for early stages of OW development, especially regarding FOW,

> "*if we agree upon a business case [i.e. with a partner] and at some point the business case is not competitive because of our [product], […], it becomes a handicap for us, and something my partner has to accept to co-develop with us and I think this is a main difficulty*".

A last and interesting perceived barrier was the discussion of whether OW development might primarily concern the use of steel or concrete. One case company emphasized that with growing plant size, constructing in concrete becomes most competitive. Still, a strong concern was raised for concrete construction in Italy, as it has been exposed that a large part of the industry previously was infiltrated by organized criminal activity, having amassed millions of euros, for instance, supplying unfortified concrete, regarding particularly Sicily. The case company stressed hope that this concern belongs to the past. Regarding steel construction in Italy, one of Europe's largest, and arguably most condemned, factories[41] are located outside Taranto in the Apulia-region, raising some strong business opportunities along the value chain.

7.5 Overview of Findings

Based on the above presentation, Table 10 lists some main findings concerning the three strategic issues. Here, the road from entry matters to main findings involved observing which matters received the most support, but also how popular matters could overlap each other, aiming for substance.

[40] Abbreviated IRA and in force from the 1st of January, being an economic stimulus package counting $369 billion, aiming to, amongst other goals, make global investments in American renewable energy production more attractive than European (The U.S. Government, 2022).

[41] Now under the company Acciaierie d'Italia S.p.A, previously known as the "ILVA plant" (NOW, 2023b). Last year, POLITICO (2022) published an investigative article on the plant, portraying it as a decade-long "fearsome tug-of-war between environmental and economic interests", also problematizing several cancer cases in the city to the plant's emissions.

Table 10: Main findings from the multiple case study (own creation).

Entry issue	**Main findings**
Entry Investigations	• Norwegian OW developers perceive the Italian OW market as emerging, and *the* market for early FOW development, arguably lying ahead of close competitive markets in Southern Europe. • Norwegian OW developers will at large continue to investigate the Italian OW market, where the contribution of the Team Norway-initiative is perceived as most rewarding when establishing varying Italian stakeholder relations. • Norwegian OW developers want to enter the Italian OW market early, leaning on anticipated competitive advantages from the offshore petroleum industry.
Entry Modes	• Norwegian OW developers perceive financially strong co-development partners, potentially domestic, as vital to enter the Italian OW market. • *Success* in the Italian OW market is a strongly subjective opinion from one Norwegian OW developer to the next. • Norwegian OW developers have both allocated existing resources differently, particularly from offshore petroleum industries, and found new resources with the contemporary emergence of OW at large.
Entry Barriers	• Slow regulatory modernization, e.g. the missing publication of the "FER 2 Decree" stands as *the* dominant barrier to entering the emerging Italian OW market. • As of now, Norwegian OW developers do not seem to encounter unforeseen challenges when investigating entry to the Italian OW market.

PART 4: DISCUSSION AND CONCLUSION

8. Discussion: To Enter or Not to Enter

Reaching the end, this chapter incorporates main findings and insights from the two empirical studies against findings from the theoretical background. This discussion constitutes the last step in the thesis' research process as illustrated in Figure 6. The first three subchapters are based on the presented strategic issues from the multiple case study. The discussion will see inclusion of some new findings, theoretically as empirically, where relevant for further detail. Even so, the discussion aims to address the posited research questions, setting the base to concretize implications for both theory and managers. The chapter settles with the research's overall encountered limitations and suggestions for further research.

8.1 Maintaining Developing Investigations

"*Og ingen kjærlighet ble slik som de drømte den, da de kysset hinannen første gang*"

-**Sigrid Undset** (1882 – 1949), Norwegian writer and Nobel laureate 1928.

This part leaps of entry investigations, thus signalling research question I). Among the topics in the case companies' entry investigations, one of the most relevant against theoretical research revolved around entry timing. As stated, most case companies argued for early entry, with case company D even stating the importance of entering the Italian OW market this year. Case company G agreed, proposing that early entry constitutes the road to becoming a leader in the FOW industry at large, aligning well with Lieberman and Montgomery's traditional "first-mover advantage" (1988) but also the ability to define the market and favourably shape customer preferences (Rodríguez-Pinto et al., 2008). Both companies, being oriented towards FOW, further conform well with the notion of early entry when regarding companies who are more engaged in R&D activities (Zachary et al., 2015). This fits with technology like FOW, reported to have reached a pre-commercialization phase (GWEC, 2022).

Further research on market entry, for example the four arguments for early entry by Johnson and Tellis (2008), revolve mostly around the entrant having better chances to gain resources (e.g. Park & Kang, 2010), incentives (e.g. Rodríguez-Pinto et al., 2008), and competence (e.g. Holtbrügge & Baron, 2013), all relative to later entry. Case company D's precise statement on the fear of missing out on such topics if delaying entry thus fits theory. As most case companies pursued early entry, they can be regarded as early followers, found by Zachary et al. (2015) to normally hold for manufacturing companies, being further able to catch larger market shares than earlier pioneers, themselves having already entered the Italian OW market. Even though manufacturing is here vaguely defined, the term at least excludes companies founded on delivering support activities along the value chain, meaning the case companies at large, especially those oriented towards FOW development, again conforms well with the notion of early entry by Zachary et al. (2015).

Still, case companies B and E stressed alternatives for later entry, in such a way being able to learn more about the emerging Italian OW market. Such perspectives come in stark contrast to the ones from case company D and G, even against stated theoretical perspectives on competence building (e.g. Holtbrügge & Baron, 2013). Still, amongst the arguments for later entry by Johnson and Tellis (2008), one concerned the ability to learn from earlier entrant's errors, which can align with companies focused on emerging industries as research find early stages of such industries to generally contain more uncertainty,

complexity, and turbulence (e.g. Virany & Tushman, 1986; Aldrich & Fiol, 1994; Gustafsson et al., 2016), commented to hold for the Italian OW market by case company F and others.

Additionally, Zachary et al. (2015) emphasized how companies with experience in swift entry can delay entry to emerging industries. As most case companies argued their competitive advantage would come from varying experiences along the value chain from offshore petroleum activities, the notion by Zachary et al. (2015) seems to hold for strong diversifying incumbents as, for instance, case companies B and E, anew defending their perceptions of later entry in contrast to case companies D and G, themselves having stronger entrepreneurial traits by consulting Table 9, but also experience from offshore petroleum activities.

Having investigated the Italian OW market, all case companies shared insights on the current pool of involved OW developers in the Italian market to arguably not contain all the capabilities to develop the OW projects to more mature stages, at least solely alone. So was also the scenario for the many companies having applied for grid connection with Terna, exemplified by case company D as being done mainly for gaining early external investments. Such early pioneers were stressed to come as no surprise by Powell et al. (2005) and Srinivasan (2008) when explaining the normal nature of emerging industries in initial stages, where many involved companies hardly possess all the necessary resources to commercialize early. This also fits with the need to rely on further co-development between companies, either in direct collaboration or competition, of technological solutions to tow the industry towards more mature stages, exemplified by Bjørgum et al. (2013) to hold for the, by many accords similar, marine energy industry.

