



Vaasan yliopisto
UNIVERSITY OF VAASA

Paul Vetter

Effectual logic of international entrepreneurs in digital platform environments

Master's thesis in International Business

Double Degree Program

Vaasa 2022

Table of Contents

Figures	3
Tables.....	3
Abstract	4
1 Introduction.....	5
1.1 Background of the study	5
1.2 Justification, research gap	7
1.3 Research question and objectives of the study	9
1.4 Delimitation and structure of the thesis	10
1.5 Key concepts and definitions.....	12
2 Background and literature	14
2.1 Platforms	14
2.1.1 Defining platforms and digital ecosystems	16
2.1.2 Global growth and platform’s relevance	17
2.1.3 Platform architecture and ecosystem.....	19
2.1.4 Uncertainty	22
2.2 Effectuation	23
2.2.1 Conceptualizing effectuation	26
2.2.2 Principles.....	27
2.2.3 Uncertainty and its evaluation - The affordable loss principle	29
2.2.4 Unexpected events - The lemonade principle	30
2.2.5 Networking in ecosystems – The crazy quilt principle	31
2.2.6 Co-creating the present – The pilot in the plane principle	32
3 Empirical part	35
3.1 Research design	35
3.2 Methodological approach	35
4 Findings	38
4.1 Case companies	38
4.2 Internationalization with platform ecosystems	40
4.2.1 Digital infrastructure.....	40
4.2.2 Global marketing.....	43
4.2.3 International networks and employee acquisition	45
4.2.4 Dependency	47
4.3 Effectuation in globalized platform environments.....	49
4.3.1 Agility and international competitiveness	50
4.3.2 Uncertainty and control.....	52
4.3.3 Causation vs. effectuation.....	55
5 Discussion.....	57

5.1 How do INVs internationalize with platform solutions?	59
5.2 Global dependency of INVs	62
5.3 Agility in platform ecosystems	64
5.4 Adaption and effectual evaluation in global, dynamic ecosystems	66
5.5 The effectual mindset in an international platform environment	67
5.6 Model development.....	69
6 Conclusion	72
6.1 Contribution to theory	72
6.2 Managerial implications.....	74
6.3 Limitations & future study proposal	75
Bibliography.....	77

Figures

Figure 1 – Research categorization and research gap.....	8
Figure 2 - Digital platform ecosystems (Re-drawn)	20
Figure 3 – The effectual process (Re-drawn).....	27
Figure 4 - Case companies interview agenda	37
Figure 5 – Dynamic cycle of the international entrepreneur’s effectuation in platform ecosystems.....	70

Tables

Table 1 - Literature Review – Digital platforms	15
Table 2 - Literature Review – Effectuation	25
Table 3 - Summary of propositions.....	34
Table 4 - Cross case comparison.....	58

UNIVERSITY OF VAASA**School of Business Studies**

Author: Paul Vetter
Title of the Thesis: Effectual logic of international entrepreneurs in digital platform environments
Degree: Master of Science International Business Administration
Program: Master's degree of International Business programme
Supervisor: Peter Gabrielsson
Year: 2022

Abstract

Due to globalization and the ongoing transformation towards a highly digitalized environment, international new ventures increasingly face dynamic and rapidly changing ecosystems. Resultingly international entrepreneurs are in close contact with dynamic digital platform constructs that impact today's B2B and B2C markets on many levels. International entrepreneurs encounter uncertainty and an unpredictably fast changing future in this network-based environment, but at the same time explore novelty and a wide range of opportunities. This thesis aims to explore how the international entrepreneur's decision-making, concretely under the perspective of effectual logic, is able to navigate through the dynamic nature of fast changing digital platform environments.

The theoretical framework of this thesis builds upon a wide range of literature discussing effectuation, digital platforms and their shared conjunction in the international context. Effectuation and digital platforming are concepts that emerged within the last 30 years and showed a significant increase in relevance as today's globalized and digitalized economy facilitates their growth and interplay. The concepts have been discussed increasingly over the last years, while the conjunction of effectual decision making by international entrepreneurs in digital platform environments has not been discussed sufficiently. In order to observe the resulting interplay, this master's thesis carries out a qualitative study that observed three German based international new ventures through semi structured interviews.

While observing international entrepreneurs in dynamic platform environments, factors such as agility, dynamism and reactivity seem to play a huge role in the effectual decision-making process. Big tech platforms, in conjunction with the innovative power by small high-tech companies, create an unpredictably fast changing environment that is globally connected and forces international entrepreneurs to consistently adapt their assumptions about the future. Opportunities and solutions to start new ventures are largely enabled by big tech platforms, while competition between entrepreneurs is also accelerated. The resulting environment of an interconnected digital platform - INV ecosystem - brings a wide range of novelty, innovation as well as dependency that selects only the fittest and most agile companies.

KEYWORDS: international entrepreneurship, effectuation, digital platforms, dynamism, innovation

1 Introduction

Within recent years digital platform enterprises became the globally biggest and most valuable companies to ever exist, while their continuous growth supports this ongoing trend. Their global structure and internet-based information exchange provide them high efficiency and make them agile in various international environments, despite their gigantic size. Especially new ventures and entrepreneurs can benefit from these platforms and are able to build up new international ventures by incorporating big tech platform's services. Solutions in the field of marketing by Google and Facebook, payment by PayPal, data analysis and communication by Microsoft and Salesforce, social media networks by Tencent and Instagram are just few examples of big global platforms services that can support the international entrepreneur to initiate their business. Therefore, a huge variety of new business and platform connections on a global scale were facilitated, and rapid changes and innovation occurred due to dynamic relations between all actors (de Reuver et al 2018). International entrepreneurs need to be aware of these fast-changing environments in order to react to disruption, rapid change and potential opportunities in the future. In this regard it might be worth taking a closer look at the international entrepreneur's decision making and observe how it interacts with the globalized platform environment.

1.1 Background of the study

The globalized and highly digitalized infrastructure of today's business environment became a catalyst for young enterprises and brought high leverage to international entrepreneurial ventures. Especially globally created networks and interconnections between new ventures, platforms and all relevant stakeholders allowed an efficient information exchange and a resulting opportunity appearance for new business (Tiwana & Balasubramaniam 2001). In this regard one can assume that competition between new ventures increased accordingly, as the provided service by platforms is available to anyone, everywhere and at a relatively low cost (Baldwin & Woodard 2009; Rocht & Tirole 2003). From the platform perspective, it appears that such platforms face almost

untouchable competition in the field of their service as the user dependency of existing digital platforms and their overall market power became immense (Moore & Tambini, 2018). This creates a quickly growing and changing environment that is quite dynamic but remains mainly operated and controlled by a few gigantic companies. Therefore, besides creating new business opportunities for new ventures, big platforms demand their own growth and oftentimes establish market barriers for competitors. It seems to be a two-edged sword that surely helps new international ventures to build their business with the help of many platforms, but the resulting dependency between the new venture, the platform and the customers also creates huge monopolies.

The question of how entrepreneurs should address these circumstances within their decision making arises. Especially when considering that the highly globalized and digitalized platform environment itself changes continuously and dynamic, unpredictable ecosystems seem to demand adaptive and novelty generating approaches (Zahra & Nambisan, 2012). This might impact the decision making of INVs regarding effectual logic, as they operate in highly uncertain environments (Yang & Gabrielsson 2017). As Yang and Gabrielsson describe, entrepreneurs encounter technological uncertainty and market turbulences in a globalized digital economy appear frequently. Decisions in such drastically changing and unpredictable environments cannot be planned long term and the benefits of an effectual decision making might help new ventures to participate in the globally highly digitalized platform environment. Therefore, the logic of the international entrepreneur's decision-making within the global platform environment will be looked at under the perspective of effectuation. It can be assumed that this agile and fairly new environment of globalized and highly digitalized interconnections of platforms shares common ground with the uncertainty-addressing concept of effectuation. (Sarasvathy et al., 2014; Nambisan et al., 2019)

The resulting fluent nature of digital platforms and disruptive evolution of young international ventures creates an ocean of possibilities and innovation, where the big platform enterprises have many advantages and new ventures must find niches and novel opportunities to compete meaningfully in this construct. A closer look at the

interplay between the platform ecosystem and the international entrepreneur's decision making is therefore of major interest.

1.2 Justification, research gap

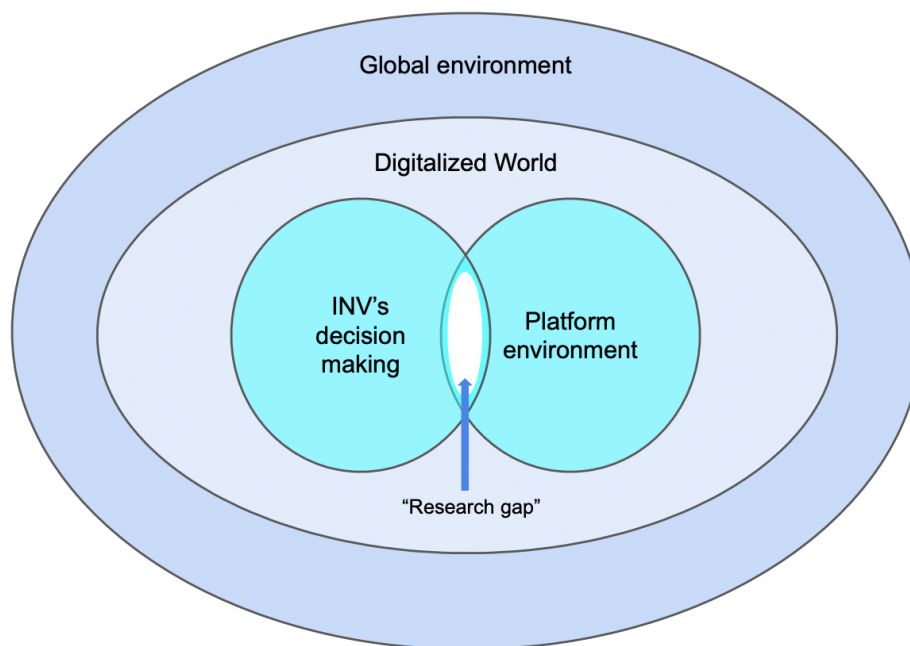
Research on effectuation and digital platforming became increasingly relevant over the last 20 years. Both topics have a strong impact on today's economy and the process of integrating new ventures into the internationalized and technological world of today's business (Hein et al., 2020; Gabrielsson & Gabrielsson, 2013; Ojala et al., 2019). However, effectual decision making by INVs in platform environments has not been studied sufficiently. This issue is addressed by Nambisan et al. (2019) as they suggest, "to build on extant research on the sources and mechanisms of technology generativity and incorporate factors related to digital technology, platform architecture, [...] and, in doing so, it may also be possible to connect with related existing concepts in innovation and entrepreneurship—for example, effectuation, improvisation, and bricolage" (Nambisan et al. 2019, p.5). As Nambisan et al. depict, the relation between platform environments and effectual logic is of interest to study, while both topics contain overlapping topics and research on it is generally missing. This might be due to the short period of time in which big platform enterprises became such relevant companies and their observation focused on how they are constructed rather than the impact they have for related ventures, in particular the international entrepreneur's decision making (de Reuver et al. 2017).

Platforms generally have seen an increasing interest in research, most likely for their growing power and ability to maintain innovativeness, while the changing manifestation of platform enterprises itself leaves a lot of room for novel and necessary research (Van Alstyne et al. 2016). The process of utilizing and entering the uncertain and competitive fields in platform environments under the perspective of a dynamic decision making is therefore a quite interesting viewpoint as both effectual logic and global platforms in digital environments are closely related to dynamism and adaptive change (Sarasvathy et al., 2014; Tiwana 2015; Teece, 2010). As platforms are altering constantly and are

non-static constructs, effectual decision-making might help new ventures in these uncertain environments to enter the everchanging and dynamic nature of digital platforms.

Research regarding this combination is difficult to find and further studies about the relation of these topics might be helpful to understand how international new ventures can successfully interact or compete within platform environments. To provide a further categorization of the topic and its importance, Fig. 1 will depict where the research gap emerges and how it is embedded within existing fields of studies.

Figure 1 – Research categorization and research gap



(own Illustration, 2022)

The actions of platforms in a highly globalized and digitalized world force international new ventures to adapt quickly to changes, whereby the connection to effectual logic might lay at hand. A closer look at the overlapping field of interest might therefore

generate new and interesting insights within internationally active ecosystems. In the following section a clarification of the thesis objective will be established.

1.3 Research question and objectives of the study

The aim of this study is to understand how international entrepreneurial ventures behave in the fast-growing environment of digital and globally integrated platform ecosystems. It should be investigated how the international startup's decision making is influenced by the surrounding platform environment and how they can incorporate business aspects such as communication, marketing, payment, data management etc. via platform solutions. Further, the resulting dependencies between new ventures, platforms and the users shall also be addressed and most interestingly, what this means for the venture's future effectual decision. The view of the international new venture towards dynamic ecosystems and an uncertain future shall be central to combine the theoretical implications of effectuation with the present digital platform environment. This interplay establishes the core of this thesis. To get a further understanding on how the fluent and fast changing ecosystem of digital platforms influence the decisional behavior and effectual logic of entrepreneurs, the research question will be preliminary:

“Which factors impact the international entrepreneur's effectuation process in a globalized digital platform environment?”

Clear and transparent objectives help to answer the research question. Furthermore, the objectives decide the direction of this study. The following objectives were chosen to achieve novelty, structure and meaningful contributions to platform and effectuation research:

- Scrutinize the international entrepreneur's effectuation process in contrast to the dynamic impacts of digital platforms in a globalized network-based ecosystem

- Produce measurable propositions that address the dynamic interplay between the international entrepreneur's effectuation and digital platform environments
- Qualitatively observe comparable small size platform INV's to test the propositions
- Generate novel insights and a model that exploratively, descriptively and critically contributes to the literature

By looking at these objectives and the research question it should be elaborated how the effectual logic of entrepreneurs and their related decision making is embedded in the surrounding international platform environment. Factors such as innovation, change, flexibility, and agility are found in the concept of effectuation as well as in the topic of digital platforms, whereby both topics find a common ground. The framework to further establish a connection between the two themes is to look at the construct from a network perspective whereas platform owners and different INVs form a global ecosystem. The factors that affect effectuation for international entrepreneurs, and the resulting impact for digital platforms will be the central viewpoint the thesis builds upon.

1.4 Delimitation and structure of the thesis

The interconnection between both topics narrows the brought field of platforms and decision-making into a more centralized sphere towards effectual logic in a dynamic technologized platform environment. The combination of both topics should concretely point towards interrelating factors that influence both sides, while digital platforms and effectuation will be discussed, first separately and then merged into a shared perspective.

Therefore, the theoretical part will firstly consist of a discussion about platforms and their relation towards dynamism, change, architecture, and uncertainty. Secondly, a respective discussion about effectuation and its benefits in ambiguous and dynamic environments will follow. In these sections, five propositions will be elaborated upon.

Thirdly, both topics will be assimilated and the propositions will be tested and discussed in the empirical section. The underlying theoretical basis and merging of both topics shall generate the foundation of the empirical part, to concretely interview three young international platforms about their effectual decision-making in the digital platform environment. Their experiences will be utilized to build a theoretical model that describes the interplay between the effectual logic of international entrepreneurs and the globalized platform environment. The international perspective is shaping the observation of the case companies and the combination of effectual logic and digital platforms throughout the whole thesis.

The context of the study is the rising interest in dynamic decision-making by international entrepreneurs, especially in times of change and exponential growth. Compared to traditional approaches, a more dynamic way of operations seems to find interest both in the literature and the actual implementation within the startup scene (Rochet & Tirole 2003). The enormous success story of platform giants within recent years on the other hand, indicates the importance and further market alteration by big tech platforms (Gawer & Cusumano 2014). Temporarily, the whole platform environment gained a boost in relevance due to the covid pandemic, as many consumers and producers were forced into the digital environment due to restrictions. This might be a further accelerator for the superordinate trend towards more flexible online networks and platform solutions. Entrepreneurs might benefit from this shift towards a globalized digital platform ecosystem, and should be prepared to dynamically address the present and upcoming changes.

1.5 Key concepts and definitions

Internationalization, INVs, digital platforms, big tech platforms, effectual logic and dynamism are key concepts in this thesis. The following part explains the key concepts and their fundamental associations.

Internationalization is referred to as an “interplay between the development of knowledge about foreign markets and operations on [the] one hand and an increasing commitment of resources to foreign markets on the other” (Johanson & Vahlne, 1990). Oviatt and McDougall build on this assumption and relate it to international new ventures by describing that “internationally experienced and alert entrepreneurs are able to link resources from multiple countries to meet the demand of markets that are inherently international (Oviatt & McDougall, 1994).

International New ventures (INVs) are described as “business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of output in multiple countries” (Oviatt & McDougall, 1994; Zahra 2005). They build on the properties of small and medium-sized enterprises, which employ below 250 employees and are mostly independent of larger enterprises, while adding the lens of internationalization to their operations (Mudambi & Zahra, 2007, Jones, 2011; Fan & Phan, 2007).