The current pool of involved OW developers in the Italian market further sustain and challenge theory on emerging industries in early stages. For example, the approx. 100 projects having gotten rapid approvals for national grid connection during the last year arguably overdo the “normal” quantity proposed by Sine and Lee (2009) and Mezias and Kuperman (2001) to characterize this stage. Staying true to theory, many early projects seem dominated by R&D-activities in regards to FOW development, additionally being done by smaller entrants as, for instance, case companies D and G, all aligning with Gustafsson with colleagues (2016) and Möller and Svahn (2009). Still, by the same scholars’ accounts, large stakeholder ambitions are missing from Italian legislators and local communities, remembering the missing publication of the “FER 2 Decree” along with local communities having taken the first Italian OW project, i.e. the Beleolico-project, to court in several rounds. Even so, the early Italian OW market and its outlooks are generally manifested in technological development, here concerning FOW, carrying the market case (e.g. Abernathy & Utterback, 1978; Van de Ven & Garud, 1993, Malerba & Orsenigo, 1996; Murmann & Frenken, 2006; Phaal et al., 2011).

The rapid emergence of the early Italian OW market, at least when considering ambitions, should further be acknowledged as a larger shift in the bigger domestic marketplace, defended in theory by Van de Ven and Garud (1993). Above all, the shift corresponds to the sudden upheaval of Russian gas dependence, stated to only in 2021 to be the second largest among EU-Member States, which towards 2025 are praised to come completely cut off (IEA, 2023; NOW, 2023a).

If only considering FOW, a dominant design is yet to arrive with the many patent applications still in the air (NOW, 2023b). Regarding Figure 4 from Suarez et al. (2015), this implies the Italian OW market to currently be positioned *before* the or *in* the window of opportunity. As the industry’s varying growth outlooks often regard GW capacities above technological designs, the patent processes also being characterized by secrecy (often by law), it is harder to grasp if the very *top* accumulation of FOW product categories lies ahead or in the past. Still, as patent applications seem to rise by the month, added by the many different grid applications in the Italian market, and strong growth outlooks both in and beyond

the Italian market, the top accumulation arguably lies ahead, leading to the Italian OW market having yet to reach the window of opportunity. If again looking to diversifying incumbents, e.g. case companies B and E ambitioning later entry, theoretical findings again seem to match practise, for instance, as the window of opportunity was found to be most relevant for such type of entrants (Markides & Geroski, 2004).

Looking at known characteristics and practises in the emerging Italian OW market, other empirical findings than the current pool of OW developers contend for both early- and late entry. Early entry seems relevant as, for instance, i) Italy has just been ranked as one of top five emerging markets for FOW *globally* (GWEC, 2022), ii) the national grid operator Terna has started €billion-size investments to increase transmission capacities between southern OW hotspots and northern consumption centres (Reuters, 2022), iii) Southern Italy itself having wide momentums for economic growth across sectors, especially regarding renewable energy production, by seizing most of Italy's E.U. covid-19 recovery funds to be implemented before 2026 (PNRR, 2021), iv) an updated national climate plan are just around the corner (PNIEC, 2019), v) come just recently, on the 25th of May 2023, a new association (i.e. AERO) dealing solely with offshore renewable energy development was inaugurated (Press release - Italian stock exchange, 2023), and finally as vi) areas asea have become more scarce with OW projects tallying capacities close to 100 GW have passed grid connection application procedures, yet many overlapping (Terna S.p.A., 2022).

Still, late entry seems relevant as, for instance, i) vital regulation (above all, the "FER 2 Decree") has been repeatedly delayed, ii) the over 100 projects with approvals for grid connection from Terna have *just* advanced to become trapped in other approval stages than actual construction phases (K.EY, 2023), iii) the application process to obtain grid connection with Terna seems efficient with stated deadlines (K.EY, 2023), iv) the GWEC (2022) does not anticipate major obstacles for FOW development in Italy to be resolved quickly, and finally v) the IEA (2023) shows that electricity generation in Italy, illustrated by source in Figure 7, seems slow to put stronger emphasis on renewables in short time frames.

All case companies were unison with the Team Norway-initiative being helpful, especially for gaining early contact with relevant stakeholders. Not surprisingly should therefore the initiative in Italy, if in need to select amongst tasks, focus on this. A third-party as the GWEC (2022) has for example argued OW developers to find partners of various art along the value chains if wanting to be part of the first commercial OW projects. As networking with stakeholders leaps forward as an important element in the case companies' entry investigations, the theoretical development regarding the industry by vast other actors than the core companies alone are supported, e.g. Van de Ven and Garud (1993) versus Porter (1980).

Still, if comparing the initiative with another European country where OW ambitions also are large, e.g. France, Innovation Norway has commented the local initiative to have commenced a multi-year campaign to position Norwegian companies for French OW contracts (Rognerud, 2022), stating that many contracts have already been won. The French OW market is generally more mature than the Italian OW market, arguably explaining the Team Norway-initiative to have advanced from stakeholder facilitation there. Yet again, some of the interviewed case companies stressed they did not necessarily need the initiative to enter or conduct investigations on the Italian OW market. The interviewed case companies seem at large financially strong to develop investigations alone, something that is unknown about those oriented toward the French market. In all, the Team Norway-initiative might become more involved than with stakeholder facilitation alone, specifically for smaller entrants, with the gradual maturement of the Italian OW market.

Coming forward, the NOW cluster is posited to become a more active part in the Team Norway-initiative. The case companies acknowledged their support on the same level as the initiative, still having some concerns about their strategic focus in front of, for instance, Italian stakeholders. Thus, the cluster should arguably, possibly in union with the member companies, specify the focus further. In the cluster's defence, they are just as emerging as the OW industry at large. With time, the cluster also seems to have laid an increased focus on promoting the Norwegian OW market[42] for Italian stakeholders, e.g. possible partner companies. Some case companies would arguably be open to such opportunities, as some have ambitions to also operate in the Norwegian home market. Still, some case companies do not hold these ambitions, possibly making the cluster's strategic direction excessive.

As the importance of stakeholder encounters with Italian parties was widely ambitioned by the case companies, further theoretical findings should be emphasized. Given the early stage of the emerging Italian OW market, the case companies' emphasis on networking with stakeholders seems to align with stated theory by Wang and Lestari (2013) who found this as a prerequisite for entry investigations at large. This arguably makes the case companies better positioned to learn (Lee et al., 2012). In all, the perspective of social capital seems to hold legitimacy amongst the case companies, where network abilities are regarded as important resources (Aspelund et al., 2009).

Considering the distinctions between causation- and effectuation approaches (Sarasvathy, 2001) in Table 3, the case companies should followingly not disregard effectuation approaches prior *to* and *in* stakeholder interactions, even though such approaches are more acknowledged by those of entrepreneurial art. Not neglecting dynamic effectuation approaches further seems to match with theory on emerging industries, as the early Italian OW market at large needs to be further grown by the companies themselves, either in collaboration or competition (Bjørgum et al., 2013).

Still, causation approaches seem to be more relevant for the case companies when *actual* entry to the Italian OW market becomes relevant, instead leaning on effectuation approaches when continuing to investigate the market, contrary to the example proposed by Chetty et al. (2015). Nonetheless, Chetty and colleagues (2015) argued for entrants to align with causation principles when entering markets with higher levels of uncertainty, especially those of institutional art. This also fits well with an emerging Italian OW market characterized at large by especially regulatory uncertainty. Market entry by causation approaches also seems to match Coeurderoy and Murray's (2008) notion of entry speed being inseparable from selection of market, as causation approaches lean on predictive goal-driven strategies.