Digital platforms are defined as “ecosystem[s] [that] comprise a platform owner that implements governance mechanisms to facilitate value-creating mechanisms on a digital platform between the platform owner and an ecosystem of autonomous complementors and consumers” (Hein et al. 2019). It is also referred to as software and code-based while being integrated into the globalized digital environment (Tiwana, 2010; Baldwin & Woodard, 2009).

Big tech platforms describe global digital platform enterprises that are highly integrated in the current B2C and B2B economy (Cusumano, 2008). Apple, Microsoft, Alphabet, Amazon, Tencent or Meta Platforms are examples of these massive enterprises that operate global platform ecosystems and connect a huge variety of stakeholders with via services, products and a global digital network (Van Dijkck, 2020; Van Alstyne et al., 2016).

Effectual logic or **effectuation** is part of the decision-making process and cognitive logic of entrepreneurial and managerial interaction under unpredictable circumstances and an overall uncertain future (Fisher 2012, Sarasvathy 2001). Effectuation processes are “consistent with emergent strategy and include a selection of alternatives based on loss affordability, flexibility, and experimentation” (Sarasvathy 2008, Chandler et al., 2011).

Dynamism in this thesis depicts the force that enables change, disruption and innovation in high tech markets (Thornhill, 2006; Rosenbusch et al. 2011). It is a driving factor for novelty and has impact on the entrepreneurial decision-making, ability to survive and power to innovate (Gabrielsson & Gabrielsson, 2013, Townsend et al. 2018).

2 Background and literature

This Chapter will be separated into the background on digital platforms and the background on effectuation. To begin with a comparative view on digital platforming in internationalized environments and the underlying literature will be taken. Afterwards a respective look on effectual logic and the core literature will be presented. On the next page in Table 1. fundamental research on the topic of digital platforming is summarized and the different implications of the theoretical contribution are depicted.

2.1 Platforms

Research in the field of digital platforms began with the rise of technology companies and their relation to the internet. As companies such as Microsoft, Cisco, and IBM were among the first successful ventures that created digital networks between consumer, product, operator, and supplier, (Boudreau & Jeppesen, 2014; Cusumano, 2008) early studies began to analyze the architecture and structure of these new ventures and their related ecosystems (Cusumano & Selby, 1998; Cusumano & Yoffie, 1999).

Since then, several perspectives on digital platforming have been taken and a broader, more diverse understanding of platforming and related aspects emerged (Lusch & Nambisan, 2015). Platforms under the digital perspective were studied by Tiwana (2010), Baldwin & Woodard (2009) and Tilson et al. (2010), a market-based perspective was elaborated by Parker et al. (2017); Van Alstyne et al. (2016) McIntyre and Srinivasan (2017). A more socio-technical viewpoint was taken by de Reuver et al. (2018), Constantides et. Al (2018) and Nambisan (2019). The complexity and diverse range of viewpoints that were taken on platform enterprises seem to create different streams of research directions.

One could assume that the big picture and interdependent factors within platform ecosystems as a whole might lose their relevance in literature, while in reality big tech platforms gain impact on all levels of the topic. Therefore, recent studies support a recombination of relevant topics to maintain the comprehensive and structural impact that digital platforms have on all levels (Baldwin & Woodard, 2009; Hein et al., 2019).

Especially with a focus on emerging interdependencies. In this regard Hein et al. suggest “a paradigm shift by integrating the intraorganizational technical perspectives on digital platforms and the inter-organizational economic, business, and social perspectives on ecosystems” (Hein et al., 2019). Furthermore, Nambisan et al. (2018) describe the comprehensive field digital platforms are acting in, by stating, “in essence, a platform provides a common foundation and a venue for a wide range of entities to converge in creating and delivering value to their customers” (Nambisan et al., 2018; Evans & Schmalensee, 2007). This leads to the assumption that platforms should be seen as a whole, as they have many interdependent variables and actors that should not be separated. The core literature that is depicted and elaborated further throughout the thesis is summarized in Table 1.

Table 1 - Literature Review – Digital platforms

Article	Method	Research Question	Main result
Baldwin & Woodard (2009)	Qualitative	How are platform’s architectures designed?	Consumer and Complementors are crucial. Platform’s architecture can achieve economies of scale.
Tiwana et al (2010)	Qualitative (Comparative review of relevant literature)	How do digital platform owners’ choices affect the platform ecosystem?	Choices by platform owners and the dynamics of an ecosystem’s exogenous environment influence its evolutionary dynamics.
Cusumano & Selby, (1995); Cusumano & Yoffie, (1998)	Qualitative (Microsoft observation)	How are software products (Windows Microsoft) conceptualized?	Depiction of software companie’s product structure (Microsoft), architecture of software platforms.

Rochet & Tirole (2003)	Quantitative	How is competition within two-sided platform markets structured?	A market with network externalities is a two-sided market. Platforms can effectively cross-subsidize categories of end users that are parties to a transaction
Hein, Schrieck, Riasanow, Setzke, Wiesche, Böhm & Krcmar (2019)	Qualitative	How do different digital platform ecosystems vary?	Platforms are compositions of the internal digital platform and the platform owner, the external ecosystem and the autonomous complementors, and the intermediate perspective of value-creating mechanisms in the ecosystem
Parker, Van Alstyn & Choudary (2016)	Book contains Qualitative and Quantitative studies	How have platform businesses managed to disrupt and dominate vast traditional industries?	Competitive strength of platforms often outperforms traditional business. Platforms redefine the nature of work.

2.1.1 Defining platforms and digital ecosystems

The multisided view on platforms and their manifestations leads also to a variety of definitions that find their validity depending which perspective might be taken. Tiwana for instance underlines the digital and code-related nature of platforms by describing them as *“The extensible codebase of a software-based system that provides core functionality shared by apps that interoperate with it, and the interfaces through which they interoperate”* (Tiwana, 2014). Van Alstyn et al. on the other hand describe platforms as businesses that *“provide the infrastructure and rules for a marketplace that brings together producers and consumers”* which points towards the competitive and market-based perspective that platforms contain (Van Alstyn et al., 2016). A shift towards the socio-technical perspective is depicted by de Reuver et al. as they describe platforms as *“Technical elements (of software and hardware) and associated organizational processes and standards”* (de Reuver et al., 2018).

A more comprehensive and supra oriented view on platforms as ecosystems is defined by Hein et al. as they underline *“a digital platform ecosystem comprises a platform owner that implements governance mechanisms to facilitate value-creating mechanisms on a digital platform between the platform owner and an ecosystem of autonomous complementors and consumers”* (Hein et al., 2019). Under this perspective interdependencies between all actors and the non-static structure of the environment itself shows how platform owners have impact on the whole construct (Sambamurthy et al. 2003). This also corresponds with the rapid growth and extension of current big tech platforms.

The variety of differentiation within defining a platform surely implies how dynamic and adaptable the nature of such platforms has become and how this construct should be seen as a durable, changing environment (Helfat & Raubitschek 2017). Especially when considering that big tech platforms constantly evolve their appearance by acquiring new ventures and seemingly unrelated businesses to increase their range of impact. (Amazon acquiring MGM, Microsoft buying LinkedIn and Activision Blizzard) The result is a dynamic ecosystem that introduces more consumers, technologies, and innovation, and creates dynamic opportunities and competition for young international ventures as thriving forces alter the market constantly. Therefore, the view of digital platforms as a whole and under the ecosystem and network perspective is fundamental in this thesis.

2.1.2 Global growth and platform’s relevance

Within the last years big platform enterprises became increasingly relevant and managed to acquire huge market shares across very different international business fields. The rise of the internet and its continuous availability for almost every human facilitates the global networking power of companies such as Amazon, Facebook, Google, Tencent, or Alibaba. Even though these companies have fundamentally different business structures and cannot be compared on every level, they all benefit immensely by creating an online network that connects people and services via a regionally unaffiliated, internationally active platform (Baldwin and Woodard, 2009).

A shared benefit of these platforms for instance is the reduced need of physical infrastructure and assets, which allows to decrease costs and facilitate positive network effects (Alstyne et al., 2016). Due to their online infrastructure, big amounts of data can be processed and analyzed, and its open infrastructure leaves room for further integration of novelty seeking technologies such as artificial intelligence. Dynamic tools, networks and services to optimize and facilitate modern businesses as well as the consumer's demands are increasingly provided by big platforms which generates further scale in the platform industry. Big platforms are therefore shaping today's businesses from both a producer and consumer perspective (Parker et al., 2016).

This dominance and robust success of platform enterprises is further underlined, when looking at the earnings. Microsoft, for instance, maintains a revenue growth rate of around 15 % per annum within the last years, despite being the third biggest company worldwide measured by market capitalization (macro trends.net, 2022; statista.com). Alphabet, which owns Google, has similar growth rates ranging from an average of 15 – 20% annually and is the fourth biggest company by market cap (macro trends.net, 2022; statista.com). Their gigantic size would let one assume a less dynamic growth in revenue, profits and overall relevance, but their international online integration, service applications for new businesses and digital platform ecosystems might describe the reasons for their immense success. When looking at the 5 biggest companies by market capitalization being Apple, Saudi Aramco, Microsoft, Alphabet and Amazon, four of them operate a digital platform (statista.com). The international integration and dynamic strength of big tech platforms assumably have a large impact on young international ventures, as entrepreneurs can access these big tech platform solutions and networks to grow their own business at a low cost. Large international networks are created and INVs can access them to build their own business or integrate big tech platform services into their own products or services (Coviello & Cox, 2006; Van Alstyne et al., 2016). This enables innovation, growth and scale as international entrepreneurs can utilize services that help to build their digital infrastructure, international networks, global marketing and communication (Meyer & Mugge, 2001; Tiwana, 2014).

Therefore, it is proposed that:

Proposition 1: Digital platforms facilitate the internationalization and growth opportunities of INVs as they offer efficient solutions to outsource the implementation of relevant business units such as infrastructure, marketing, communication, global networks or HR.

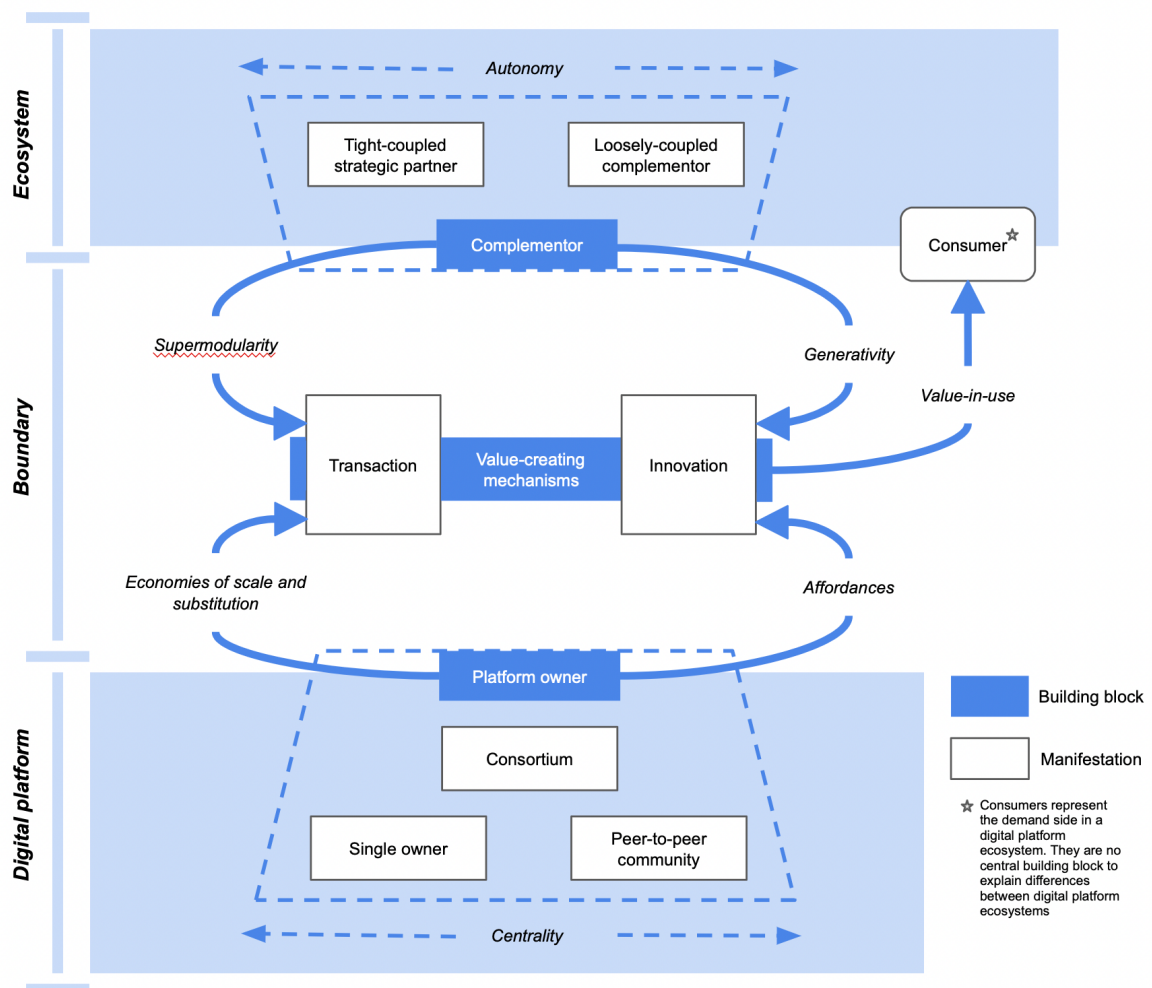
2.1.3 Platform architecture and ecosystem

To further understand how platforms have such robust, yet dynamic capabilities and benefit new ventures on such an integrated level, a closer look at the general architecture shall reveal the interpolating factors within the digital platform ecosystem. Preliminarily, it should be stated that such a concept functions as an abstraction to model the real world's manifestation of such platform ecosystems. It cannot ideally represent any actual platform due to limited representation capabilities, neither can it summarize all individual manifestations of existing platforms (Yoo et al., 2010). However, a conceptualization is helpful to understand the fundamental relations between different actors within the platform ecosystem and its application should facilitate the general understanding of established, existing platforms.

Platform ecosystems usually consist of three main actors, the platform owner(s), the complementors (sometimes referred to as providers) and the consumers (or users) (Baldwin & Woodard 2009; Tiwana 2014; van Alstyne et al., 2016). The platform owner is running the digital angle point where product/service and the consumer meet. Apple owns iOS as a platform, Alphabet owns Android, and Amazon owns its online marketplace. On these platforms a variety of complementors create services or products that can be found on the platform or are used to utilize the platform. An example on Apples iOS platform for complementors would be developers that create Apps running on iOS, complementors on Alphabet's Android platform would be smartphone manufacturers as well as app developers, and on Amazon's marketplace, individual dealers would be seen as complementors. The consumer in the end can access services or products that are brought to the platform by the complementor or the platform owner themselves (Wen & Zhu 2019; Gawer & Henderson 2007). Usually, the

complementor pays a fee to utilize the platform's user range and ability to efficiently bring the service/ product to the consumer.

Figure 2 - Digital platform ecosystems (Re-drawn)



(Hein et al., 2019, re-drawn)

In fig. 3 the digital platform ecosystem is conceptualized, whereas platform owner and complementors mark the interface on which consumers can use or buy the product or service. This area in between complementor and platform owner, which is referred to as value-creating mechanisms, builds on the efficiency and scalability of transactions and the affordance to facilitate innovation and optimization in the evolution of the

platform ecosystem (Yoo et al., 2012). The efficient arrangement and orchestration between complementor and owner reveal a two-sided market that creates beneficial network effects. The resulting networks and platform structures create attractive and cost-effective solutions for young ventures to integrate fundamental business services. These platforms can provide solutions for almost all business units of a firm: digital marketing such as Google Ads, Instagram, YouTube; network and HR solutions like LinkedIn, Stepstone, Fiverr; cloud storage and a business infrastructure provided by Salesforce, Microsoft, AWS, SAP; Retail Platforms like Amazon, JD.com, Alibaba or communication Platforms like Discords, Slack.

The architecture of such digital platforms provides an efficient and accessible solution for young international firms to outsource the implementation of relevant business subsidiaries. Within this construction one should notice that also strong dependencies also occur. In this regard Tiwana states, “the platform owner and the complementors depend on each other and share a common fate” (Tiwana, 2014). Therefore, symbiotic relations (positive and negative) between platform owners, complementors and consumers might appear. The architecture however is not static, as for instance the consumer of this platform excerpts pressure on and facilitates innovation within the platform ecosystem. This change might also be driven by new ventures and young entrepreneurial firms that bring disruptive potential regarding innovation and novel know-how that impacts the platform’s structure (Zhou & Wu, 2010).

The grade of autonomy of complementors and centrality of platform ownership might further influence the level of openness of the platform and its potential to change over time (Nambisan et al., 2019). Platform ecosystems with a high level of centrality and a low level of autonomy for the complementors are therefore more resistant to change within the given platform ecosystem architecture (Hein et al. 2019, Bourreau 2017). Apple, for instance, has a high level of centrality, while complementors have only limited degrees of autonomy (Cusumano, 2010). Nonetheless, how open, or centralized platforms might be, the affordance to innovate, and change is omnipresent. If a platform’s ecosystem lacks the ability to change internally or adapt to external pressure, the user base might gravitate to a more sophisticated and contemporary competitor

(Gawer & Cusumano, 2008). This threat is also facilitated as digital platforms act in an international sphere and users can switch to a competing platform if desired without any regional boundaries.

After getting a first insight on the structure of platforms and their relation to other companies and young ventures, the second proposition is:

Proposition 2: Big tech platforms create huge dependencies, as they develop globally active networks between their own services, INVs and end customers.

2.1.4 Uncertainty

This brings up the dynamic nature that such platforms experience. Changes within a rapidly growing business environment are typical and all actors should be able to maintain flexibility. As Baldwin and Woodard describe, “an important property of platform systems is that they are evolvable, in the sense that they can adapt to unanticipated changes in the external environment” (Baldwin & Woodard, 2009). The evolution of ecosystems is not linear wherefore the platform owners and complementors must coordinate all their means and abilities in a flexible way. Sudden changes due to a disruptive innovation might cause users to change their consumption behavior and almost instantly shift to a different company (Parker et al. 2016). The platform owner and the co-dependent complementors should therefore remain solutions and hold alternative strategies that could be useful in times of rapid change. Big digital platforms understood this issue and positioned themselves in fields such as AI, Blockchain and Cybersecurity as the highly digital infrastructure cross countries within platform ecosystems is dependent on such topics. (Jia et al. 2018 Gawer & Cusumano, 2014).

As this unpredictable and constant evolution in pattern forces the highest degree of innovation and adaption for basically all actors of the ecosystem, many opportunities occur. Especially international entrepreneurs and INVs might take chances and adaptively prepare their skills to enter the existing global and digitalized ecosystems.

Nambisan states in this context, that “innovation and platforms have created numerous opportunities for entrepreneurs and their firms—from serving as inputs for innovation for established firms to participating as complementors on existing platforms” (Nambisan et al., 2018). It remains up to any venture’s (especially new ventures but also existing platform’s and complementor’s) ability to prepare for further changes in the ecosystem’s evolution. Traditional managerial concepts that statically focus on an expected outcome might lack the ability to react in times of digital growth and socio-technological globalization (Van Alstyne et al. 2016). Due to the high level of uncertainty and ambiguity in such environments, an emergent strategy should facilitate the process of adaption.

With the given insight it is proposed that:

Proposition 3: The dynamic structure of platform ecosystems forces international entrepreneurs to maintain agility, especially in a digitally and globally connected environment.

2.2 Effectuation

Effectuation theory is part of the decision-making process and cognitive logic of entrepreneurial and managerial interaction given under an uncertain future (Fisher 2012, Sarasvathy 2001). Within this theory it is fundamental to understand that the concept is based on given means that lead to a yet undefined outcome. The theory was firstly introduced by Sarasvathy in 2001 and was followed by diverse literature and articles regarding decision-making, effectuation, and causation in entrepreneurial ventures. The following Table 2 summarizes crucial research in the field of effectuation and provides insight on the theoretical contribution.

A central viewpoint within effectuation is that it is not possible to predict the future, but by utilizing techniques and know-how it is possible to control and frame it (Dew & Sarasvathy, 2002). This implies that the near and distant future are characterized by moments of ambiguity and uncertainty (Yang & Gabrielsson 2017) and it becomes a

challenge to adapt to such changes (Knight, 1921; March 1982). To overcome this uncertainty, effectuation suggests being aware of one's own competencies and understanding how to utilize them in times of change and disruption. As described by Eisenhardt & Martin (2000), the relevance of dynamic capabilities in an internationalized and digitalized world should outlay abilities for any venture to adapt to these ongoing shifts (Sapienza et al. 2006, Saad 2007). Entrepreneurs in this regard should not approach a static outlook for the future, as the fluent state of the highly globalized and technologized world, presupposes agility and dynamic reaction (Schweizer et al. 2010).

In contrast to the effectual approach, research about causal logic defines its counterpart. Within causation a particular effect is taken as granted and to achieve this effect, necessary means are selected consistently (Ansoff, 1988; Mintzberg, 1978; Brews & Hunt, 1999; Sarasvathy, 2001). By combining these means in a heuristic way, the result will address predictable obstacles and deliver (if the circumstances are not too complex) an efficient way to solve such problems (Prashantham et al. 2018). It can be seen as a more traditional approach within decision-making, as the path of finding a solution is already defined. This, however, requires predictable surroundings and a level of certainty to successfully apply causal logic (Chandler et al. 2011).

As depicted by Weick (1979) it is difficult to find rationality, when the external world does not set static rules, and ongoing variations should be understood by the actors. Sarasvathy, Dew and Read (2008) underline this thought and point towards the resulting role of the entrepreneurial decision-making that suggests room for flexibility and adaptation. Internationalization, globalization, and digitalization opened doors for a rapid growth of innovation and a transformation process, which results in high levels of uncertainty and disruptive pressure. Therefore, it might be reasonable to adapt with effectual logic and emergent strategies to address major changes (Mintzberg, 1978; Sarasvathy, 2008). Table 2 summarizes the core literature on effectuation and provides a perspective on the different views of the entrepreneurial decision-making process.

Table 2 - Literature Review – Effectuation

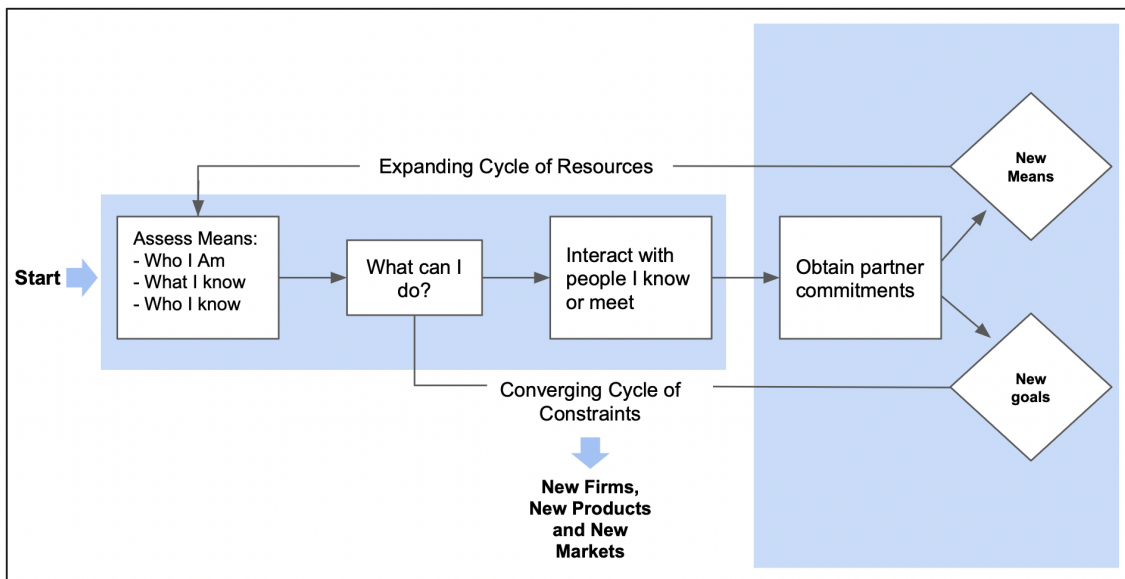
Article	Method	Research Question	Main Result
Sarasvathy (2009)	Qualitative	What is effectuation?	Comprehensive insight on effectual logic and many related factors. Standard literature and book about causation and effectuation.
Chandler, McKelvie, DeTienne and Mumford (2011)	Qualitative (Semi-Structured Interviews)	Relevance of Causation vs. Effectuation?	Effectuation is a formative, multidimensional construct with (experimentation, affordable loss and flexibility). Effectuation and causation are both relevant.
Sarasvathy (2001) Dew and Sarasvathy (2002)	Qualitative	What is effectuation? How are firms established?	Differentiation of effectuation and causation. Explanation what effectuation is not. How is it connected to other forms of management theory.
Wiltbank, Dew, Read, and Sarasvathy (2006)	Qualitative	How do young companies decide what to do when faced with uncertainty? control vs prediction?	If uncertainty arises how do firms manage related issues. Perspective taken under a transformative decision-making approach. General use of effectuation for all firms.
Yang and Gabriellsson (2017)	Qualitative	Which marketing decisions are made by entrepreneurs in high-tech B2B markets?	Causal and effectual variations due to, technological and internal uncertainty, and market turbulence faced by the firm.

Gabrielsson and Gabrielsson, (2013)	Qualitative	Which phases experience growth and survival of INVs.	Maturity of INV is dependent on rapid and dynamic changes in high-tech environments. Opportunities, crises, retrenchment and effectual logic contribute to the growth phases INVs experience.
Dew, Read, et al. (2008)	Quantitative (Protocols of 27 expert entrepreneurs and 37 MBA students)	Do expert entrepreneurs frame decisions using effectual thinking more often than novices do?	Experts focus on means, partnerships, networks and weighed predictive information less than MBA students.
Fisher (2012)	Qualitative, deductive (alternate template research design)	How does Individual behavior influence effectuation, causation and bricolage?	Behaviors are consistent across the emerging theories; causation does not effectively capture and reflect the actual behavior of entrepreneurs.

2.2.1 Conceptualizing effectuation

The startup finding its decision-making with effectuation takes all relevant means into consideration to create the foundation of the novel idea (Sarasvathy, 2008). Central for international entrepreneurs using effectual logic is to utilize abilities and strengths they already have, rather than struggling to achieve abilities others urge them to have. Agility, flexibility, and dynamism in changing environments are resulting factors when operating with an effectual mind-set that can help the entrepreneur to adapt to unpredictable changes in the future.

Figure 3 – The effectual process (Re-drawn)



(Sarasvathy & Dew, 2008; re-drawn)

Figure 4 depicts the theoretical construct of the effectual process and describes a non-static decision-making process that contains a variety of means and factors that ultimately form several possible outcomes. Changing means and goals during this process enhance the model's ability to address uncertainty and produce more than one possible answer. Within this model are the core principles of effectuation that are relevant to maintain its dynamic and emergent characteristics.

2.2.2 Principles

Digging deeper into the concept of effectuation, five principles distinguish and build the foundation of Sarasvathy's model. Starting with the "bird in hand" principle, she describes the entrepreneur's set of means: who I am, what I know, and whom I know. These three core aspects address the entrepreneur's abilities and knowledge in the first place, the vision, intention, and identity, as well as the connections and networks to other key contacts (Schweizer et al, 2010).

Sarasvathy compares the means within effectuation to the style of cooking where the chef has to “look through the cupboards in the kitchen for possible ingredients and utensils and then cook a meal. Here, the chef must imagine possible menus based on the given ingredients and utensils, select the menu, and then prepare the meal” (Sarasvathy, 2001). This metaphor clarifies that within the effectuation process all means (ingredients) are the starting point and these means decide what path the process will take. Generally, the means may consist in the global, digitalized platform world generally of know-how, technology, international networking, structural and organizing abilities as well as relationships to potential partners (Tranfiend et al., 2003). Defining means is in the first place a very sophisticated and complex task, because all actions and connections to entities originating from the entrepreneur, can be seen as means (Dew et al., 2009). Nevertheless, the entrepreneur creates based on these means a venture with scope for novelty and flexible outcomes.

Causal logic depicts the inverse decision-making model in contrast to effectuation and starts with the sought goal (Chandler et al., 2011). Compared to the metaphor of cooking within causal logic the process begins with the idea of the already finished menu and uses preselected ingredients to create the product. The cook has the recipe, and she/he can follow heuristics to create the menu. Whether the meal prepared with effectuation logic or causal logic tastes better cannot be generalized. Both methods produce delicious or not delicious meals, dependent on the cook’s abilities and the customer’s taste (Harms & Schiele, 2012). Regarding the international entrepreneurial scene, where novelty, innovation and creativity are core attributes, the effectual logic seems to do very well and can reveal its potential.

Entrepreneurial decision-making in a global and complex environment might derive from an abstract and even subconscious origin such as political or religious ideology, behavioristic and in-depth psychological viewpoints, digitalized and innovatively driven worldviews or aesthetical pursuits (Sarasvathy, 2008). Seemingly all these factors can be defined as means and play a role in the active managing of enterprises within an internationalized, unpredictable world.

Sarasvathy concludes the bird in hand principle as a “one to many mapping” which illustrates the variety of outcomes within effectual logic (Sarasvathy, 2008). Having possible directions to several yet unknown outcomes facilitates innovation within the establishment of new international ventures and enables entrepreneurs to process ideas in a much more creative and adaptive way (Teece et al., 2016). Even though this method leads to novel and disruptive inventions, many of these changes cannot be calculated and the evaluation of the consequences is challenging.

2.2.3 Uncertainty and its evaluation - The affordable loss principle

To this extent, the effectual method provides an approach that revolves around the decision-making process in such challenging situations and is depicted in Sarasvathy’s second principle. This so called “affordable loss” principle implies the entrepreneur’s risk affinity and motivates them to choose actions that have a potentially beneficial outcome, even though they could still end up failing. The core question in this principle for the entrepreneur is “what am I willing to lose in order to start the venture” (Sarasvathy, 2001). If the loss is affordable, it might be worth it, meaning that the option resulting in the future could be more valuable than the maximized return in the present (Sarasvathy, 2008). Changing environments have the tendency to be very dynamic, equivocal, and even uncertain, (Gabrielsson & Gabrielsson 2013) resulting in a difficult evaluation of circumstances for the entrepreneur (Fisher, 2012). By focusing on the downsides and potential losses the entrepreneur can assess the worst case on the one hand and on the other hand, expand the set of opportunities for the venture.

Causal logic would suggest calculating the estimated return, which is at this point of course just a prediction. This prediction is then compared to the effort, time and fundraising that was necessary to achieve the innovation. In all cases, where the expected return turns out to be negative, causal logic would not promote the innovation, which would result in a lot of lost opportunities (Fisher, 2012; Galkina Lundgren-Hendriksson, 2017). The affordable loss principle twists this around and suggests, even if the entrepreneur loses money or time there might be a huge potential

in the long run. It is almost impossible to predict that, but if the entrepreneur can manage the loss, she/he should take the risk. As predictions are in most cases not correct, they are not reliable in many situations (Kahneman, 2011).

Taking this thought further to failure and success in existing startups, it becomes clear that in many cases luck was the crucial variable (Gompers et al., 2006). One unpredictable change within the ecosystem can change the circumstances fundamentally, either positively or negatively. Maybe one small move of the startup or even of the startups surrounding could result into huge social media attention activating thousands of search algorithms that lead to a free marketing campaign. It is easy for the entrepreneur to claim they anticipated such an event after it happened but very often these path changing happenings are simply driven by luck or misfortune.

Focusing on the affordable loss, the entrepreneur creates new opportunities and is prepared if something unexpected happens, (Dew et al. 2009) however the entrepreneur should be aware of many future scenarios in which the decision could end up failing.

2.2.4 Unexpected events - The lemonade principle

Moving on, the principle of “leverage contingency” forms the third aspect of effectuation. This principle also referred to as “Lemonade” principle (originating from the saying “when life gives you lemons, make lemonade”) depicts unexpected factors and underlines their beneficial potential rather than focusing on the downside. The entrepreneur must be open-minded towards new changes and should try to implement these changes into the venture. This might force the entrepreneur to go unusual paths, but going new unexplored trails might reveal unexpected opportunities. The key ability is that the entrepreneur can make use of this actuality and takes the chance to interact with it. Within Sarasvathy’s study from 2008 one entrepreneur quoted: “I always live by the motto Ready-fire-aim. I think if you spend too much time doing ready-aim-aim-aim-

aim, you're never gonna see all [the] good things that would happen if you actually start doing it and then aim" (Sarasvathy, 2008).

As entrepreneurs are innovators, they must invent new possibilities and reinvent old patterns, appreciating all the unexpected eventualities that facilitate that process (Christensen et al. 2013; Markides 2006). Even if the surprise factors seem to only have a negative impact on the venture, the entrepreneur should reveal/uncover possibilities and new markets coming along with the unexpected action.

Combining the role of surprises to platform ecosystems, the following hypothesis is created:

Hypothesis 4: Predictions and assumptions of the future within global digitalized environments have to be adapted constantly.

2.2.5 Networking in ecosystems – The crazy quilt principle

The fourth principle focuses on partnerships and the collaboration between all stakeholders. Co-creating with business partners rather than competing with business rivals. Causal models support a detailed competitive analysis, whereby managers would work against competitors and invest energy to maintain or achieve the venture's optimal position. Entrepreneurs using effectual logic take stakeholders with commitment to the startup into account and are opened to cooperating with them. Even though there might not be a long-term relationship and regardless of what opportunity costs emerge, the entrepreneur generally interconnects with external stakeholders, as they can potentially become part of the network or even the venture itself (Sarasvathy, 2008). The extension of the ecosystem's and the venture's network is always helpful as it links the ventures impact to the range of additional firms in the acting environment. Especially during times of globalization and platform digitalization, where many changes in the traditional pipeline economy are happening, a strong variable network might help to adapt dynamically (Van Alstyne et al., 2016). Within the crazy quilt principle, the fundamental idea is to reduce uncertainty by committing to stakeholders and stakeholders

committing to the venture. Over time, a network is established that offers new opportunities and enlarges the entrepreneurs mean repertoire. A startup with access to a large network has oftentimes, especially in unpredictable situations, more viable solutions as they have contact to other experts in different fields. As many entrepreneurs share the networking affinity, a kind of symbiotic ecosystem gets established, many opportunities and ideas for the future are created (Hansen & Witkowski, 1995). Startup hot spots such as Berlin or the Silicon Valley offer a lot of connecting days and entrepreneurial events to strengthen the interconnections between all stakeholders and online connection events find more and more interest. Going this path alone without creating a network seems to be very unlikely.