Some of the case companies might get their next big breakthrough by developing FOW in the emerging Italian OW market. Over 100 years ago, Norwegian writer Sigrid Undset got her artistic breakthrough with the publication of the novel "Jenny", written partly in and having action in Rome, Italy. As industrial companies engaged in OW development investigate emerging markets like the Italian, they should be aware that many aspects regarding entry will change, either incremental or substantially, with forthcoming maturement. As all case companies but one wanted to continue their Italian investigations, one amongst many notions for core companies to remember could be one of Jenny's phrases, finding that "*no love turned out the way they dreamed it, when they kissed each other for the first time*".

[42] As of today, Norway is one of the countries with the largest global installed FOW capacity, further having a goal of 30 GW installed OW capacity by 2040 (The Norwegian Government, 2022). In the first quarter of 2023, the Norwegian government announced competition for two areas, concerning both fixed- and floating technology, to formally commence with winners to be announced by the end of the year. A larger announcement for more areas is ambitioned for 2025 (The Norwegian Government, 2023).

8.2 Partners *in spe*

"*[...] che se dovessimo sbagliare, meglio sbagliare insieme*"

-**Aldo Moro** (1916 – 1978), Italian prime minister from 1963 to 1968, and from 1974 to 1976.

This part leaps of entry modes, thus signalling research question II). Theoretical findings suggested the choice of entry mode to be among *the* decisive decisions for entrants (e.g. Johnson & Tellis, 2008; Holtbrügge & Baron, 2013; Zachary et al., 2015). As shown, most case companies kept distance from mentioning any specific entry mode, e.g. between those listed in Table 2. Still, one case company confidentially declared itself as a WOS while case company G had already set up a JV with another partner, still specifically emphasizing, along with case company D and F, the importance of a local partner. For the latter two companies this involved a co-development partner, seen from research on emerging industries to be important in progressing from an initial stage (Bjørgum et al., 2013; Gustafsson et al., 2016), where the Italian OW market currently sits. Considering the earlier emerging Danish OW market, Garud and Karnøye (2003) stressed how co-development between companies helped the market gain track.

If solely concerning co-development in terms of collaboration, i.e. neglecting competition, such considerations should further imply entry modes where the case companies can execute larger resource control, i.e. entry modes as alliances, JV, and WOS above export and licensing. This is supported by research on emerging industries with, for instance, Bjørgum (2016) showing the former entry modes to become relevant for companies entering emerging industries focused on new technologies, matching the quality of FOW development being most relevant for the Italian OW market.

Large resource control is something that also implies the RBV holds legitimacy for the case companies' decisions, either taken or to be taken. Following the RBV, higher resource control was stated to increase chances of successful entries (Das & Teng, 2000). Case company B also emphasized how a partner should contain a complementary profile to them, arguably towards the final, then joint, OW value offering. As stated, the RBV's posited successful entries to stand better changes when key resources would become more available, either being wanted or already controlled (Wernerfelt, 1984; Eisenhardt & Schoonhoven, 1996). Such resources fit, for instance, when companies having complementary profiles are wanted as partners. Besides, when asked about what successful entry would entail, many case companies' answers revolved around partnerships, for example stressed by case companies D, C, and E, with case company B emphasizing a wide energy proposition being able to leverage synergies across projects, while also having a clear strategy to team up with larger local companies.

Another point of interest arguing for the RBV is how the case companies did not emphasize costs, if even at all, in their varying argumentations, not only regarding those for entry mode but also those for entry investigations- and barriers, thus not aligning well with the TCE who itself rather revolve around companies' hunt to minimize costs (e.g. Williamson, 1979; 1981; 1989). If regarding OW, and especially FOW, involved costs seem to be substantial, implying involved developers to be financially strong. So can also be the case as it was found that approx. 40% of direct costs from offshore petroleum activities, stressed as the case companies' biggest competitive advantages, could have large synergies with those ambitioned for OW development (GWEC, 2023). Further, OW installations can in contrast to offshore petroleum installations reap larger benefits from economies of scale, arguably bringing costs directly down (IRENA, 2022b).

Therefore, the OW industries' involved costs seem to be perceived as rules for the game above barriers. This does therefore not directly disregard Porter's (1980) general characterization of emerging industries having high initial costs followed by steep reductions, as so empirically seems to be the case for the Italian OW market and beyond (IEA, 2019; IRENA, 2021; GWEC, 2023), also detailed in footnote 14. Still, one should remember how no final investment decision on large-scale OW farms was taken in 2022, partly caused by high prices, again party caused by unusual high inflation (BloombergNEF, 2022; Wind Europe, 2023).

It should be noted that the case companies' ideas of entry modes arguably correspond to their specific product or service, current or ambitioned, both for the emerging Italian OW industry and beyond. The case companies are all OW developers but some are not strictly selling products, whereas others, as case companies C and E, are more oriented towards such. Direct exporting should therefore not be fully neglected as an entry mode even though partner companies were widely sought, relating mostly to *project* partners, something the case companies arguably carry different perceptions about, i.e. what OW projects in Italy *really* entails.

None of the case companies stressed acquisitions by word, case company F even stated that the opposite, i.e. internal development, would be relevant moving forward. This implies acquisitions to be less relevant at this stage, supported by the case companies at large when agreeing on allocation of existing resources to have been more relevant than finding new resources, at least to this stage. By Lee and Lieberman's (2010) argumentation, might internal development above acquisitions also results from the Italian market being close to the Norwegian market, i.e. the home market, by varying institutional parameters.

As elaborated, did the same authors stress internal development to be more relevant than acquisitions for emerging industries in phases of stark technological development. These two entry modes are further what Bjørgum (2016) identified as equity modes, again having ties to JV and WOS. JV and WOS should not get all the attention, as high resource control can arguably be attained in co-development alliances. Regarding the current pool of OW projects in Italy, primarily those that compose the 200% increase in grid application to Terna (2022), possibilities exist for the case companies to at later stages join these projects, observed by case company B as an opportunity to meanwhile develop internally. If so, the GWEC (2022) argued, as stated, that entrants should be certain they can provide substantial innovation and cost savings for a second phase.

Looking at Italy in general, entered Norwegian industrial companies with *potential* to enter the OW industry seem to neither have taken use of acquisitions. Currently, two Norwegian wind companies are known to operate in Italy, these being Statkraft and Fred Olsen Renewables. Statkraft, not having public Italian OW ambitions, deal with operation of onshore wind- and solar power in Italy, having many projects in pipeline and counting increasingly more employees (K.EY, 2023). Contrary, Fred Olsen Renewables have publicly communicated ambitions to enter the Italian OW market, already having projects in consenting procedures, even regarding FOW (offshoreWIND.biz, 2023). Common for the two Norwegian industrial companies, holding respective Italian offices in Milan and Rome, are how they have entered Italy *alone*. The exact reasons behind are unknown, but one should remember that onshore wind is a different industry than OW, and vastly more different than FOW, arguably causing different perceptions about entry and competition than those from the case companies. Also, both companies seem financially strong to go alone for the time being.

Looking more to the emerging Italian OW market, few big domestic developers exist, these already being in various partnerships with one another, as raised by case company D. As entry into international emerging OW industries has become a big strategic focus for the current Norwegian government (NOW,

2023a; 2023b), it should be highlighted how an Italian OW developer like Renantis has offices in Denmark and Sweden, even offering services in Denmark (K.EY, 2023). Danish-based Copenhagen Infrastructure Partners are also involved in an OW-partnership with the Italian petroleum-giant ENI (K.EY, 2023). Swedish owners further preside over the JV AvenHexicon, having communicated some acquisitions of necessary Italian permits for OW development (offshoreWIND.biz, 2022).