2.2.6 Co-creating the present – The pilot in the plane principle

The fifth and final principle within Sarasvathys model focuses on control vs. prediction. All four other principles have their foundation in the “pilot in the plane” principle and the decision-making process depends on this last principle. The core aspect is the focus on the controllable present and not the approximative prediction of the future. Controlling the present in this regard goes along with controlling parts of the future, whereas not every change disrupts the market fundamentally. This evaluation utilizes all means the entrepreneur can offer and give him the ability to control aspects that are controllable. Sarasvathy expands this thought and states that “to the extent that we can control the future, we do not need to predict it.” (Sarasvathy, 2008)

Even expert entrepreneurs with a broad range of experience cannot predict the future (Dew, Read, et al. 2008) rather they control their activities and arrange, based on all five principles, the desired product. Acting in an entrepreneurial environment makes it too complex to predict the future, moreover these environments are very situational and luck-dependent. Working towards a controllable present, by building up networks, being ready for unpredictable action and taking risks when it is affordable can decrease this luck dependency, but it is still a nearly independent variable. Forecasting the future is in many fields impossible, as for instance depicted in Kahneman’s Book “Thinking fast and

slow". Most experts that predict the future in many different economic fields are not significantly better than non-expert people predicting the same circumstances (Kahneman, 2011). Most things are unpredictable and therefore Sarasvathy clearly states predictions and assumptions are not the path entrepreneurs should go, rather they should utilize what they already have and shape the future in the present. After elaborating the main effectual principles in conjunction with the theoretical outlay of digital platforms and their dynamic properties it is proposed that:

Proposition 5: An effectual mindset facilitates the entrepreneur's ability to internationalize in platform environments. Networks, exploration, a time-restricted planning horizon and affordable losses are driving factors that benefit the international entrepreneur in such dynamic ecosystems.

After establishing the theoretical foundation and resulting propositions, an overlapping field of interest in the theory of digital platforming and effectuation gets visible. Especially in an international context, the fast evolution of platform enterprises creates dynamic and unpredictable environments which might be addressed with effectual logic. Uncertainty plays a big role in both concepts and the element of surprise and disruption are encountered by both global platforms and international entrepreneurs within the digital world. It seems like effectual logic can provide solutions for the problems created by dynamic environments in the international platform world.

The propositions discuss similar topics like internationalization, agility, uncertainty and networking under the perspective of platform environments and entrepreneurial effectuation. Summarized, they are structured like this:

Table 3 - Summary of propositions

#	Proposition
1	Digital platforms facilitate the internationalization and growth opportunities of INVs as they offer efficient solutions to outsource the implementation of relevant business units such as infrastructure, marketing, communication, global networks or HR.
2	Big tech platforms create huge dependencies, as they develop globally active networks between their own services, INVs and end customers.
3	The dynamic structure of platform ecosystems forces international entrepreneurs to maintain agility, especially in a digitally and globally connected environment.
4	Predictions and assumptions of the future within global digitalized environments have to be adapted constantly.
5	An effectual mindset facilitates the entrepreneur's ability to internationalize in platform environments. Networks, exploration, a time-restricted planning horizon and affordable losses are driving factors that benefit the international entrepreneur in such dynamic ecosystems.

3 Empirical part

In this section of the thesis, it shall be described, how the research was conducted, what method was chosen and why it was chosen. It will also discuss the data collection process, its analysis and the underlying philosophical assumptions. Furthermore, the limitations, validity and reliability of the thesis will be discussed.

3.1 Research design

To generate scientific data, it is crucial to determine the underlying philosophical assumptions (Silverman, 2000; Erikson & Kovalainen, 2008). As this thesis aims to generate novel insights within the space of internationalization, platform economy and entrepreneurship theory, a reality of subjective and socially constructed topics are discussed. It revolves around a composition of multiple perspectives which interpret and analyze the surrounding world and its individuals and stakeholders. Resultingly, the core findings are discussed under the lens of interpretivism. Entrepreneurs experience a variety of situations which the researcher can qualitatively observe under the lens of interpretivism in order to generate quality-based, novel insight (Leitch et al, 2010). Direct communication with the entrepreneur, as well as the interpretative understanding of the entrepreneur's perception, are a vital part of the interpretivist paradigm and shall create a set of means and data based on real-life experience and underlying literature. The resulting empirical data is therefore based on the entrepreneur's experience as well as the researcher's understanding and theoretical interpretation of what was observed (Yin, 2011; Erikson & Kovalainen, 2008).

3.2 Methodological approach

To give more detailed and explicit insights into the venture's decision-making the empirical part will be of qualitative nature. This opens doors for novelty within the quite specific combination of effectuation and digital platforming. Qualitative research is a

holistic approach that involves discovery. According to Williams, the qualitative method is less structured in the description because it formulates and builds new theories (Williams, 2007). Direct insights due to interviews with digital internationally active platforms shall provide a detailed and more descriptive view on the topic and further extend the theoretical basis of this study with empirical research.




3.3 Data collection

With the intent to create scientifically valuable insights and a novel understanding in the field of entrepreneurship, internationalization and platform economy, primary data will contribute the main part for the thesis foundation (Hox & Boeije, 2005). The primary data was collected in face-to-face interviews that followed the semi-structured approach (Longhurst, 2003). Due to the covid-19 pandemic, the traditional approach of in person face-to-face interviews needed to be adapted to a strictly online solution of interviews (Deakin & Wakefield, 2013). An interview guide and set of prepared questions revolving around a theoretical base from the space of effectuation, internationalization and digital platforming, was paired with a number of in-depth follow up questions to grasp a further dimension of understanding and a further degree of novelty. Secondary data was also utilized to fill gaps and embed new primary data in the existing at hand information about the case companies, for instance the case companies' websites (Hox & Boeije, 2005).

The interviewees were conducted in several interviews with focus topics in platforming & internationalization as well as effectuation and decision-making. The duration of the semi-structured interviews varied from 41 to 94 minutes, depending on the interviewee's engagement, motivation and number of follow up questions. It can be summarized that all interviewees were highly cooperative and spent often more time than initially scheduled to discuss prepared and ad hoc questions. A first interaction on slack allowed them to understand the field of interest and give them an introduction about the topic and the initial questions the interviewees were expecting. All Interviewees were reachable for short text questions that cleared up further

understanding in the decoding phase of the interviews. All interviews were held in the interviewees mother tongues, German, in order to maximize the level of insight and information generated. Later they were transcribed into English.

Figure 4 - Case companies interview agenda

	Business Idea	Interviewees	Dates & Interviews
	A platform that connects event providers and customers with an international online ticket market	Markus Link, Co-Founder & Lead Developer	20.05.2022 Focus Platforming & Internationalization 31.05.2022 Focus Effectuation & Decision Making
	A platform ecosystem that facilitates the subscription process for companies in the EU	Manager, wish to stay anonymized	17.05.2022 Focus Platforming & Internationalization 20.05.2022 Focus Effectuation & Decision Making 24.05.2022 Follow up Interview Platforming & Internationalization
	A young platform that aims to connect international craftsmen with jobs abroad	Co-Founder & CEO, Dan Olorunmaye	10.05.2022 Focus Platforming & Internationalization 15.05.2022 Focus Effectuation & Decision Making

(own Illustration, 2022)

3.4 Case selection

As described, the primary data was collected by conducting semi-structured interviews to three young digital platforms. To increase comparability and purposefully optimize the sampling approach, they were chosen based on the following underlying similarities (Fielding & Schreier, 2001; Yin, 1994):

1. They all work as a digital platform.
2. They are all internationally active.
3. They are young firms, with an entrepreneurial mindset.
4. They were all founded and have their base in Germany

To create a high level of comparability, a careful selection of interview partners was approached, which resulted in interviews with three comparable software-based platform enterprises. The process to acquire qualified and comparable interview partners in the field of digital platforms can be described as somewhat challenging, as in European countries the trend towards digital platforms seems to be lagging behind compared to pioneering regions such as North America (European Investment Bank, 2022). However, the ongoing shift towards online solutions, also catalyzed by the 2020 covid pandemic, creates a progressively beneficial environment for research in the field of international platform research (Adedoyin & Soykan, 2020). Therefore, and also with credit to the explorational and cooperative mind of the interviewed entrepreneurs a selection of INVs with similar patterns and a comparable foundation is available.

4 Findings

In this section a closer look at the three case companies will be taken. It should summarize what the core business is, how the platform is constructed and globally integrated as well as how the underlying business cases lead to the topic of the thesis. After the introduction of the three cases, the propositions and main topics of interest regarding internationalization, platform ecosystems, networking and effectuation will be discussed by presenting and comparing key findings from the three case studies. It shall be comparatively analyzed how the basis of the theoretical assumptions can be supported and what differences appear when looking at the case companies under the lense of platforming, internationalization and effectuation.

4.1 Case companies

Billwerk is a platform startup, that is specialized in managing subscription-based services for companies, as they describe in their mission statement: “Unleashes the potential of

your subscription business” (billwerk, 2021). The Integration of subscription models, recurring billing and pricing, debit management and related data monitoring is the main field where billwerk aims to optimize services for customers. The platform connects business customers with payment providers, such as PayPal, SEPA, Credit Card providers and other payment solutions and integrates the payment process, application, monitoring and regulative norms between all stakeholders. It was founded in 2015 and since then has internationalized into other European countries and markets. The rising popularity of the subscription model, that demands a frequent transaction process between the venture, payment providers and banks as well as the countries taxation formalities led to a platform ecosystem that connects and enables all actors to interact over billwerks solution. Big international platforms such as Apple, Google, PayPal and Amazon are part of the payment integration ecosystem and build a broadly connected ecosystem for mid to large business that utilize billwerk’s service.

Univents, the second case company, is a platform solution for the online ticketing process and management of events and festivals. Customers can purchase tickets and book promotions via an application, while event-providers can offer their ticketing and extra options via the ecosystem. Univents is further embedded in a variety of other platforms, as its services can be shared via Instagram, Maps and other social media platforms. Univents connects users and event providers and encourages a network between all actors, as their mission states: “Univents is to create a central anchor point for everything related to experiences and events”. The company was founded in 2021 and is expanding from Germany into various countries. Univents has an international approach, as the network connects people from all over the world and further aims to create an internationally scalable solution. The platform is built around an app that connects all stakeholders and is available on Android and IOS.

Craftsmen Beyond Borders, the third case company, is a platform that connects companies with international craftsmen and enables them to find work in North European Countries. The idea is that a large number of qualified craftsmen in countries

with lower wages can find high quality jobs in countries like Germany and can be mediated over the platform. The startup was founded in 2021 and has the mission to “bring qualified people and qualified companies together with modern technology and innovation, that is why we want to create a digital platform that creates a bridge between skilled workers and craft companies”. A digital network between all parties is the key component of Craftsmen Beyond Borders, while arrangement of contracts, temporary work solutions and regulative integration of international craftsmen are the main service provided. As Craftsmen Beyond Borders offers a solution that operates between different countries, the startup has an international mindset and members from a variety of countries.

4.2 Internationalization with platform ecosystems

In the following section it will be discussed how the platform nature is facilitating the internationalization process within the case companies. All companies are analyzed and compared side by side in each sub-topic to generate comprehensive results and show where the research indicates overlapping insights. With that approach a direct comparison and qualitatively valuable interpretation based on the underlying theoretical assumptions is facilitated, while the propositions can be tested under the perspective of all cases (Yin, 2011). It shall be elaborated how the case companies’ platforms are operating internationally, how their ecosystems are embedded in the overall international platform environment, factors regarding global marketing strategies are compared and their approach on employee acquisition and other operationally relevant instances are discussed.

4.2.1 Digital infrastructure

As **billwerk** operates a platform that connects international customers via a decentralized ecosystem, the digital infrastructure to enable a globally accessible network is crucial. Therefore, a core part for billwerk’s international digital system is the

server integration via Amazon's AWS and the Microsoft Azure Cloud. It has enabled billwerk to create a *"platform that is accessible in several locations without being dependent on a single one, which makes it for us and our customers easier to access an international framework"* (billwerk, 2022). The underlying code is hosted via GitHub, a digital platform specialized for code and data within digital ecosystems. As billwerk described, this creates an efficient and immersive network, as many of the utilized services offered by third party platforms are built to interact with each other. For that reason, the internal communication is managed through Microsoft Office suite, especially Microsoft Teams and also the communication network Slack, which is owned by Salesforce. Billwerk gave the example, that *"the integration and effortless communication between Slack and other platform ecosystems like Microsoft Office, makes it very easy to communicate over long distances with other departments in different countries we are operating in. A decision in the management department can be easily transferred to, for instance, our marketing department, while all relevant employees are directly in the respective slack group and resulting meetings can be directly scheduled into the outlook calendar. After that the meeting can be hosted directly in teams, this solution is super integrative and we didn't need to develop our own internal communication tools"* (billwerk, 2022).

Univents utilizes a quite similar approach as their digital infrastructure is based on Amazons AWS and the Google Cloud. Univents underlined, that the easy access to cloud providers as well as their overall integration within other services by big platform companies like Google, Microsoft or Amazon make it ideal for young ventures to get started and build an internationally functional ecosystem. Furthermore, univents is hosting applications that are internationally available on Apple iOS and the Google Android PlayStore. As univents created a platform that connects event providers and customers from all locations, the international availability for anyone with an application hosted by iOS and Android is supporting their global accessibility and international ecosystem approach. Univents further underlined, that their own integration of such infrastructural foundations is far more costly than the outsourcing towards a service

provider. This especially helps young startups to maintain low starting costs, but simultaneously enable a functional ecosystem that can be transferred to different countries and locations worldwide. As they state, *“the process of internationalizing is much easier now, as the ecosystem solutions by big tech platforms that we use are as functional here in Germany as they are in North America. When we communicate with Microsoft Teams over such long distances, we barely remember that some of our colleagues are sitting on the other half of the planet”* (univents, 2022).

Craftsmen Beyond Borders as the third platform has its digital infrastructure based in the Google Cloud. Similar to univents, they stated that the affordable access to such a service and the overall popularity make it ideal for entrepreneurs to offer their own service beyond the home country. As they stated, *“it gets quite easy to reach out to potential customers and partners with an ecosystem that is based online. [...] International cooperation is now digitally facilitated and we can find people from countries quite far away, while still being in Germany”* (Craftsmen Beyond Borders, 2022). Craftsmen Beyond Borders further stated that the digital infrastructure of a platform like Google, which is familiar to many people globally, makes it much easier to integrate staff from different counties, as they have most definitely used Googles services already. Therefore, Craftsmen Beyond Borders described an “international workspace, with a variety of innovative potential” that enabled employees in the Ukraine working on the same issue with other employees in Germany, just because of the digital infrastructure provided by Google.

As shown by all three case companies, the provided infrastructure is oftentimes a combination of server and digital solutions by big platform corporations like Amazon, Google or Microsoft. All three case companies indicated that especially the affordable and efficient integration of big platform service providers enable young firms to make their business innovative and globally available. This already indicates the strong relevance of network effects by companies like Google, Salesforce or Microsoft and how they enable young ventures to be part of the bigger system. The growing relevance of

big tech companies is also mirrored in the next section, that discusses the findings of the case companies' international marketing strategies.

4.2.2 Global marketing

Billwerk offers a solution that is trending towards the online environment, wherefore the potential customers are also found especially in that space. The subscription model is adapted by many firms and one of the most efficient ways to reach them is potentially through online channels. Big platforms like Google and Instagram are core players in the marketing world, wherefore the use of these platforms is unavoidable for an online business. Billwerk described that their marketing strategy was internationally launched, as the users from all over the world faced the same problems. *“The subscription model is a trend that companies from Netflix to Mercedes are using nowadays, and even if these companies are fundamentally different, the subscription model is mostly the same. Advertising is therefore something we can holistically approach, which facilitates our internationalization process” (Billwerk, 2022).* The digital and global connection between users and platform providers creates a network that can reach customers over long distances, with relatively low costs in marketing. Billwerk stated that they utilize this network by advertising on Instagram's and Facebook's platforms, which are owned by Meta Platforms. Further they are using Google ads and HubSpot to reach customers via an online solution. The international marketing process is similar within the countries billwerk operates in, as the subscription-based approach is not facing drastic differences from country to country. Although the legislation and regulatory aspect varies quite a bit, the customers share the same interests and can receive the same adverts globally.