In all, contrary to the last paragraph, this shows *some*, yet *leading*, similar OW developers to the thesis' case companies to have entered the emerging Italian OW market through partnerships, primarily JV, as an entry mode. Looking into ENI, one can see that Norwegians-sided Equinor is in a JV with them through Vårgrønn on the development of Dogger Bank (2023) in the U.K. Such partnerships fit well with stated theoretical findings by Gustafsson et al. (2016), arguing larger established incumbents to build coalitions for *enhancing* innovations, matching the Italian OW market's outlooks to primarily concern FOW.

One interesting, and arguably overlooked, aspect regarding possible partners along the supply chains (for example becoming relevant if demands of local fabrication) is the Italian cluster structure. To date, many Italian territories contain entire manufacturing processes for certain productions, many even being leading in exports (Innovation Norway). Even though advancement currently lies in ideas rather than plans, the port of Taranto[43] and close companies along an ambitioned OW supply chain[44] *could* be amongst the next clusters, possibly the first regarding OW. If using an example, Saitec Offshore Technologies, a company based in the Biscay-region in Northern Spain and producing concrete foundations for the FOW industry, have reported to use approx. 75% of their construction budget on supply chain products and services from within 25 km of their location, leading to rapid technological development and short lead times (K.EY, 2023), thus beating what has been stated as some persisting barriers to the OW industry at large (IEA, 2022; IRENA, 2022a). The same could arguably become a characteristic for Taranto or the bigger Apulia-region. Still, one should not ignore other possible strong hubs. One of the world's largest oilfield service companies, Italian-sided Saipem, control by example the Arbatax-yard on Sardinia (i.e. close to Italy's most prone OW areas), having previously been used for the construction of platforms for the stated Dogger Bank-project (Press release - Saipem, 2020).

Being faced with much political violence and social turmoil from the 1960s, in what became known in Italy as the "Years of Lead", two-time prime minister Aldo Moro suggested in a speech on the 28th of February 1978 to his fellow Christian Democratic parliamentarians that the "Historic Compromise" with the Italian Communist Party needed to endure for the sake of national peace. Today, the case companies stressed the importance of partnerships, seeming to align well with theoretical findings and empirical practise for entering an emerging industry as the Italian OW market. This and coming entry processes will contain large risks, uncertainty, and turbulence, stressing Moro's notion that "*[…] if we are to fail, it is better to fail together*".

[43] Used by Renexia S.p.A. to build the Beleolico-project, having recently published a competitive tender, for example being relevant for OW developers, for the allocation of areas designated for development of renewable energy production, having a deadline at the 14th of July 2023 (Autorità di Sistema Portuale del Mar Ionio - Porto di Taranto, 2023).

[44] For example, **Vestas** (wind mill blade manufacturing (to produce 15 MW blades from approx. Q3 2023), having to date approx. 700 employees and 50 partners and suppliers), **Marraffa S.r.l.** (specialized industrial transportation, having been engaged in the Beleolico-project), **C.F.G. S.r.l.** (manufacturing shaped reinforced concrete), **Primiceri S.p.A.** (delivering varying control- and electrical systems), **Faver S.p.A.** (e.g. water management), **Comes S.p.A.** (large industrial construction, having Vestas as a customer), **Planetek** (geodata-services), and the stated steel work **Acciaierie d'Italia S.p.A.**
- All known from presentations and visits in Apulia (NOW, 2023b).

8.3 Persisting Barriers (& Opportunities)

"*Veni, vidi, vici*"

-**Julius Caesar** (100 BC – 44 BC), Roman general and statesman.

This part leaps of entry barriers, thus signalling research question III). Barriers of judicial art characterized all the case companies' perceptions about entering the emerging Italian OW market. As emphasized theoretically, will the specific host market's judicial demands inevitably influence the entrants (York & Lenox, 2014). Staying true to further theoretical findings, the case companies stressed concerns about regulation demanding possible local fabrication and ways of conduct (York & Lenox, 2014). As seen, has the former point not been neglected in competitive emerging OW markets as, for instance, the American through their launch of the IRA-deal.

Even though Italian practise is yet to be fully determined, at least when considering regulation, case companies C and D acknowledged Norwegian companies to arguably stand with leverage against demands of possible local fabrication with Norway's EEA-membership. Such barriers may also become more obsolete for European manufacturing at large if the E.U. takes offensive counter steps through similar deals as the IRA, expected by case company G. Barriers revolving around local fabrication could further be accommodated through possible contracts with Italian co-developing companies, or another entry mode where some Italian ownership and/or -management is secured, for example through listing on the stock exchange in Milan, or formal acquisition of an Italian part along the OW supply chain.

Research on emerging industries seems to overlook regulatory barriers, at least by direct abstract phrasing. Still, conforming with the research, regulatory barriers arguably hold the main perceptions, i.e. turbulence, uncertainty, and complexity (e.g. Virany & Tushman, 1986; Aldrich & Fiol, 1994; Gustafsson et al., 2016), upon entering such industries. Specifically, the Italian regulatory barriers revolve around missing modernization (primarily the union of the CDM plus the VIA under the AU in line with PNRR-objectives (2021)) and publications (above all, the "FER 2 Decree" (NOW, 2023a)), something the case companies all emphasized. Such regulatory alterations can in all be attributed to, besides the technological development, characterize why Italy has an emerging OW industry (e.g. Madhavan et al., 1998; Lounsbury et al., 2003).

Even so, one should recollect Porter (1980) listing regulation as a means of state intervention amongst his five characteristics with emerging industries, but *not* as a commonly encountered entry barrier to such industries, at least in phases of early growth. As later studies on emerging industries seem to not diverge, the case companies' regulatory concerns seem more market-specific than objectively true for *all* industries of emerging art. In fact, Porter (1980) only listed regulatory approval as one of many problems constraining industry development, but here not taking the perspective of a core company.

Given the intensity of the case companies' regulatory concerns, additional examples of Italian practise should be emphasized. Regarding tiresome authorization procedures missing modernization, companies should be aware of how Italian legislators have previously *succeeded* when it comes to emerging industries. For example, in a recent study by Bripi (2016) on the role of administrative regulation vis-à-vis the nature of entrant companies, an answer to similar concerns as the ones presented by the case companies was given, stating that until 2007, national Italian regulation imposed "considerable procedural and administrative burdens at the start-up stage" (Bripi, 2016). The following year, four procedures were folded into one, resulting in over 30% reductions in time spent in the regulatory

procedural stage for the entrants. This implicitly shows that early entrants were able to reap the better side of new regulation early, something Rodríguez-Pinto et al. (2008) stressed to especially hold for emerging industries.

Hence, if Italian legislators succeed, anew, in unifying relevant regulatory procedures for industrial development, opportunities may certainly replace barriers. Strong momentum exists as PNRR-funds, containing favourable annotations (when considered jointly) for OW development, needs to reach investment decisions before 2026 (PNRR, 2021). Last year's inauguration of the country's "Technical Commission" (MITE, 2022), overseeing main technical PNRR- and PNIEC obligations, seems further favourable for OW development to catch track in Italy.

Contrary, regulatory barriers in Italy were not anticipated to be resolved *quickly*, according to the GWEC (2022). Still, regulatory steps toward Italian OW development have been done. Amongst the projects that composed the 200% increase in grid application to Terna (2022), one FOW project totalling approx. 400 MW (offshoreWIND.biz, 2022), launched by the Swiss/Italian company Repower Renewable S.p.A., got hold of the necessary CDM in about *half a year*, according to industry presentations (K.EY, 2023). This comes in stark contrast to what the company Renexia S.p.A. experienced upon developing the stated Beleolico-project, counting *five years* for the CDM-issuance.

Such modernized regulation for OW development seems to create more company success, at least in terms of communicated projects at early stages. Case company C stated that the regulatory status for Italian OW development did not diverge noteworthy from what was experienced in other Southern European markets. The road to contracts seemed, by their accord, still easier to endure in more mature markets. This aligns with stated empirical findings as, for instance, the British market holds almost 50% of European OW capacity to date. Quite interesting is therefore how Italian legislators seem to direct forthcoming regulations towards that of the U.K., regarding especially declared contracts-for-difference models (NOW, 2023a).

Added by case company D's comment about Italian OW development being sure to gain track if these latest regulatory drafts (primarily the "FER 2 Decree") turn into judicial status quo, opportunities may also here replace barriers. This *might* happen sooner than anticipated, as OW development at large post-permitting procedures can reach construction quickly, as highlighted by the GWEC (2023). It is also important to bear in mind how Italy comes out amongst the top FOW markets *globally* to see quick emergence, at least having the highest changes (GWEC, 2022).

According to theoretical findings, technological barriers seem to persist throughout emerging industries. For example, Porter (1980) listed proprietary technology as a first barrier, causing complexity to characterize the industry (Aldrich & Fiol, 1994). Regarding characteristics, Porter (1980) also listed technology uncertainty, aligning with the stated introduction of disruptive technologies (Kirkwood & Srai, 2011). Interestingly, the case companies did not primarily state such technological barriers to portray possible entry to the Italian OW market. Rather, technical concerns revolved around upgrades to the domestic transmission grid and missing investments in, for instance, supply chain expertise and physical infrastructure. By these accords, the case companies seem to silently overlook making their possible OW product according to drafted Italian regulation, something that was discussed at this year's K.EY. Energy Fair (2023).

Instead, technical barriers were perceived to lie outside the case companies' direct control. This paints a picture of sophisticated case companies, not pertaining entry barriers to *product* demands, but rather towards *market* demands. It should be noted that strategic market entry, as the task at hand for interviewed company representatives, does not contain technological product development per se. Still,

concerns related to strategic market entry in an expensive and encompassing industry as OW would not overlook the premises set by the outlooks and state for technological development.

The case companies' other barrier perceptions further diverged from stated theoretical findings. Research on market entry often emphasizes barriers of economic- or sociocultural art (e.g. Dikova & Van Witteloostuijn, 2007; Johnson & Tellis, 2008; York & Lenox, 2014; Chetty et al., 2015). Amongst the case companies, relevant statements were that of i) case company G, having an ambition for local stakeholder management, ii) case company B, pointing out possible local opposition, and iii) case company E, proposing political processes to always be relevant for OW development, especially in Italy. Not specifically mentioning barriers of economic- or sociocultural art, e.g. costs or business culture, seems to argue for the case companies not finding the institutional distance between Norway and Italy as noteworthy, supposedly raising changes for successful entries (Dikova & Van Witteloostuijn, 2007).

In all, the presented barriers from the case companies both align and diverge from those found by varying empirical sources. Difficulties with regulations were stated by both the IRENA (2022a) and the GWEC (2022). The IRENA (2022a), the GWEC (2022), and the IEA (2022) state grid connection difficulties as the case companies. Further barriers stated by the IRENA (2022a) align most with the last presented barriers by the case companies, regarding public (often local) opposition and missing growth in support infrastructure and industry (e.g. labour expertise). Entrants should further not disregard possible network relations with Italian stakeholders and regulators, as Markman with colleagues (2019) as this to become increasingly important thus more projects reach pipeline, something that fits the Italian market with its over 100 projects stuck in varying legal procedures (Terna S.p.A., 2022).

Different interpretations exist as to what exact context and time Julius Caesar once uttered, if even at all, his famous words "*I came. I saw. I won*". Even though his rise to power and leadership should not become any direct ideal for industrial companies entering international emerging industries, the now widely famous words sum up what a company should perceive upon their encounter with entry barriers, not forgetting that facing them equals subsequent business opportunities, possibly *all* opportunities. As the case companies at large reported not having encountered any unforeseen challenges when investigating the Italian OW market, they seem well-positioned for the task at hand.

8.4 Implications for Theory on Market Entry to International Emerging Industries

To briefly sum up how the case companies' perspectives correspond to stated research on market entry to international emerging industries, the discussion yields both support and opposition. Concerning entry investigations and research question I), findings seem to overall match theory well, for example the many competing notions of early entry in favour of late entry or vice versa (e.g. Lieberman & Montgomery, 1980; Johnson & Tellis, 2008; Zachary et al, 2015). This again supports normal facets regarding the growth of an emerging industry past the initial stage. Still, the amount of currently involved Italian OW projects seem excessive regarding general characteristics on the pool of involved companies to normally constitute such an early stage (e.g. Mezias & Kuperman, 2001; Gustaffson et al., 2016). Even though the window of opportunity is yet to be reached (e.g. Suarez, 2015), the current pool of projects might accelerate the dominant FOW category and ensuing launch of the window (e.g. Powell et al, 2005; Srinivasan, 2008), accelerating entries by more diversifying incumbents. Separation between effectuation- and causation approaches was found relevant when incorporating the case companies'

stakeholder- and network perspectives but could see further application in theory on market entry and emerging industries (e.g. Sarasvathy, 2001; Chetty et al., 2015).

Reaching entry modes and research question II), the RBV holds legitimacy (e.g. Wernerfelt, 1984; Eisenhardt & Schoonhoven, 1996; Das & Teng, 2000). The case companies' perspectives about resources, concerning especially possible or required partnerships, seem like the most relevant catalyst. Concerning the growth of an emerging industry past an initial stage, empirical findings again support theory but this time around by leaning on the RBV regarding co-development partnerships (e.g. Garud & Karnøye, 2003; Bjørgum et al., 2013; Bjørgum 2016; Gustafsson et al., 2016;). Parts of the RBV's impact could be blamed on the case companies' lacking emphasis on incurred costs or at least the hunt to minimize them. It should be noted that this, for instance, was shown to not directly challenge theoretical characteristics of emerging industries (e.g. Porter, 1980).

The main perceived barrier amongst the case companies concerned regulation, signalling research questions III). This does not match perfectly with theoretical findings at early stages of an emerging industry. As shown, could regulatory concerns be regarded more as market-specific than general characteristics. Still, regulatory concerns were stressed to contain many of the often-stated notions regarding early entry barriers to emerging industries (e.g. Virany & Tushman, 1986; Aldrich & Fiol, 1994; York & Lennox, 2014). Technical barriers were important but revolved more around the market than the product, which is interesting given the persistent focus on technological difficulties when advancing an emerging industry past its initial stage (e.g. Porter, 1980; Kirkwood & Srai, 2011). Other institutional barriers of economic- and sociocultural art further had effect but the former less, corresponding well to the missing focus on the TCE.

8.5 Implications for Managers Overseeing Entry to the Italian Offshore Wind Market

Having regarded the strategic issues of entry *investigations*, *-modes*, and *-barriers* from the case companies' perspectives against empirical findings on the Italian OW market and known theory on market entry to international emerging industries, final strategic advice for Norwegian OW developers, current or ambitioned, are stated in Table 11. As introduced in the thesis' motivation has no generalization been desired. Still, hope persists in the advice being applicable, at least to a certain degree, for industrial companies entering international emerging technology-intensive industries in general.