As univents offers a platform for events and festivals that aims to connect customers and event providers, the cultural differences are more present when advertising its product. *“We have to understand which platforms are used in which countries to create an optimal implementation of our service in the target market. [...] Among students in England, a large number use Facebook, while students from Germany share events and*

festivals mainly through Instagram. Therefore, we consider the cultural differences when approaching our target groups, although the implementation remains fully online” (univents, 2022). The international marketing is therefore more selectively approached, however the same platforms are used as in the case of billwerk. Additionally, the advertising network consists of LinkedIn and hotel booking platforms like Booking.com. The international marketing strategy is also extended to the use of affiliated links, that create a broader network between event providers, customers, univents and advertising platform providers.

Craftsmen Beyond Borders has the strategy to reach workers from international locations and thus needs to advertise their platform in a variety of countries. Spain, Tunisia and eastern European countries are therefore markets in which Craftsmen Beyond Borders target their marketing campaigns. Especially Facebook advertising is a core component, as well as Google ads. Google’s and Facebook’s extensive network between all customer groups appears to be a crucial part for the related internet-based sales strategy, within the craftsmen industry, too. As Craftsmen Beyond Borders stated, *“We had the possibility to directly access a big number of international craftsmen just by advertising on platforms like Facebook or the Google search engine. This was a huge advantage for us, as we didn’t need to implement own sales strategies and could utilize an already existing network of users. We still are building networks besides the advertising platforms, but it gave us a possibility to directly go international at a low cost and with quick responses” (Craftsmen Beyond Borders, 2022).*

It appears that modern marketing clearly shifted towards a mainly online based approach and once again the respective platforms created a network that reaches into this business field too. All three case companies stated that they are using Meta Platforms user networks and Google’s respective services. The broad and international reach of these gigantic platforms make it attractive for young firms to access global networks at a low cost and enables them to advertise their business on a worldwide scope. This network capability is also part of the Companies international B2B

integration and potential employee acquisition. In the next part the findings in the international networking strategies and employee acquisition approaches are summarized.

4.2.3 International networks and employee acquisition

Billwerk stated that the partnerships and network capabilities are a crucial part when building up an international business, especially in the starting phase. The structure of a platform-based economy is largely dependent on network effects, wherefore an ecosystem of many stakeholders usually benefits the overall ecosystem. Billwerk stated in this regard, that “our business is connecting other businesses with a digital solution, that is applicable in any location and most business cases. In order to generate scalability, we always broaden our partnerships and strengthen our core ecosystem by implementing a network consisting of valuable B2B contacts. [...] We figured, that in the early phase especially face to face and personal relationships are very valuable, whereas the use of online networking comes in handy when an initial network is implemented” (billwerk, 2022). As billwerk indicated the approach of utilizing digital solutions is more successful, when having an initial network of partners that was established with personal relations. “We can now scale our network with digital solutions like LinkedIn and Google Search Engine, while in the same time profit from our already established partnerships” (bilwerk, 2022). It seems that, besides the online networking capability, personal relationships still play a valid role in order to build an international network. This is also mirrored in billwerk’s approach when looking for new employees. They stated that “in order to find new employees, we like to advertise offline, especially due to collaborations with universities. Besides that, we also like to utilize digital networks like LinkedIn and other job platforms to find qualified staff” (billwerk, 2022).

Univents stated that the networking capability is in their business case crucial on the B2B side, as well as the B2C side. *“As we aim to internationally provide the best solution for customers and providers of event services, we have to have an integrated network that*

addresses needs from the B2B as well as the B2C side and brings them closer together”(univents, 2022). Univents stated, that the integration of their own platform into the broader ecosystem is fundamental. Especially Instagram and Facebook play a role in that regard, as the network is largely dependent on social media interconnections. Additionally, to enhance univent’s global position, other platforms such as clubhouse and the business network international (BNI) are utilized and create an ecosystem beyond the social media realm. *“We have figured that business networks, which are oftentimes free to use or at least quite affordable, can help to internationalize the own ecosystem. In our case we found a cooperation partner in Australia with the help of business networks and we are continuing to pursue that path”* (univents, 2022). The international integration of networking platforms seems to mirror in the business’ ability to enter new markets globally, without having to invest largely into the expansion. In order to strengthen their own company with new employees, univents uses the services LinkedIn and other job platforms offer.

Craftsmen Beyond Borders described a similar approach as billwerk. The core network and first big partners were approached via personal relations, whereas after initiating this network, scalability via third party platforms is approached. Craftsmen Beyond Borders underlined, that *“in the beginning we were dependent on private connections of the founder team. With that approach we found partnerships with international craftsmen chambers, who helped us to figure out new markets. After that we took the next step in order to enter markets like for example Spain, and started to directly reach out to ventures and people that were desirable for our partnership network. [...] We used especially networks such as LinkedIn, Facebook or Lunchclub”* (Craftsmen Beyond Borders, 2022). Craftsmen Beyond Borders further described that new ventures and entrepreneurs have a great tool, with respective platforms, to internationally connect with other partners, as they are more agile and can easily find partners with similar interests on a global scale. As they stated, *“Platforms help the international networking process, remote work solutions, employee acquisition or even the exploration of new ideas and entrepreneurial creativity. We have now the possibility with platforms like*

LinkedIn, Lunchclub or other known social media platforms to examine new markets and cultures, without leaving our workspace in Germany. This is an ideal approach to connect with new markets and build the first relevant anchor points to internationalize" (Craftsmen Beyond Border, 2022). In order to find new employees, LinkedIn is a central resource, as well as a smaller university platform that helps to build a regional network between startups and academic institutions.

The findings in the field of international networking and employee acquisition showed, that all three cases, once again, rely on big tech platforms like Microsoft and Facebook to strengthen their own network and employee number. They are still using offline relationships to broaden their own ecosystem, but as the business progresses the network effects of global platforms generate faster scalability and an international scope. The huge integration of big tech platforms into many business segments of their own venture raises the question about a bigger dependency. The following part will therefore elaborate on the case-companies viewpoint towards integration of big tech platforms and the perceived benefit versus risk.

4.2.4 Dependency

Billwerk utilizes many external solutions and platforms ranging from Slack and Microsoft Teams for internal communication to international marketing and networking with Google, Facebook and LinkedIn. In this regard billwerk underlined that, *"we do have the capacity to create own solutions and develop tools for some instances, but in almost every case, the network effects, scale and international scope make the big platforms more efficient and effective for us. Resultingly we can say that there are certainly dependencies, especially when big cooperates like Google and Microsoft offer solutions ranging from cloud service, over marketing, all the way to communication within our firm"* (billwerk, 2022). As billwerk described the brought integration of platform services brings a variety of benefits and profitable solutions for new ventures when working internationally, but comes at the cost of being somewhat dependent on these services.

“It should also get clear that the market place for instance in advertising is now mainly controlled by Google and Facebook, therefore we need to use them to reach our customers. [...] We are connected over their services and build up on them, however they provide us with solutions that are greatly beneficial. Services like LinkedIn, AWS or Google Ads became an international standard and broadly facilitate our own business case as well as the business of our partners” (billwerk, 2022). It seems that the current big tech platform ecosystem behaves like a two-edged sword, that brings a big benefit but strengthens the monopoly of regarding platforms.

Univents described a similar pattern when comparing dependency and benefit, while they underlined that many of the big tech platforms they use *“have a quite sticky business solution, which makes it difficult for us to switch to different service providers”* (univents, 2022). Univents depicted that their idea is largely dependent on social media platforms and brings a quite one-sided perspective to solutions in the social media sphere. *“Luckily, we didn’t need to face any problems so far. On the contrary we would say that our business idea is to a certain extent only possible because of services like Facebook and other platforms. Of course, they are the main operators with monopolistic structures, but they provide us a sphere and network to internationally explore new solutions and connect to a big variety of people within the event and festival realm. We constantly develop new ideas and make use of our creative potentials that are to a certain degree also enabled by social media platforms for instance”* (univents, 2022).

Craftsmen Beyond Borders has a similar take, as they stated, *“not using globally integrated platform solutions would create a 100% disadvantage. A big part of the early-stage progress is due to the ease of usability and affordability by services from companies like Google or Microsoft. Especially the international communication is facilitated and, honestly, without the services from a globally positioned platform, in our case Google, we would have probably failed in the starting phase”* (Craftsmen Beyond Borders, 2022). As they described the services provided by major platforms are an integral part of their own business and especially in the digital world it became a must to be globally

connected and integrated. Craftsmen Beyond Borders described clearly that the benefits were greater than the resulting dependency, wherefore they were enabled to come up with entrepreneurial solutions and an explorative mindset. *“We are more efficient and agile when we have access to international platforms and we can find craftsmen more easily while also communicating with employees internally. Even though this is surely a dependency, we have now tools that support our entrepreneurial spirit on an international scale and connect us to partners and customers around the whole globe.”*

The light is also shed on the new possibilities that emerge when creating entrepreneurial business, especially with an international intention. Dependency is therefore a subordinate factor, that is far less important than the opportunities that became visible for Craftsmen Beyond Borders.

The case studies indicated that the vast integration of platform services offered by big tech cooperates is in fact a two-edged sword, however the beneficial side has a larger positive impact than the negativity of the dependency. It creates the doorway to an internationalized business and brings infrastructure and entrepreneurial potential at low cost to young ventures. The case companies described that they became more agile in this digitalized environment and had the opportunity through services like Google, Facebook and Microsoft to explore, expand and network on an international scale. They all noticed a resulting dependency, however it stands in no contrast to the opportunity that emerged in the first place.

4.3 Effectuation in globalized platform environments

As observed the platform economy and resulting services create a variety of new approaches to start a business, internationalize, network and explore innovation. Thus, the resulting insights of the current platform environment indicate a similar field of interest to decision-making and effectuation theory. Entrepreneurs that approach an international scope and are active in a platform economy are confronted with global integration, huge network effects, agility, uncertainty, innovation and other explorative

capabilities. All of these aspects are also found in effectuation theory and are therefore intersecting with the topic of platform economy. The second part of the findings builds on this interface between platforms and decision-making and digs deeper into the effectual properties of the three case companies.

4.3.1 Agility and international competitiveness

Billwerk described that, especially in the starting phase, the level of agility within a startup is much bigger, while digital platforms and a code based online business structure is further facilitating the grade of agility. Billwerk underlined that, *“we emerged from a digital problem that required a code-based solution. Therefore, our business is always confronted with technological innovation and quick changes in the broad online environment and we need to adapt our code constantly to provide the best solution at every time”* (billwerk, 2022). The fast-changing digital environment that can be disrupted by any global competitor is a constant threat that requires agility in a digital platform venture. Billwerk described several times they needed to adapt in response to the rapid evolution within the digital subscription business, whereby they implemented new approaches and technologies to maintain agility. *“We are currently exploring new instances in the field of process optimization and machine learning, as the technology evolves so quickly. To stay relevant, we have to make use of our smaller size compared to a company like IBM for instance, which brings us certainly the advantage of agility and fast innovation”* (billwerk 2022). The size factor depicted by billwerk is another component that makes young ventures competitive and enables them to explore new solutions rapidly. It is much easier for a company like billwerk to explore new methods and adapt their business case to a sudden disruption in the market.

Univents depicted a similar behavior and showed that they have the possibility to adapt their business to quick changes in the market. *“We are not strictly committed to an ultimate fix strategy, this would probably make us loose touch. We try to react to needs in the field of managing events and ticketing, wherefore new technologies are not*

ignored, rather observed and potentially integrated in our business case” (univents, 2022). Further, univents pointed out that by analyzing the behavior of other competitors through online channels and platforms, they have a tool to understand how the trend and close competitive environment is evolving. “We look at our peer competition and ask ourselves how can we do it better. In one case we found out that the overall layout of an event platform works internationally, however the needs, interests and utilized social media platforms by customers can differ from culture to culture. Therefore, we try to address these different needs better than our competition” (univents, 2022). Univents compared their approach with the “lean startup” (comp. Eric Ries, 2014), which focuses on responsiveness to quick changes and disruption in order to create an efficient solution in emergent situations. As univents further described, the integration of their platform into a bigger ecosystem of social media platforms can create turbulences and uncertain developments that require a quick responsiveness and ability to react to unseeable change.

Craftsmen Beyond Borders underlined that especially the smaller size and entrepreneurial mindset has an effect on their agility and ability to react to changes in the market. *“When we started with our idea, we jumped on every train to see what works for us, this gave us a lot of room to develop our idea and understand how we can internationally fit into the market of mediating people between countries” (Craftsmen Beyond Borders, 2022). Exploration seems to be a key component in the starting phase and is further facilitated as Craftsmen Beyond Borders described by the international access of digital platforms and social media networks. “The needs by people can be observed via social media, an oftentimes trends evolve that change the market situation. For us that has impact on what people believe when emigrating from a country that is not as much developed as for instance Germany and how we can make sure that they face an effortless integration into the German craftsmen market” (Craftsmen Beyond Borders, 2022). It appears that a combination between digital solutions by globally accessible platform services and their own ability to understand how the market is*

evolving creates the foundation to keep up with change and the turbulences within a quickly altering environment.

As the three case studies described, the need to address change is crucial, especially in a globally connected world, where new ideas can disrupt the market rapidly. As the future is not foreseeable, a higher degree of flexibility in all case companies is desirable, as they can react to the potential changes more agilely. Effectuation builds on the premise that a destination is not reached through a fixed path, rather an explorative one. This appears to be crucial in a dynamic environment such as the global high tech and platform construct outlays. However, a strategy that is building on unforeseeable events begs the question how risk and uncertainty are managed and controlled in the startup and its internationalization process. Therefore, the next part discusses the case companies' approaches to control their decision making as well as their overall risk affinity in platform environments.

4.3.2 Uncertainty and control

Billwerk stated that it is a balancing act between minimizing risk and being innovative. The rapid evolution of online platforms occasionally demands risky decisions that lead to an uncertain, yet potentially beneficial outcome. *“From the beginning we needed to minimize our risk as we had no initial investors, but at the same time we had to address the markets needs with innovative solutions in the subscription economy. We wanted to stay competitive and therefore invest into new and potentially risky ideas like subscription process automation and optimization, without knowing if the market will go in that direction and how drastically it will affect our budget”* (billwerk, 2022). The resulting uncertainty, as billwerk described, is a necessary cost that can produce greater returns if managed properly. The outcome might be uncertain, but the rewards can be worth taking the risk. *“In a recent situation we had to decide if we continue staying in Belarus, with the potential risk regarding the Ukraine-Russia war. We decided to take the risk and continue collaboration with the developers in Belarus, which was uncertain at*

several levels, but made us keep qualified employees that are now working from Poland and help improve our solution” (billwerk, 2022). In order to control such risky decisions billwerk stated that they analyze their decision making in intervals and discuss if a general shift regarding strategy is necessary. *“Twice a month we have a strategic meeting in which we evaluate if any change regarding a trend in the international markets for instance affects our business and if we have to adapt to it” (billwerk, 2022).* Billwerk underlined that a consistent evaluation is key to understanding how a platform can behave in an international market and how the overall uncertainty can be addressed respectively.

Univents described that uncertainty is always present when acting in a digital environment and the results can be a mixture of opportunities and potential threats. *“When we talk about uncertainty, we are usually willing to take risk as it could always create big opportunities. However, if the resulting risk is a potential danger to our overall business case, we are obviously not taking the risk” (univents, 2022).* Platforms are internationally connected and therefore more exposed to rapid change and disruption. Univents described that in a construct with many digital and global interconnections, one player can quickly change the environment and others need to adapt quickly in order to keep up. *“We are integrated with platforms like Facebook and Google and therefore are observing the rapid shift in the online environment. Trends change quickly and people share for instance events on other platforms like Tik Tok etc., which could be a new direction for the market” (univents, 2022).* Uncertainty seems to be more present in digital platform ecosystems and new companies should therefore understand how to address risk and opportunity, especially when operating internationally. In order to control this, univents is also scheduling regular meetings about their managerial strategy. *“Our team comes from a tech background and we like a technocratic approach also when managing strategy. Therefore, we have weekly meetings to decide on our decision, check our backlogs and try to understand where the trend especially regarding online and social media platforms is going” (univents, 2022).* Univents addresses uncertainty and risk with a constant checkups and eventually finds new opportunities

when evaluating the present environment. As they depicted, the platform environment and ensuing international integration is accelerating the process of innovation, but also the uncertainty for young ventures.

Craftsmen Beyond Borders underlined a further reason for an accelerated level of uncertainty that emerged from big tech platform services that help startups to grow their business. *“We are running a big portion of our business, like communication, server integration or marketing on services provided by Google and all at a quite low cost. Other startups can do the same thing and we see that this creates a lot of competition. In the job mediation market, many platforms occur nowadays wherefore we placed our niche in the craftsmen segment”* (Craftsmen Beyond Borders, 2022). As it is described, big platforms like Google offer solutions for new companies to start their business at low cost which drastically increases the number of startups. Resultingly the level of innovation, competition and uncertainty rises. In order to react to this threat Craftsmen Beyond Borders has strategic meetings on a regular basis to understand how they can adapt to the markets evolution and make use of new opportunities. *“We value our team and believe that besides the fast changes in the online world good ideas emerge when being physically together. This is why we have meetings on a regular basis, also to check if our assumptions are still valid”* (Craftsmen Beyond Borders, 2022). The strategic evaluation of their own decision making seems to be a core component when managing risk and uncertainty. Craftsmen Beyond Borders stated that the platform environment is further enabling startups to initiate their ideas which results in a further level of competition and risk, that has to be addressed by other startups.