Table 11: Strategic advice for managers overseeing entry to the Italian OW market (own creation).

Nr.	Strategic advice
1	Financially strong Norwegian OW developers can hold entry to the Italian OW market if being able to offer substantial innovation regarding FOW technology come later swift entry.
2	Being yet to reach the window of opportunity, financially exposed Norwegian OW developers are better positioned to enter the Italian OW market now, shifting focus from allocating internal resources to grip external resources accordingly.
3	Norwegian OW developers should avoid acquiring current Italian OW projects by ownership and instead develop internally towards gaining Italian co-development partnerships able to scale winning FOW technology.
4	Norwegian OW developers should take inspiration from effectuation approaches when investigating the Italian OW market, and from causation approaches when formally entering.
5	When entering the Italian OW market, Norwegian OW developers should scope for local cluster synergies and be posited for rapid regulatory upheaval.

8.6 Encountered Limitations and Suggestions for Future Research

Upon conducting the various studies, as well as developing the research design behind them, various limitations were encountered. Some of these should be stressed, as should also suggestions for further research on market entry to international emerging industries, even regarding the Italian OW market.

First, the thesis introduced and further functioned of the separation between market *product*, *-entrants*, and *-context*. Such a distinction was deemed reasonable and necessary, even though it was not taken from literature on research management nor from theory on strategy and business development. Thus, the specification of such parameters can be elaborated for further case studies regarding general market entry. It would, for instance, come interesting to understand if and how extra parameters could supplement or challenge the empirical study or -cases at hand.

The thesis's theoretical background incorporated many sources. Still, *more* sources should arguably carry *more* weight, possibly strengthen, challenge, or even disregard some of the stressed theoretical aspects in this thesis. Even so, the thesis' theoretical background leaped off a previous literature review, itself having its strengths and limitations. Other theoretical literature reviews into the thematic of market entry to international emerging industries should be desired for further studies as strong contemporary dynamics with the recurring introduction of new technologies carry the research field.

The thesis' two empirical studies met their own limitations. At first, much data for the Italian market study was gathered through events as listed in Table 4. Attending such events was strongly necessary, as a lot of the information regarding the contemporary development of the Italian OW market can not be found in written referenced sources alone. Concerning the multiple case study, one should again emphasize that two levels of coding were used in contrast to the normal standard of three levels. Further studies incorporating more data, possibly over a longer period, should aim for further levels of coding.

Studying contemporary entry strategies towards an emerging industry means no generalization to entry procedures should be directly derived from this research. As introduced, comes this not rare to research on market entry. Further, this thesis' findings and discussion must be seen against the backdrop of an emerging industry at an early stage. As the market products, i.e. OW installations, are too emerging with a strong emphasis on FOW, the case companies' perceptions could be understood as emerging themselves, leading to possible alterations in data in coming case studies. When regarding solely a Norwegian perspective, limited availability of cases further portrays entry to the emerging Italian OW market. Further studies could therefore look behind the Italian market context or even extend the focus on market entrants from Norway alone.

One should further not disregard that other market parameters could have been chosen. Other parameters could have served as equally relevant when considered vis-à-vis theory on strategic market entry to international emerging industries. Some could also be better. For example, during the market study on the Italian OW market, the country's solar PV industry was understood to have possibly reached further stages of maturement, possibly even influencing fewer stakeholders, and be characterized by fewer costs. A similar study into the Italian solar PV market would be interesting to, for instance, understand how entrant's strategic choices develop towards further stages of maturement or possibly discover if the TCE also here seems prevented in favour of the RBV. The GWEC (2022) has by example emphasized the Italian solar PV industry as a close price competitor to the OW industry. Zachary et al. (2015) have also proposed research to emphasize later stages of an emerging industry's growth, even though Forbes and Kirsch (2011) emphasized research mainly lacks perspectives into contemporary emerging processes, these constituting interval C and B in Figure 2.

If wanting to compare the market product of OW installations across contexts, other similar studies should be done on the emerging OW markets in, for instance, Spain, Portugal, or Greece, carrying many similar facets of institutional art to that of the Italian market. Research on the technical- and environmental sides of OW development in the Mediterranean basin has seen a stark rise in recent years (e.g. Cassola et al., 2006; Bripi, 2016; Serri et al., 2020; Maienza et al., 2020), increasing the possibilities. Such comparison seems highly relevant to understand if many of the case companies' perspectives in this thesis were solely market-oriented, or in fact hold across similar institutional contexts, by itself rising a new research interest for emerging industries. Further studies could also see the inclusion of, by Forbes Kirsch's (2011) reasonings, extra theoretical disciplines, and methodological traditions, as emerging industries persist to carry complexity.

Further individual studies into how the main challenges for Italian FOW development, as presented by the GWEC (2022), can be addressed. As can also be done with time when more mature stages align with technological FOW development, for example reaching the window of opportunity presented by Suarez et al. (2015). Such studies could, for instance, give more tangible data in terms of absolute concretization amongst company representatives, possibly raising the pool of companies' ethos concerning strategic perceptions, i.e. emerging strategies becoming more generic.

9. Conclusion: Successful Entry to the Italian Offshore Wind Market

Faced with many internationalization options, many industrial companies will consider entry to emerging industries. Varying motivations will always carry the entrants' desires but arguably come oriented toward the notion of *success*. Most studies on entry to emerging industries, domestic as foreign, have accordingly been done post-emergence, oriented towards measuring or describing the success. This study has distinguished itself by studying contemporary entry strategies to an emerging industry carrying international appeal and strong technology-intensity.

This thesis took the perspective of Norwegian OW developers, current or desiring, investigating entry to the Italian OW market. Studying their strategies alone was never envisaged, as it was rather how their strategies came oriented towards success, incorporated in the problem statement as,

- What does successful entry to *an international technology-intensive emerging industry* entail for *industrial companies*?

By using a multiple case study into seven case companies, the direct perception of success varied strongly from one company to the next. Furthermore, when considered against the continual development of a market study and a theoretical background, success was understood to not only involve a certain point or action, but actual strategic work of various art towards deciding on formal entry or not. Thus, a single phrase to answer the problem statement is not attainable. In fact, success was by varying accounts deemed to come after maintaining- and developing entry investigations on and towards the market at hand, eyeing co-development partnerships and overcoming especially regulatory barriers. More specifically, the thesis has shown known theory on market entry to international emerging industries to at large come acknowledged, still proposing some challenges to be further studied.

Industrial companies will, as stressed by one case company, only invest where the markets seem most interesting. When considering the status quo and current outlooks, the Italian OW market leaps forward as a strong contender for early FOW commercialization. Given the country's current pool of projects, regulatory drafts, and persistent interest, one can hardly argue against Italy being a country where OW development at all will come to take place. Larger interest from Italian companies than first anticipated has developed the market case, leading to stronger competitive terms for Norwegian OW developers ambitious of an international portfolio. In the time coming forward, entrants should be wary of market alterations but not scared of either investigating or entering the Italian OW market, as the market itself will be coloured by the entrants' demands and capabilities, at least for the time being in the emergent market's initial stage.

Still, the clock is ticking.

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A: APPENDIX

A1. Empirical Disclaimers

Having conducted two empirical studies, the thesis gradually understood it could not involve *all* relevant aspects for proper entry investigations to the Italian OW market. Thus, some disclaimers were produced at varying points in the empirical analyses, listed below in an arbitrary order.