All three companies indicated that the digital world and internationalized platform structure is potentially accelerating innovation and respective uncertainty. In order to react to this ocean of competition, an effectual and causal mindset might have beneficial properties for the entrepreneur. In the following section, it will be analyzed what findings are crucial for the case company when approaching their effectual or casual decision-making and how open and long term the applied decision-making is.

4.3.3 Causation vs. effectuation

Billwerk described that, in uncertain markets, the future is even less predictable, wherefore an open, more emergent approach might bring a higher level of agility and creative solution finding that could be beneficial. Openness and exploration are therefore good approaches to finding possible solutions and innovative potentials. *“Exploration is a tool for international growth. We are acting in quite dynamic environments that are driven by technological disruption and need to keep in mind that things can change quickly. At least once a month when we check our strategy, some adoptions have to be made as nobody can foresee the future and oftentimes this leads us into new directions. Of course, we are not changing our strategy every time we observe it, but having a too strict plan might let you miss opportunities”* (billwerk, 2022). As described billwerk aims to retain a degree of openness to react to changes in the own environment. Effectual properties are therefore valued by billwerk, especially as they operate in technologically and internationally integrated environments. The assumption of leaving room to address potential changes might bring innovative potential as well as dynamism to the startup.

“If you want to achieve more than 95% of your competition you have to do something different than 95% of your competition. Obviously, it is extremely difficult to know what this means in detail, but you have to find innovative approaches to come up with novel and successful ideas that bring some competitive advantage. [...] If we wouldn't explore things like machine learning or intelligent automation processes, we would be stuck with our previous assumptions and another competitor could quickly create a more innovative and efficient solution” (billwerk, 2022). This shows that exploration and taking action in sometimes unconventional ways might generate novelty which is further reflected in the “pilot in the plane” principle in the effectual theory.

Univents has a similar take when looking at effectuation and the decision-making regarding their business. They pointed out that trail and error within an early phase venture might bring more understanding of what the market wants and how the startup

can address the needs of customers. *“Opportunities drive our innovation, but we can only explore these opportunities when we take action and try out what works. Oftentimes we needed to adapt our strategy after for instance launching crowd events or running marketing campaigns in other countries. This made us realize in one instance that affiliate links and cooperation on other social media platforms is a good fit for our platform”* (univents, 2022). Openness is also a key factor within univent’s decision-making and the step of taking action is crucial to tackling these changes. Univents further described that their strategic planning reaches not too far into the future as they prefer to maintain agility and focus on what they can work with in a specific situation. *“Our horizon in the planning process is no longer than three months and our assumptions oftentimes change far before these three months. [...] Usually, in our meetings, we look at our abilities and brainstorm what we can do with that and which new idea could fit into the market. Then we start exploring and see how far we get with the initial approach and if we can continue, change or trash our idea”* (univents, 2022). This again reflects a variety of effectual principles that aim to create novelty and competitive advantages in the internationalized platform environment in which univents is operating. Resultingly a quite open and emergent process is established that might be seen as a driver for innovation and idea implementation.

Craftsmen Beyond Borders described that a mixture of planning and room for adaptation and exploration seems to be a good fit. As they stated, a certain idea and framework gives a good direction, but new paths and different solutions should be explored as well. *“When we first started working on our idea before we founded Craftsmen Beyond Borders, we had a plan but were exploring probably a lot more things. We still have a clear idea and plan of what we want to do, but in the process, we oftentimes figure that other directions work better. At one point we were running marketing campaigns in Spain and figured that a lot of responses occurred from people originating in Morocco. This showed us that many things have to be explored spontaneously, but we also like to somewhat plan them in the process if possible”* (Craftsmen Beyond Borders 2022). As described, parts of the effectual process, as well as a certain degree of causal logic is

applied. Craftsmen Beyond Borders further underlined that, especially with all the technology at hand, a lot of opportunity arises that helps to connect internationally and creates novelty for entrepreneurs. *“When we network internationally, we talk to a lot of interesting people and companies with creative ideas regarding the online job platform market. This oftentimes brings up new ideas or cooperation for us and surprises us every time how dynamic and innovative the digital world is”* (Craftsmen Beyond Border, 2022). Craftsmen Beyond Borders showed that the decision-making in international and digitally integrated environments generates a further degree of novelty as a bigger number of ideas comes together and people across all countries share their beliefs online. This led them to oftentimes spontaneously explore what new things can work for their solution and how this shapes the overall environment.

5 Discussion

The thesis discussed the research question *“Which factors impact the international entrepreneur’s effectuation process in a globalized digital platform environment?”* and took in this regard a closer look at three new international case platforms. After analyzing the findings, it became clear that the overall dynamic nature of international platform ecosystems and the effectual decision-making of young international entrepreneurs, share a common ground and many factors have implications on each other. Ranging from uncertainty and opportunity, over agility and spontaneity towards network-abilities and dependency.

In the following part the propositions will be discussed under the lens of the key findings from the three case studies in conjunction with the theoretical foundation. After that, a model is developed which summarizes the key insights and the interrelations between the implications of international platform environments, effectual decision making and the main factors shaping this construct. In order to give a detailed comparison between all case companies, table 4 comparatively depicts the key issues of interest. The insights

depicted in the table summarize the most important findings of the interviews and bring detailed evidence if the propositions can be supported or not.

Table 4 - Cross case comparison

	billwerk	univents	Craftsmen Beyond Borders
Industry	Platform	Platform	Platform
Platform Type	Subscription	Event ticketing	Hiring, jobs
Established	2015	2021	2021
Number of Employees	78	4	8
Country of Inception	Germany	Germany	Germany
Degree of Internationalization	17 Countries	3 Countries	4 Countries
Mission Statement	"Unleashes the potential of your subscription business"	"Univents is to create a central anchor point for everything related to experiences and events"	"Bring qualified people and qualified companies together with modern technology and innovation, that is why we want to create a digital platform that creates a bridge between skilled workers and craft companies"
Length of Interviews	41 min to 1h 34 min	42 min to 1h 29 min	50 min to 1h 31 min
Description	Subscription Ecosystem for businesses. The billwerk SaaS platform arranges payment, discounts, offers and international banking transactions, Scalable during internationalization	Event ecosystem in the middle of several other platforms international approach, scalability is key during the process of internationalization	Addressing the shortage of high-quality craftsmen, International Platform for craftsmen where mainly craftsmen from international countries find jobs in firms focusing initially in Germany
International Marketing Strategy (Proposition 1)	Google Ads, Instagram, HubSpot, EU wide application with standardized platforms. <i>Platforms facilitate international marketing</i>	Instagram, LinkedIn, hotel platforms, affiliate links, global integration of social media platforms <i>Platforms facilitate international marketing</i>	Facebook, Google Ads, YouTube, Instagram as next steps, Internet facilitates international reach to potential craftsmen <i>Platforms facilitate international marketing</i>
Digital Infrastructure (Proposition 1)	AWS, Microsoft Azure, GitHub, Jenkins <i>Platforms facilitate digital infrastructure, in some cases own applications are superior</i>	Android, Apple iOS, AWS, Google Cloud, firebase <i>Platforms facilitate digital infrastructure</i>	Google, Google Drive <i>Platforms facilitate digital infrastructure</i>
Internal Communication (Proposition 1)	Microsoft Teams, Slack, Slack Connect, Jenkins <i>Platforms facilitate internal communication</i>	Microsoft Teams, GitHub, WhatsApp <i>Platforms facilitate internal communication</i>	Google Meet, Gmail <i>Platforms facilitate internal communication</i>
Employee Acquisition (Proposition 1)	LinkedIn, Job Platforms <i>non-platform solutions are preferred</i>	LinkedIn Job Platforms, <i>Platforms bring benefit, non-platform solutions are used</i>	LinkedIn <i>non-platform solutions are preferred</i>
Platform Dependency (Proposition 2)	Dependent on many levels, switching costs are high <i>Platforms create strong dependencies</i>	Oftentimes difficult to switch platform <i>Platforms create strong dependencies</i>	Not using global platform is unimaginable <i>Platforms create strong dependencies</i>

International Networks (Proposition 1 & 5)	Networking via digital platforms is a good way to strengthen ecosystem, personal connections are still important <i>Networks impact effectual decision, platforms facilitate network abilities, Private connections are still fundamental</i>	Create international networks between existing target groups and potential users, <i>Networks impact effectual decision, platforms facilitate network abilities, Private connections are still accessed</i>	First Partners were found over private connections, from there they took their network to internationalize. <i>Networks impact effectual decision, platforms facilitate network abilities, Private connections initiate networks</i>
Agility, Effectuation and Platforms (Proposition 3 & 4)	Competition benefits and must be addressed, continuous adaption and optimization <i>Dynamic platform structure demands agility, constant adaption</i>	Trial and error, fast adaption in platforms, react to competition, Lean startup, not strictly committed to one strategy <i>Dynamic platform structure demands agility, constant adaption</i>	High level of agility, able to make changes in the approach compared to bigger companies <i>Dynamic platform structure demands agility, constant adaption</i>
Uncertainty, Predictions and plannable horizon (Propositions 4 & 5)	At least once a month, there needs to be some adaption, nobody can foresee the future, Strategy meetings every 2 weeks <i>Predictions need to be adapted constantly in platform environments</i>	Plannability is limited as technologized global constructs and competition is changing quickly, weekly meetings <i>Predictions need to be adapted constantly in platform environments</i>	The usability of platforms creates competition, constant adaption, regular meetings to check assumptions <i>Predictions need to be adapted constantly in platform environments</i>

5.1 How do INVs internationalize with platform solutions?

The three case platforms have shown, that the internationalization process is facilitated especially due to services by bigger platforms such as Google, Facebook or Microsoft (Gawer & Cusumano, 2014). These big platform enterprises can be seen as gateways for new smaller platforms like billwerk, univents and Craftsmen Beyond Borders and enable them to internationalize via the big platforms' networking services, marketing solutions, code-based infrastructure and communication services (Tiwana, 2014). At the same time, they create effectual opportunities for entrepreneurs and enable them to explore, network and expand internationally in the digitalized platform environment (Sarasvathy, 2001; Nambisan 2018). As Hein et al depict, the case companies take the role of platform owners in relation to consumers and other B2B partners, but at the same time the case companies are complementors to bigger platforms such as Google, Salesforce or Microsoft (Hein et al, 2019). Resultingly the value-creating mechanism can be described by the benefits within marketing, communication and networking that the three case companies experience when internationalizing with the help of bigger platforms.

When digging deeper into the findings of the three case companies it is interesting to observe that all three companies tend to utilize the same platforms when internationalizing. The digital **infrastructure** and server hosting is managed by AWS for billwerk and univents, while the Google servers are utilized by univents and Craftsmen Beyond Borders. All three case companies stated that the low cost and easy global integration make it highly accessible and attractive to use these services instead of implementing their own solutions. Furthermore, all three case platforms underlined that the advanced integration between the big tech platforms increases functionality and communication for their own everyday business. Data can therefore directly be implemented into communication services also offered by Google, Salesforce or Microsoft. This correlates to the fundamental assumption by Tiwana, that software-based platforms aim to create interfaces that connect each other and provide a shared functionality (Tiwana, 2014). Van Alstyne gives a similar viewpoint that is supported by the three case companies' insights which points towards the platform's role of an infrastructure provider for a larger shared producer consumer ecosystem (Van Alstyne, 2016).

The advantage for the internationalization of entrepreneurial platforms that is hypothesized in proposition 1 is also reflected in the **global marketing** (Morris et al. 2002). Advertising solutions and networks offered by third party platforms, especially Facebook and Google are therefore fundamental in the entrepreneurial decision-making and growth of the firm. As described by the underlying literature, digital marketing for entrepreneurial firms (as well as established firms) has shifted from conventional media and offline marketing to a globalized online platform advertisement policy (Patruti-Baltes, 2016; Ryan & Jones, 2009; Chaffey & Ellis-Chadwick, 2012). In this regard Internet Sales channels became increasingly important as the changes over the past years enabled customers and companies to easily access the online environment (Gabrielsson & Gabrielsson, 2011). The rising supply of internet-based sales and marketing channels increases accessibility for young international firms to effectively advertise on a global scale (Kocak & Abimbola, 2009). This trend is underlined by all three case companies, as

they are mainly dependent on channels like Google Ads and Facebook / Instagram. Especially when internationalizing the case companies showed that ecosystems and social media networks bring quick access and agile marketing solutions for the entrepreneurial venture. Exploration in new markets like Craftsmen Beyond Borders in Spain led to further insight and new B2B partners. Univents and billwerk are likewise using Facebook, Instagram and Google to reach out to potential customers from Europe to Australia and create a bigger network between all stakeholders. The overall platform interdependence is therefore further increased while network and scalability effects are generated (Cenamor et al. 2016).

This dynamic environment is further broadened by the **networking capabilities** and **employee acquisition** possibilities when utilizing other platforms. It appears that the networking capabilities of platforms ideally integrate into the effectual decision-making of entrepreneurs and synergies between both instances appear (Birley, 1985; Lavie, 2006). Large networks create opportunities, wherefore a smart entrepreneur can utilize such services and leverage their own progress. All case platforms stated that they utilize services and online solutions to network with others. Especially LinkedIn, Slack and Clubhouse are all key components within the case platforms networking ability and bring further acceleration to the internationalization process of young ventures. Aldrich & Zimmer describe the power of social networks for young ventures before the Internet era in 1986 and indicate that it is not only important what you know, but whom you know (Aldrich & Zimmer 1986, comp. Sarasvathy 2008). Transferring this fundamental thought towards today's globalized and digitalized world with all its technological capabilities, it becomes clear that platform ecosystems can be an effective foundation for new ventures. The three case companies at the same time underlined that the importance of offline events and in person networking is still quite relevant. In order to establish a functioning network oftentimes personal relations are the first door opener while the scaling of the network happens afterwards with the help of digital platforms. When looking at employee acquisition, it also becomes clear that conventional networks

are oftentimes utilized besides the newer approach to source employees with the help of digital solutions.

The case companies have shown that a large part of the core business structure like marketing, coding, communication and infrastructure can be outsourced to global platforms. As depicted in table 4 all case companies show a significant support regarding facilitation in the internationalization process, when looking at platforms that are utilized to internally communicate, internationalize the marketing strategy, build a digital infrastructure. Univents and Craftsmen Beyond Borders depict that especially international marketing is mainly addressed with digital platform solutions. Billwerk, univents and Craftsmen Beyond Borders all show evidence that a digital infrastructure and the internal communication is almost fully provided by global platform solutions. In this regard, all case companies utilize global platforms like Google, Microsoft, Salesforce or Facebook. This provides further evidence of the tight platform integration into the case companies internationalization process. Only when looking at the networking component and employee acquisition the case companies prefer to rely on non-platform solutions. Especially billwerk and Craftsmen Beyond Borders seem to value offline partnerships and a non-platform-based employee acquisition.

Therefore, **proposition 1 can be partially supported** by the findings within the case companies.

5.2 Global dependency of INVs

The overall trend towards an integration of platform services brings the risk of a high dependency. The case companies showed that especially the tight integration of platform services like marketing, cloud, communication and infrastructure have extremely sticky properties. The fast evolution of online and platform ecosystems creates a high level of disruption and opportunity for new ventures like the case platforms (Van Dijk, 2018). Furthermore, as big platforms offer solutions to enable

entrepreneurs to access creative and effectual properties, they become an integral part making entrepreneurs start their idea and quickly address the international market. The big platform companies know this dynamic environment and aim to integrate as many services into their own international ecosystem that leads to dependency of smaller ventures on a global scale, as the three case companies indicate. Microsoft, Google Salesforce and Amazon regularly try to acquire smaller, faster growing more innovative companies and indicated that they try to reduce competition while increasing their own share and relevance (Haucap & Heimeshoff, 2014). As a result, the risk of deeper dependencies towards small players becomes an issue. The US regulatory is constantly evaluating and oftentimes denying the acquisition of big tech companies to reduce their monopolistic properties (Fuchs, 2021). Microsoft bought LinkedIn and is reaching out for Activision Blizzard, Salesforces bought Slack, Adobe is looking to integrate Figma and Apple recently announced to enter the Advertising market like Google and Facebook. This drastic shift is also reflected within the case platform and as the findings of all three case companies underline, services by big global platforms are an international standard for their own and other international new ventures (Tiwana, 2014; Boudreau & Jeppesen, 2014; Cusumano, 2008). As *Craftsmen Beyond Borders* describes, “not using globally integrated platform solutions would create a 100% disadvantage” (*Craftsmen Beyond Border*, 2022). Billwerk and univents share a similar viewpoint and are fully aware of this “sticky” and “dependent” property, however the alternatives are not as functional and internationally integrated (univents, billwerk, 2022). All case companies rely on platforms like LinkedIn, AWS, the Apple or Microsoft ecosystem and many other services provided by big tech companies. Resultingly it is a truly two-edged sword that on the one hand offers solutions and a lot of entrepreneurial opportunity for young international startups, but creates a loophole of dependency in the long run (Van Dijck, 2019). Interestingly, the three case companies seem to not have a fundamental issue with that tight integration and with coming dependency. Rather they all state that it is more of an advantage to start organizing the own business and expand internationally than fearing the risk of being dependent on few gigantic enterprises. However, through acquisitions, the big platforms are increasingly vertically integrated and simultaneously

expand into all profitable and nonprofitable markets that show growth potential (Van Alstyne et al., 2016). The resulting gigantic condensed impact and power of a single company like Amazon or Alphabet creates synergies within their own enterprise, massive amounts of usable data and market barriers for competitors (Khan, 2017; Van Dijck et al., 2018). This further increases the dependency of smaller ventures like the case platforms on the big global players. Antitrust laws and solutions to reduce the monopolistic properties seem to be adequate to address the rising dominance of platform players.