- The blend of Norway's EEA-membership and Italy's EU-membership entails many facets of legal character but also regarding the movement of workforce, goods, and services. Interviewing case companies, many representatives put forward this as relevant to their business case, especially how forthcoming EU-regulation on energy development may direct their attention *to* or *from* certain European markets as the Italian. As EU-ambitions for energy diversification into renewables largely impacts OW development in Italy, has some main points from leading EU-policies been included in the thesis, being largely known to the stakeholders. The thesis does not take responsibility for further EU-regulation than this, which ideally must be studied for full knowledge of all facets related to entering the Italian OW market. For instance, on the 30th of June 2023 (2023), the same month the thesis is to be delivered for final evaluation, each EU-Member State is anticipated to submit updated PNIECs (2019), meaning Italian outlooks and procedures, both direct and indirect, for OW development certainly will be modified.

- Continuing on EU-relations, Italy's reception of covid-19 recovery funds can be delayed. As shown, are the large funds' planned investments set in the country's PNRR (2021), arguably having huge stakes for development of OW projects, -value chains, -infrastructure, and more. To receive the funds, Italian officials need to accommodate various policy- and reform demands from the European Commission, which on its side can veto Italian plans. At the time of writing, some tension between the Italian government and the European Commission has come to life over investment areas and -control (POLITICO, 2023a; 2023b). Explained in short, Italy's new government from October 2022, led by Prime Minister Giorgia Meloni, revolved a remarkable part of their electoral campaign on altering *some* elements in the country's PNRR. A revised PNRR, due April of this year is, for instance, unlikely to reach Brussels before summer. Italy's EU affairs minister, Raffaele Fitto, has proposed to move some heavy investments from the PNRR to other funds, to extend investment deadlines, e.g. for OW development, from 2026 towards 2030. In all, the thesis has considered the objectives relatable to OW development as they currently stand in the PNRR (2021), not taking any responsibility for what now seem like forthcoming adjustments, *possibly* significant.

- A thorough legal investigation into the Italian OW market was not performed as the author did not have a background in the judicial field. Additionally, it would have directed the thesis too far off its thematic base in strategy and international business development. Adding such an extensive judicial part would serve the thesis' problem statement, as a prevailing barrier to enter the Italian OW market concern regulation, strongly emphasized by the case companies. Even so, the thesis has included some main judicial issues and -practises, largely known by the industry. Also, current outlooks for OW development in Italy, especially for Norwegian developers, entail larger plants, i.e. MW/GW size. Accordingly, plants proposed to inject at least 10.000 kW into the national electrical grid were given all attention, meaning a certain set of regulations and practises being assessed above others (NOW, 2023a). Most importantly, this implies that applications for connections to the electrical grid must be sent to the national Italian

grid operator, i.e. Terna, and not local distribution companies. This point is largely known by the stakeholders.

- The thesis was written at a time with historic high inflation in Europe. Italy's annual inflation rates, measured from February 2022 to February 2023, lied almost exclusively above both the rates in the E.U. and the eurozone[45]. Many of the prevalent outlooks for OW development in Italy and beyond were set before these high measurements, meaning 2023-values on related costs for entering the Italian OW market lie, *probably*, well above values measured in the preceding years when many formal outlooks were set. As such, the thesis does not take responsibility for all the financial estimates for OW development in Italy and beyond to accurately align with current 2023-values. Coherent financial updates by officials and stakeholders in Italy and beyond should thus be expected.

- The Italian OW market is often understood to be located within the country's exclusive economic zone within the Mediterranean Sea. More specifically, this also entails *parts of* or *all of* the Tyrrhenian Sea, the Ionian Sea, and the Adriatic Sea. Contrary to common perception, may OW development in these areas require not only the construction of connecting subsea cables to the Italian mainland, but also to close neighbours such as France (Corsica), Greece, Croatia[46], Montenegro, Albania, Malta, and Tunisia[47]. Especially interesting for Norwegian OW developers in Italy could be the added opportunities to, for instance, fully electrify Malta by OW. By these considerations, entering the Italian OW market may entail not only the Italian market per se. Even so, the possibilities of such *multilateral* development are completely omitted in this thesis, instead having a sole *bilateral* focus.

[45] According to consistent public statistics from Eurostat, the E.U.'s official statistical office.

[46] Having only in May 2022 signed an agreement on exclusive economic zone demarcation (Government of the Republic of Croatia, 2022).

[47] For instance, the large renewable energy operator Acciona Energia has OW projects in pipeline located off the smaller Italian islands of Lampedusa and Linosa, on the very edge of Malta's and Tunisia's maritime areas (NOW, 2023b). To date, Italy and Malta further claim exclusive right to overlapping sea areas, causing some dispute (International Institute for Law of the Sea Studies, 2021).

A2. Interview Guide

START

- 1) Introduction of the student and the master's thesis.
- 2) Introduction of **company X.**
- 3) Statement about recording, storage, and NSD-guidelines.

MARKET ENTRANT / PRODUCT - STATUS QUO

- 4) As of now, how is **company X** involved in the international OW industry?
    - 5) Does **company X** desire to change this current industry position?
        - 6) Why/Why not?
- 7) How are **company X's** OW activities organized within the company?
    - 8) To this point, has this arrangement yielded success according to **company X's** OW ambitions?
        - 9) Why/why not?
- 10) Is there any prevalent market indicator when **company X** investigates different OW markets to enter?
- 11) Do **company X** wish to develop OW in the home-based Norwegian market before involvement in international OW markets?
    - 12) Why/why not?
- 13) Is **company X** more focused on *pushing* its product offering onto the OW markets, or rather, are the OW markets *pulling* **company X's** product offering?
    - 14) Either way, can **company X's** OW market strategies be characterized as emerging?
        - 15) Why/why not?
- 16) What competitive advantage does **company X** aim to have in its product offering?

MARKET CONTEXT - STATUS QUO

- 17) What is **company X's** current interest for investigating entry to the Italian OW market?
    - 18) What are **company X's** ambitions?
    - 19) Does the Italian OW market fit **company X's** product offering?
    - 20) Are **company X** investigating entry to the Italian OW market by change or has it been a specific focus?
- 21) Investigating entry to the Italian OW market, has there been a specific need to hire new employees with other experiences or competencies?
    - 22) Why so/not?
- 23) What type of market barriers does **company X** anticipate to portray entry to the Italian OW market?
- 24) Has **company X** encountered any unforeseen challenges when investigating entry to the Italian OW market?
    - 25) If yes, which?
        - 26) Why were these not expected beforehand?
        - 27) Did this force **company X** to change strategy?
    - 28) If no, which are to be anticipated?

- 29) Up to this point, how much time and resources has **company X** spent on strategizing entry to the Italian OW market?
    - 30) Is there a specific need for new resources, or allocate current resources differently?
- 31) How does **company X** aim to enter the Italian OW market in terms of corporate structure?
    - 32) Why this structure?
    - 33) Is this specific structure deemed vital to enter? If so, how?
    - 34) If partnerships, is there a focus to find Italian partners or other foreign companies?
    - 35) If partnerships, what kind of formation should the structure have?
    - 36) Has **company X** considered a combination of entry modes?
- 37) Has **company X** had a specific focus on entering the Italian OW market at a specific time, i.e. early- or late entry? Has rapid entry into the market been perceived as important? Why/why not?
- 38) If any, did **company X** take leverage of any specific network relation(s) when investigating entry to the Italian OW market? Has a specific relation been deemed as a prerequisite to enter?
    - 39) Why so/not?
- 40 To this point, has **company X** engaged with, for instance, Italian officials, Italian value chains, Italian maritime industry, Italian communities, etc. when investigating entry to the country?
    - 41) Why so/not?