Resultingly, all three case companies suggest that there is a fundamental benefit provided by bigger platforms like Google, Apple and Microsoft. They are in the words of the case companies “necessary” and increase the international entrepreneurial success, however they come at the cost of creating massive dependencies and monopolistic structures. As depicted in table 4 billwerk, univents and Craftsmen Beyond Borders all indicate high switching costs which increase the barriers to change platforms in the field of marketing, communication or infrastructure. Univents and Craftsmen Beyond Borders further give evidence, that the integration in the international market without global platform solutions would slow down their own process of internationalization drastically, while the competition will have huge advantages. Billwerk depicts a similar picture and underlines that the integration of own solutions is less efficient and more costly. All case platforms acknowledge a dependency on platforms like Google, Microsoft or Apple as there are now comparable alternatives. However, all case companies state that the benefits outweigh the threat of the dependency.

Therefore **proposition 2 is fully supported** by the findings of all three case platforms.

5.3 Agility in platform ecosystems

New venture and platforms however still come up with innovative ideas and internationally scalable solutions. Just as the three case platforms show, new ideas and

functional digital solutions that interlink on a global scale are constantly created and build the foundation for an innovative future. Resultingly, the broader platform environment that is connected with smaller and bigger players creates a global dynamic playground for novelty and idea creation. The fittest and most agile players can contribute with new solutions and further lay the foundation for consecutive innovation (Nambisan et al., 2017; Autio et al., 2014). The current digital state depicts an environment that truly creates opportunity and technological disruption with the underlying code-based infrastructure (Tiwana, 2014). Networks, Software and Deep Learning Algorithms are growing into all branches of today's business and create efficiency and dynamism (Thomas et al., 2018). The case platforms show that exploration in these fields and an open approach towards new solutions make them agile and further increase the level of dynamism. To survive in this quickly adapting environment it is shown that the three case platforms make use of effectual decisions and especially aim to maintain agility in this fast changing and dynamic environment. All case companies indicate that within the startup journey shifts and adaption are constantly occurring and only by maintaining responsiveness is it possible to catch up with trends and disruption (Kraus et al., 2018). Especially in international environments change and disruption is facilitated through the internet and network effects, wherefore the three case companies are investing into innovative networking solutions and deep learning applications.

The constant critical evaluation of their own assumptions is fundamental in all case platforms and when planning the future, it is expected that some unknown variable might change the predefined course. Agility is for this reason a trait that all case companies described and valued within the everyday operative business. It seems that an agile mindset benefits univents, billwerk and Craftsmen Beyond Borders comparably, when acting in dynamic platform environments, and furthermore facilitates to maintain effectual fitness within the startups. As depicted in table 4 all case companies show evidence that agility is a main force to compete in digital platform environments. Billwerk and Craftsmen Beyond Borders underline that competition is facilitated, whereby the

own ability to quickly react to change must be omnipresent. Univents shows that a less predefined strategy can help to maintain adaptiveness and bring further effectual fitness in a digital platform environment.

Resultingly **proposition 3 is fully supported** by the findings of all three case platforms.

5.4 Adaption and effectual evaluation in global, dynamic ecosystems

The importance of agility for international entrepreneurs also points to the relevance of evaluating own assumptions and their adaption if necessary. When acting in global platform environments with fast changing properties, an insufficient evaluation of the status quo that is not regularly checked can be fatal. Insufficient assumptions and evaluation can lead to a path dependence of the international entrepreneur's decision-making, that are missing the overall market direction (Sydow et al. 2009). The future can only be planned to a certain extent and predictions are oftentimes difficult to make (Kahneman & Tversky, 1979). The case platforms underlined this assumption, as all of them are constantly reviewing and adapting their outlook and decision making in the process. Billwerk for instance indicated, that changes in the subscription market due to deep learning and automation processes are constantly happening, whereby they need to evaluate regularly if the core assumptions are still valid. Univents and Craftsmen Beyond Borders share a similar viewpoint as they aim to understand trends and relevant shifts in their respective business fields constantly. Their **planning horizon** is in all cases relatively short term as they cannot predict the future and changes in the digital, internationalized world happen quite quickly.

All case companies evaluate on a weekly to maximum monthly basis in how far their assumptions about the future are still valid. This points back to the level of agility that is present in a dynamic platform environment (Nambisan, 2017; Van Alstynne, 2016). Therefore, predictions and assumptions about the future have to be evaluated and adapted continuously in order to keep up with the rapid change and disruption in

globalized platform ecosystems. As depicted in table 4 billwerk proposes a strategic adaption within the decision-making process at least once a month, to keep up with the evolution of the bigger platform ecosystem. Univents addresses this with a two-week meeting cycle. Similarly, univents remains adaptive by reconsidering decisions on a regular base and conducts strategic, technocratic oriented meetings on a weekly base. Craftsmen Beyond Borders addresses the need for adaption with regular meetings within a monthly cycle, to maintain competitiveness and the ability to explore new opportunities. All three case companies provide evidence that effectual logic provides a solution to navigate within an uncertain environment. At the same time the case companies show that a prediction of the future is not possible, but a constant checkup and adaption of strategy is utilized to address the dynamic nature of digital, entrepreneurial environments.

Resultingly **proposition 4 can be fully supported** by the findings of all three case platforms.

5.5 The effectual mindset in an international platform environment

The findings made clear that the dynamic structure of platforms creates a fruitful foundation for international entrepreneurs with an effectual approach. Exploration, agility, unexpected events, and global networks find their value in the platform economy and are simultaneously a fundamental part of the entrepreneur's effectual mindset (Sarasvathy, 2008). When looking at the effectual properties of the entrepreneurs in international platform ecosystems the ability to network, explore and make use of the unexpected is valuable for all three case companies.

This agile construct is also depicted through the broad international connection and **networking** opportunities offered by the global platform construct. Connections between entrepreneurs and other stakeholders are crucial in progressing with the startup idea and all case platforms describe that they use third party online platform to

enlarge their ecosystem (Cenamor et al. 2016). LinkedIn, Clubhouse, Slack and Instagram are utilized tools for all three case companies to network and increase the own network. As Sarasvathy describes, the number of people you know is important for the entrepreneur to encounter new means and valuable business opportunities in the future (Sarasvathy, 2001; Sarasvathy, 2008). Platforms seem to offer a solution for international entrepreneurs to further enlarge their network and therefore strengthen their effectual mindset.

The case platforms show that **exploration** is also facilitated in an international platform environment. Global markets can be explored with survey functions, online marketing campaigns and social networks to understand and adapt new business cases at a low cost (Nambisan 2018; Tapscott, 2014). Billwerk and univents underlined that input and creative potential, especially for a code-based software solution in conjunction with the market's needs, can be tested with online channels and its data analysis. Craftsmen Beyond Borders showed that exploration of international markets like north Africa and Spain is largely facilitated by online platforms like Instagram and creates new networks and opportunities. The international integration and opportunity that is now accessible for many entrepreneurs through online platforms supports the entrepreneur to come up with novel solutions, explore creativity and at the same time start to implement the business directly.

All case companies showed that the threshold of an **affordable loss** is increased through platforms like Google or Microsoft, as the cost to integrate high quality business solutions became very low. Entrepreneurs can take a higher risk due to cost reductions and can focus on international expansion as the tools are already available (Dew et al. 2009). Developing own solutions would be far more costly and create bigger barriers to start the venture, whereby all case companies underlined the value by big platforms for young international entrepreneurs (Hein et al., 2019). The reduced risk enables more entrepreneurs to access international solutions and start their business idea without creating and developing entirely new infrastructure.

As discussed in proposition 1 the advantages range from all business fields and bring means to the company that are necessary to initiate the internationalization of their own venture. All case companies are therefore enabled by platforms to use opportunities and expand their effectual mindset. As the case study indicates, many effectual factors ranging from networking capabilities and exploration, over planning horizons towards evaluating an affordable loss are impacted by the global platform ecosystem. As depicted in table 4, billwerk and univents highlight a technocratic view towards change, that remains in close contact with digital exploration and creative potentials. Networking is facilitated in all three case companies and helps to tighten the relations and means to internationalize successfully. *Craftsmen Beyond Borders* gives further evidence that affordable losses bring opportunities in the long run and can open doors to access novelty competitive strengths. The effectual mindset is resultingly a beneficial tool that helps all three case platforms to internationalize and understand the dynamic nature of global platform ecosystems.

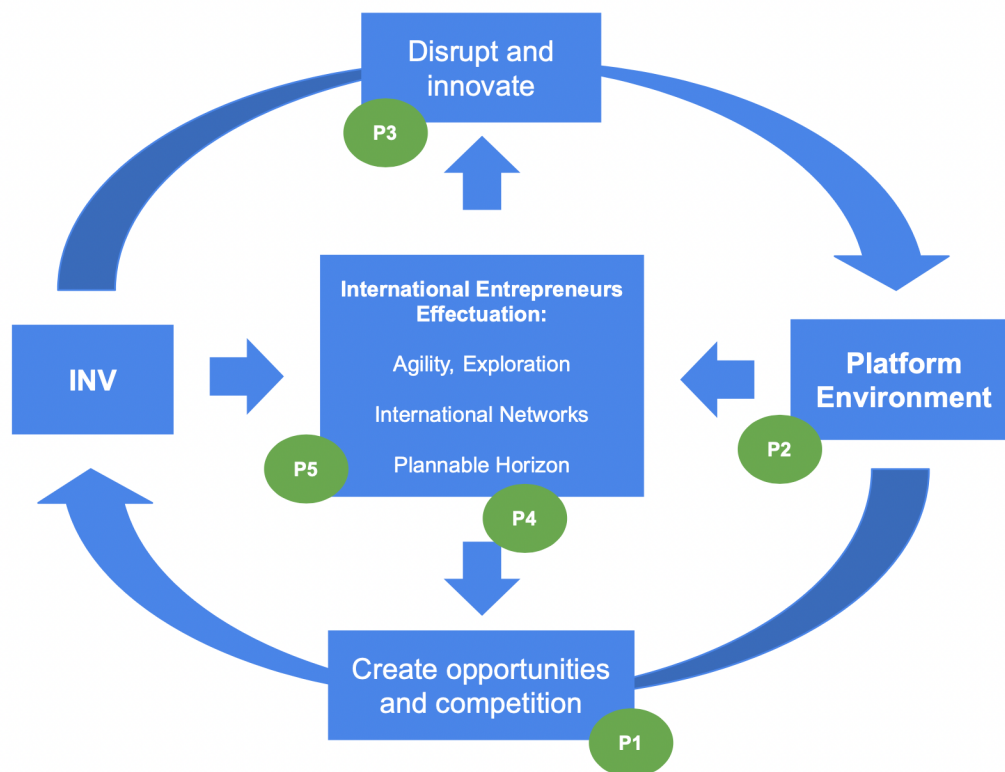
Therefore, the findings of the case companies **fully support proposition 5**.

5.6 Model development

The case studies underlined that the relation between an international entrepreneur's effectual mindset and the dynamic structure of the global platform ecosystem is quite relevant. Many opportunities are created due to the innovative power of digital platforms in conjunction with the rising number of international entrepreneurial ventures (Dew, 2009; Nambisan, 2018). In this regard both sides have impact on the entrepreneur's decision-making and as the three case platforms underline, especially the effectual approach offers solutions for addressing dynamism and disruption in fast changing environments (Sarasvathy, 2001; Yang & Gabrielsson, 2017). The case companies further showed, that services by large platform enterprises benefit the international network and opportunities to start with a business idea in all three cases. The effectual mindset was also present in all case companies and goes in many instances

hand in hand with the rapid evolution of the surrounding platform ecosystem. Transferring this to an international level which contains a broad supply of platform solutions, the entrepreneur's ecosystem is further leveraged and accelerated (Cusumano, 2010; Andersson, 2011). Resultingly, an interplay between new international ventures and the highly globalized platform environment is created. The case companies are in this concept representative for INVs with novel solutions and disruptive potentials, while on the other hand big established global platforms like Google, Microsoft or Amazon shape and drive this dynamic relation. In between lies the effectual decision making of the international entrepreneur with regarding network abilities, planning horizons, agility and explorative potentials. The case companies have shown, that these topics are central and are in close exchange with the platform environment and their own ability to internationalize successfully.

Figure 5 – Dynamic cycle of the international entrepreneur's effectuation in platform ecosystems



(own Illustration, 2022)

The concept in figure 2 shows that big platform enterprises like Microsoft, Google etc. (depicted by platform environment on the right) create novelty for young ventures and new business opportunities, due to easy access to platform services and business operation ecosystems for the INV (Parker et al. 2016; Rochet & Tirole 2003; Cenamor et al. 2019). This increases the growth rate of international new ventures but also the overall competition due to easy accessibility for everyone. This was supported by all three case companies in proposition 1. International new ventures, like the case platforms, on the other hand aim to enter existing platforms, by introducing new skills, means, technologies, novel understanding, and disruptive potentials, which become increasingly important in a digitalized and globalized environment (Sarasvathy, 2001; Tiwana et al. 2010).

As depicted by proposition 1 big platforms create opportunities and competition for international new companies. They offer technology, networks and scalability to small ventures and create room for novelty (Van Dijck, 2018; Hein et al., 2019). At the same time, as depicted by proposition 2 they create strong dependencies. Resultingly the connection between big global platforms and smaller new ventures is tightened and the ecosystem grows closer together. This has further impact on the new venture's decision-making, as opportunities come at the cost of being dependent (Fuchs, 2021). However, as all case studies indicate, the benefit of technologies, networks and scalability outweighs the potential problems regarding monopolistic structures of big tech platforms. Proposition 3 describes the core ability that international entrepreneurs should bring when operating in such dynamic digital environments. All case companies indicate that agility is a main connector between the entrepreneurial mindset and the dynamic competition from the international platform environment. In this regard proposition 3 enables the international entrepreneur to dynamically integrate the effectual mindset of entrepreneurs. This effectual mindset, depicted by proposition 5 is the core component for entrepreneurs to act in the broader platform ecosystem and produce innovation that shapes the whole construct (Sarasvathy, 2009; Nambisan, 2017). Evaluation of the own assumptions within the effectual process and a constant checkup is depicted in proposition 4, which helps entrepreneurs to maintain

reactiveness towards external changes of the environment and a resulting adaptation in the effectual logic. The emerging cycle is therefore driven by two main forces, the effectual mindset by entrepreneurs depicted in proposition 5 and the opportunities created by the existing big platform environment depicted in proposition 1. Proposition 3 and 4 outlay core abilities to react and navigate in the overall ecosystem and proposition 2 underlines the tight integration of international entrepreneurs in globalized platform environments, with potential dependencies.

6 Conclusion

This thesis looked at the entrepreneur's ability to internationalize in platform environments under the lens of an effectual mindset. As the research question "Which factors impact the international entrepreneur's effectuation process in a globalized digital platform environment?" indicates, core aspects about the relation between international new ventures and the global platform environment were observed. The analyzed case companies gave insight into how they are connected and influenced by the platform ecosystem, while also indicating how their effectual behavior impacts the whole construct. The aim of this study was therefore to establish an interconnected model that describes this dynamic process and shines a light on both sides of this cycle.