MARKET ENTRANT / PRODUCT / CONTEXT - FUTURE

- 42) Ideally, how will **company X** conclude they have entered the Italian OW market "successfully"?
    - 43) What are **company X's** realistic ambitions?
- 44) With full competitive terms for OW yet to be reached by Italian authorities, how does this uncertainty impact **company X's** entry strategies toward the Italian market?
    - 45) Where does **company X** expect the Italian OW market to go?
    - 46) Would **company X** propose any specific measures Italian officials or -stakeholders need to adopt if **company X** is to continue investigate entry?
- 47) Knowing what you do know about the Italian market, will **company X** continue to investigate entry to the Italian OW market?
    - 48) Why/why not?
    - 49) Do **company X** expect to enter the Italian OW market?
- 50) Until this point, and with the aim of entering the Italian OW market, how would **company X** evaluate the collaboration in the Team Norway initiative?
- 51) Being a Norwegian OW company, is **company X's** strategy aligned with the NOW cluster's cluster strategy?
    - 52) If yes, how?
    - 53) If no, why not?
- 54) Where does **company X** expect, or at least aim, to be in 10 years?

END

- 55) Do **company X** wish to add something?
- 56) Statement about anonymity and the time coming forward.

A3. Manufacturing Strategies

Widely known in research on production strategies, a simple presentation of how production is split by the customer order's decoupling point (CODP) is seen in Figure A, itself to be read from left to right. The CODP, marked as the triangle, should be understood as the point in the manufacturing process where production based on specific customer orders and production based on stock levels/prognosis is separated. The production strategy with the least amount of customer specification is the make-to-order (MTO) strategy, focusing on mass customization, e.g. for low-price consumer goods. Towards sole customer-driven manufacturing, instead focusing on 100% customization and larger engineering projects, the assemble-to-order (ATO) and make-to-order (MTO) strategies comes before the engineer-to-order (ETO) strategy. ETO-production traditionally entails the longest lead times and highest costs.

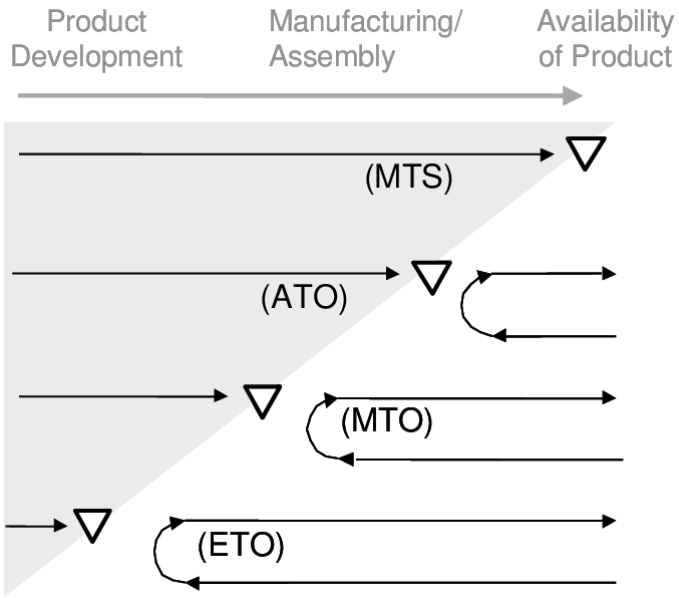
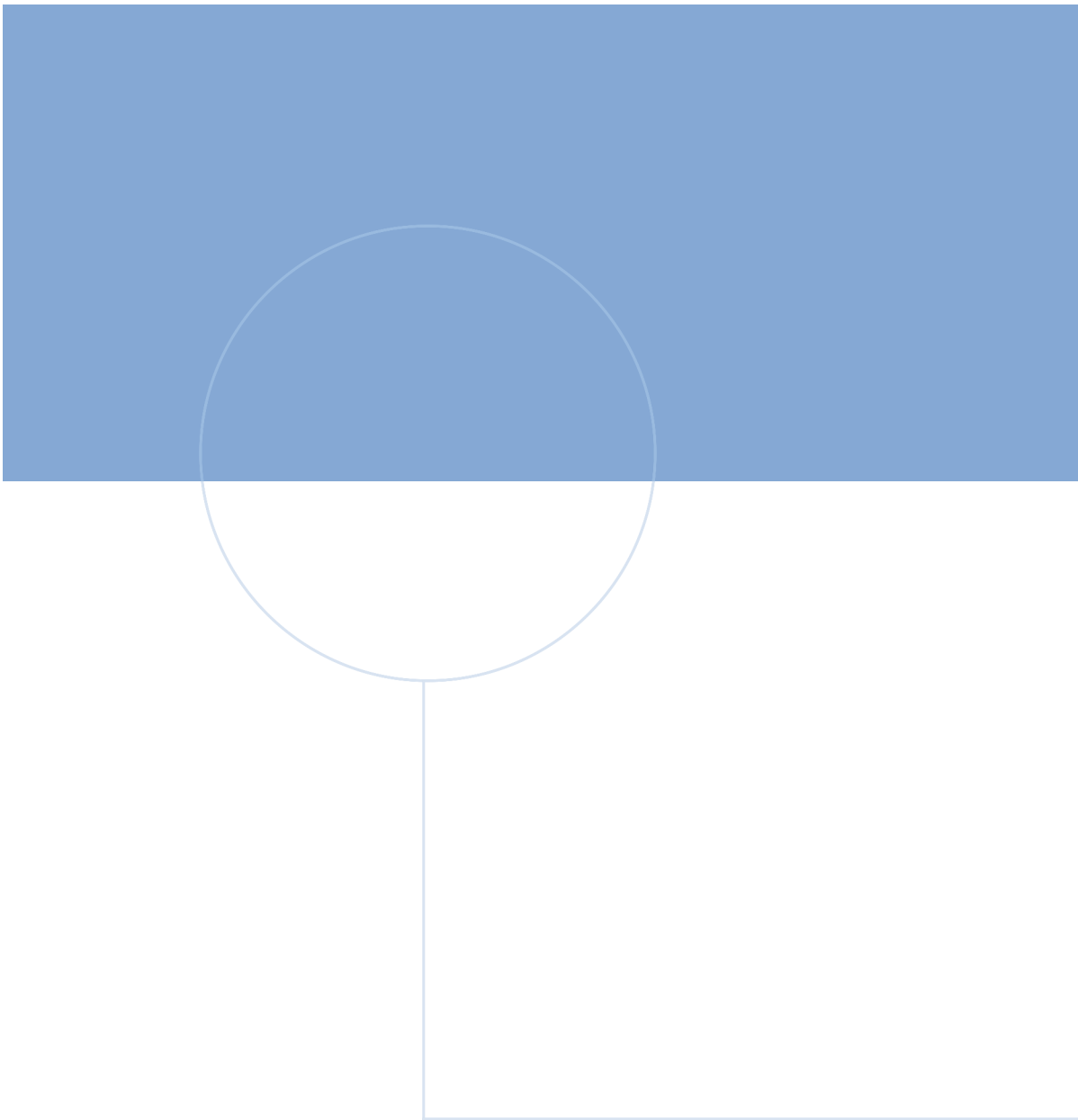


Figure A: Customer specification and decoupling point *(Thoben, 2003)*.



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