6.1 Contribution to theory

Taking this into consideration, the thesis produced meaningful contributions. Starting with the finding that the case studies are integrating services and networks by big tech platforms into all branches of their own business. Online solutions and digital channels are taking over the traditional business approach and platforms create strong networks between many stakeholders on a global scale (Gabrielsson & Gabrielsson, 2011; Tiwana et al., 2011, Parker et al. 2016). Disruptive powers and a wide range of solution fits are created by big platform enterprises, that increasingly are integrated in the global market (Hein et al. 2019, Baldwin & Woodard, 2009). When going into detail within the case

studies, especially network solutions, technological infrastructure (software and hardware based), marketing as well as communication tools are utilized to internationalize. This has a strong impact on the entrepreneur's decision making, as the cost of starting a new international venture is reduced and new creative opportunities emerge (Van Alstyne et al., 2016). This transitions to the second main finding, which describes that international entrepreneurs in this platform construct are enabled to efficiently make use of an effectual mindset. This perspective is not sufficiently discussed in the literature while all case platforms indicate a strong interplay between digital platform ecosystems and their own effectual decision-making (Nambisan et al., 2019). All case companies indicated that they pay huge attention to their networks, means and abilities they have, potential risks, uncertainty, affordable losses and the ability to adapt. The innovative nature and opportunity creating potential for international entrepreneurs by big tech platforms gave them in this regard more room for exploration, risk taking and affording losses. Sarasvathy's model of effectuation perfectly fits into this relation between entrepreneurial ventures and the broader platform ecosystem (Sarasvathy, 2001). The network ability, new technological means and explorative potentials equip the international entrepreneur with tools to navigate in the dynamic environment of digital platforms and fast disruption (Dew & Sarasvathy, 2002). The fast growth in high-tech markets is further a catalyst for international entrepreneurs to initiate novelty seeking solutions and adapt their decision making with explorative potential (Yang & Gabrielsson 2017, Wiltbank et al., 2006). Another finding in this regard is that a core ability for entrepreneurs is to maintain agility. All case companies described how they aim to maneuver agilely through rapid changes and try to evaluate their own decision making constantly. Dynamic constructs such as globalized digital platforms demand responsiveness and the ability to change (Teece et al., 1997). The agile international entrepreneur is therefore prepared for the unexpected and can best use effectual properties to arrange the high complexity of a digitalized environment.

6.2 Managerial implications

This thesis suggests that international entrepreneurs can largely benefit from effectual logic in digital platform environments. The empirical data has shown, that three young case companies utilize effectual logic in order to internationalize and create an entrepreneurial fitness that addresses constant change and uncertainty in a digital platform ecosystem. The qualitative insights suggest that international entrepreneurs should focus on exploration, adaptiveness, agility and international networks. They should continuously evaluate their assumptions and critically question their strategic decision-making, in order to stay competitive in globally connected platform environments. The case companies further indicate that a large pool of opportunities is available by big tech platforms, that helps to internationalize efficiently at a low cost. Entrepreneurs should be aware of this effective solution to implement international marketing, infrastructure, internal communication and network abilities. On the other hand, it also creates competition within the whole ecosystem that demands a high level of dynamism. Further, large dependencies are created by big tech platforms, that should be acknowledged and observed by INVs and international entrepreneurs.

This thesis has shown, that effectual logic is a driver for young ventures to internationalize in digital platform ecosystems and enables international entrepreneurs to compete in such dynamic ecosystems. Effectual logic is therefore a tool that helps to maintain agile, competitive and innovative, especially in digital environments, thus should be considered when acting in such fast-changing environments. New ventures should note that conventional businesses are transferring into a digitalized world, whereby change will progressively accelerate and dynamic solutions are key to remain competitive. Effectual logic should therefore be a core part of the international entrepreneurs decision-making repertoire, as it enables to create opportunities, seek novelty and explore the future.

6.3 Limitations & future study proposal

As every study is limited to a certain extent, this study does not differ. The generated empirical data was of a qualitative nature and focused on three companies. It generated novel insights and the basis for a new model in the field of effectuation and international platforming, however a deeper dive into a quantitative back up might bring further comparable and consistent findings. Although the three case companies indicated many similar approaches and relations to big tech platforms, it might still differ when looking at a larger population. Further the study observed companies that are of digital nature and are platforms in their own sense, while it would be of interest to analyze companies that have a more traditional non digital pipeline and business approach (Van Alstyne et al., 2016). It might be that these less digitalized companies are still integrated into platform solutions, for instance online marketing and sales channels. The study was limited to reach out to a broader extent and archetype of companies which would create a further more differentiated view towards the interplay of INVs and platform ecosystems.

Based on the outlined contributions and limitations, this thesis indicates the potential for consecutive research in the field of effectuation and digital platforming. International integration of digital networks between all stakeholders opens the field to a vast range of potential research regarding an entrepreneurial decision making. A deeper look at the dynamic capabilities and ability to survive in high tech platform ecosystems might be of further interest, where topics like cultural differentiation, creativity and ideation as well as communities and dependencies might bring new insights about the evolution of today's business. The resulting relevance is constantly growing as new international businesses are always created, while the existing larger ones aim to maximize their impact, which results in an imbalance and oftentimes strong dependencies. This might open further fields of interest in combining platforming constructs with ethical decision and a view towards further regulation and fair competition. It appears that the combination of effectual logic by international entrepreneurs and digital platform environments showcase a variety of novel insights and at the same time open doors to

a further range of research regarding contemporary topics. Innovation and dynamic internationalized environments are constantly shaping culture, business and policy-makers, whereby international entrepreneurs will always face new opportunities, networks and solutions that create novel space for future research.

Bibliography

Adedoyin, O.B.; Soykan, E. Covid-19 pandemic and online learning: The challenges and opportunities. *Interact. Learn. Environ.* 2020, 1–13. [CrossRef]

Aldrich, H., & Zimmer, C. 1986. Entrepreneurship through social networks. In D. Sexton & R. Smilor (Eds.). *The art and science of entrepreneurship*. 3-23. Cambridge, MA: Ballinger.

Andersson, S. (2011). International entrepreneurship, born globals and the theory of effectuation, *Journal of Small Business and Enterprise Development*, 18, 627-643.

Ansoff, H.I., 1988. *The New Corporate Strategy*. Wiley, New York

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43(7), 1097–1108.

Baldwin, C.Y, Woodard, J. 2009. The architecture of platforms: A unified view, in: Gawer, A. (Ed.), *Platforms, Markets and Innovation*. Edward Elgar, Cheltenham, UK and Northampton, Mass, pp. 19-44.

Birley, S. 1985. The role of networks in the entrepreneurial process. *Journal of Business Venturing*, 1: 107-117.

Boudreau, K.J., Jeppesen, L.B. (2014): Unpaid Crowd Complementors: The Platform Network Effect Mirage, *Strategic Management Journal*, forthcoming.

Bourreau, M., Caillaud, B., and De Nijs, R. 2017. Taxation of a Digital Monopoly Platform. *Journal of Public Economic Theory*, forthcoming

Brews, P.J., Hunt, M.R., 1999. Learning to plan and planning to learn: resolving the planning school/learning school debate. *Strategic Management Journal* 20 (10), 889–913.

Carey, D. & Smith, M. (2016). How Companies Are Using Simulations, Competitions, and Analytics to Hire. *Harvard Business Review*. Available: <https://hbr.org/2016/04/how-companies-are-using-simulations-competitions-and-analytics-to-hire>.

Chaffey, D. and Ellis-Chadwick, F. (2012). *Digital Marketing: Strategy, Implementation and Practice*, Pearson, London, UK.

Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability and ambidexterity. *Journal of Business Research*, 100, 196-206.

Chandler, G.N., DeTienne, D., McKelvie, A., & Mumford, A. (2011). Causation and effectuation processes: A validation study. *Journal of Business Venturing*, 26, 375–390.

Christensen, C. M. (2013). Disruptive innovation. En M. Soegaard y R. F. Dam (Eds.), Encyclopedia of human-computer interaction. Aarhus, Denmark: The Interaction-Design.org Foundation. Accesible en http://www.interaction-design.org/encyclopedia/disruptive_innovation.html.

Coviello, N., & Cox, M. (2006). The resource dynamics of international new venture networks. *Journal of International Entrepreneurship*, 4(2–3): 113–132.

Cusumano, M.A. and R.W. Selby (1995), *Microsoft Secrets: How the Worlds Most Powerful Software Company Creates Technology, Shapes Markets and Manages People*, New York: Free Press

Cusumano, M.A. and D.B. Yoffie (1998), *Competing on Internet Time: Lessons From Netscape and Its Battle with Microsoft*, New York: Free Press

Cusumano, M. A. (2008). Changing software business: Moving from products to services. *Computer*, 41(1), 20–27.

Cusumano, M.A., 2010. *Staying Power: Six Enduring Principles for Managing Strategy and Innovation in an Uncertain World (Lessons from Microsoft, Apple, Intel, Google, Toyota and More)*. Oxford University Pres

Dew N, Sarasvathy SD (2002) What effectuation is not: further development of an alternative to rational choice. Paper presented at Academy of Management Conference, Denver

Dew, N., Read, S., Sarasvathy, S.D., Wiltbank, R., 2009. Effectual versus predictive logics in entrepreneurial decision-making: differences between experts and novices. *Journal of Business Venturing* 24 (4), 287–309.

Dew, N., Sarasvathy, S.D., Read, S., & Wiltbank, R. (2009). Affordable loss: Behavioral economic aspects of the plunge decision. *Strategic Entrepreneurship Journal*, 3(2), 105–126.

Deakin, H., & Wakefield, K. (2013). Skype interviewing: Reflections of two PhD researchers. *Qualitative Research*. doi: 10.1177/1468794113488126

de Reuver, M., Sørensen, C., and Basole, R. C. 2017. "The digital platform: A research agenda," *Journal of Information Technology*), pp. 1-12.

Duggan J, Sherman U, Carbery R, et al. (2020) Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. *Human Resources Management Journal* 30(1): 114–132.

Eisenhardt K, Martin J (2000) Dynamic capabilities: what are they? *Strat Manag J* 21:1105–1121

Eriksson, P., & Kovalainen, A. (2008). *Qualitative methods in business research*. London: SAGE Publications Ltd.

Evans, David S. and Richard Schmalensee (2007), The industrial organization of markets with two sided platforms, *Competition Policy International*, 3:151-179

Fielding, N., & Schreier, M. (2001). On the compatability between qualitative and quantitative research methods. *Forum: Qualitative Social Research*, 2(1)

Fisher, G. 2012. "Effectuation, Causation and Bricolage: A Behavioral Comparison of Emerging Theories in Entrepreneurship Research." *Entrepreneurship Theory & Practice* 36 (5): 1019– 1051

Fuchs, C. (2014). *Social media: A critical introduction*. Thousand Oaks, CA: SAGE.

Gawer, A., M. Cusumano. 2008. How companies become platform leaders. *MIT Sloan Management Rev.* 49(2) 28

Gawer, A., & Cusumano, M. A. (2014). Industry platforms and ecosystem innovation. *Journal of Product Innovation Management*, 31(3), 417-433.

Gawer, A., and R. Henderson. 2007. Platform owner entry and innovation in complementary markets: Evidence from Intel. *Journal of Economics and Management Strategy* 16 (1): 1–34.

Gabrielsson M, Gabrielsson P (2011) Internet-based sales channel strategies of born global firms. *Int Bus Rev* 20(1):88–99. doi:10.1016/j.ibusrev.2010.05.001

Gabrielsson, P., & Gabrielsson, M. (2013). A dynamic model of growth phases and survival in international business-to-business new ventures: the moderating effect of decision-making logic. *Industrial Marketing Management*, 42(8), 1357–1373.

Galkina, T.; Lundgren-Henriksson, E.-L. Coopetition as an entrepreneurial process: Interplay of causation and effectuation. *Ind. Mark. Manag.* 2017, 67, 158–173.
[CrossRef]

Gompers, P.A., Kovner, A., Lerner, J., Scharfstein, D.S., 2006. Skill vs. luck in entrepreneurship and venture capital: evidence from serial entrepreneurs. NBER Working Paper number 12592.

Hansen, E.L., Witkowski, T.H., 1995. Entrepreneur involvement in international marketing: the effects of overseas social networks and self-imposed barriers to action. In: Hill, G.E., LaForge, R.W. (Eds.), *Research at the Marketing/Entrepreneurship Interface*, pp. 363–367.

Harris, B. (2017). Uber, Lyft, and Regulating the Sharing Economy. *Seattle University Law Review*, 41(1), 269–285. Available: <http://heinonline.org/HOL/P?h=hein.journals/sealr41&i=277>.

Harms, R., & Schiele, H. (2012). Antecedents and consequences of effectuation and causation in the international new venture creation process. *Journal of International Entrepreneurship*, 10(2): 95–116.

Haucap, J., & Heimeshoff, U. (2014). Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization? *International Economics and Economic Policy*, 11(1e2), 49e61.

Healy, J., Nicholson, D. & Pekarek, A. (2017). Should We Take the Gig Economy Seriously? *Labour and Industry: A Journal of the Social and Economic Relations of Work*, 27(3), 232–248. DOI: 10.1080/10301763.2017.1377048.

Hein, A., M. Schreieck, T. Riasanow, D. S. Setzke, M. Wiesche, M. Böhm and H. Krcmar (2019). “Digital platform ecosystems” *Electronic Markets* 43 (1), 39

Helfat, C. E., & Raubitschek, R. S. (2017). Dynamic and integrative capabilities for profiting from innovation in digital platform-based ecosystems. *Research Policy* (Forthcoming)

Hox, J. J., & Boeijs, H. R. (2005). Data collection, primary versus secondary.

Javalgi, R.G. and Ramsey, R. (2001), “Strategic issues of e-commerce as an alternative global distribution system”, *International Marketing Review*, Vol. 18, pp. 376-91.

Jia, K., Kenney, M., Mattila, J., & Seppala, T. (2018). The application of artificial intelligence at chinese digital platform giants: Baidu, alibaba and tencent. *ETLA Reports*, 81.

Johanson, J., & Vahlne, J.-E. 1990. The mechanism of inter- nationalisation. *International Marketing Review*, 7(4): 11–24.

Jones, M.V., Coviello N., & Tang, Y.K. (2011). International Entrepreneurship research (1989– 2009): A domain ontology and thematic analysis *Journal of Business Venturing*, 26(4) 632–659

Khan LM. 2017. Amazon’s antitrust paradox. *Yale Law J.* 126:710–805

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291.

Knight F (1921) *Risk, uncertainty and profit*. Houghton Mifflin, New York

Kocak, A., & Abimbola, T. (2009). The effects of entrepreneurial marketing on born global performance. *International Marketing Review*, 26(4), 439–452.

Kraus, S., Palmer, C., Kailer, N., Kallinger, F.L., Spitzer, J., 2018. Digital entrepreneur- ship: a research agenda on new business models for the twenty-first century. *Int. J. Entrepreneur. Behav. Res.*

Lavie, D. (2006). The competitive advantage of interconnected firms: An extension of the resources-based view. *Academy of Management Review*, 32(3), 638–658.

Leitch, C., Hills, F.M., Harrison, R.T., 2010. The philosophy and practice of interpretivist research in entrepreneurship. *Organizational Research Methods* 13 (1), 67–84.

Longhurst R. (2003) Semi-structured interviews and focus groups, in CLIFFORD N. J. and VALENTINE G. (Eds) *Key Methods in Geography*, pp. 117–132. Sage, London.

Lusch, R. F., & Nambisan, S. (2015). Service innovation: A servicedominant logic perspective. *MIS Quarterly*, 39(1), 155–175.

March JG (1982) The technology of foolishness. In: March JG, Olsen JP (eds) *Ambiguity and choice in organizations*. Universitetsforlaget, Bergen

Markides, C (2006) 'Disruptive innovation: In Need of a Better Theory', *Journal of Product Innovation Management*, 23 (1): 19-25

Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D., Zacharia, Z.G., 2001. Defining supply chain management. *Journal of Business Logistics* 22 (2), 1–25.

Meyer, M.H. and Mugge, P.C. (2001). Make Platform Innovation Drive Enterprise Growth. *Research Technology Management* 44(1):25–39 (January–February).

Mintzberg, H., 1978. Patterns in strategy formation. *Management Science* 24 (9), 934–948.

Moore, M., & Tambini, D. (Eds.). (2018). *Digital dominance: The power of Google, Amazon, Facebook, and Apple*. New York, NY: Oxford University Press.

Mudambi, R., & Zahra, S. A. 2007. The survival of international new ventures. *Journal of International Business Studies*, 38: 333-352.

Nambisan, S., 2017. Digital entrepreneurship: toward a digital technology perspective of entrepreneurship. *Entrep. Theory Pract.* 41 (6), 1029–1055.

Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, 41(1), 223–238.

Nambisan, S., Siegel, D., & Kenney, M. (2018). On Open Innovation, Platforms, and Entrepreneurship. *Strategic Entrepreneurship, Journal*
<https://doi.org/10.1002/sej.1300>

Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), 103773.

Oviatt, B. and McDougall, P. (1994) 'Toward a theory of international new ventures', *Journal of International Business Studies* 25(1): 45–64.

Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. 2016. Platform revolution. New York, NY: Norton and Co

Patruti-Baltes, L., 2016. Inbound Marketing - the most important digital marketing strategy. Bulletin of the Transilvania University of Braşov, Series V: Economic Sciences, Vol. 9 (58), No. 2, pp.61-68.

Prashantham, S., Kumar, K., Bhagavatula, S., & Sarasvathy, S.D. (2018). Effectuation, networkbuilding and internationalisation speed. International Small Business Journal, Forthcoming, <https://doi.org/10.1177/0266242618796145>

Ries, Eric (2012), Lean Startup: Schnell, risikolos und erfolgreich Unternehmen gründen, München.

Rochet, J.-C., & Tirole, J. (2003). Platform competition in two-sided markets. Journal of the European Economic Association, 1(4), 990–1029.

Rosenbusch, Nina, Jan Brinckmann, and Andreas Bausch. 2011. "Is Innovation Always Beneficial? A Meta-Analysis of the Relationship Between Innovation and Performance in SMEs." Journal of Business Venturing 26 (4): 441–457. doi:10.1016/j.jbusvent.2009.12.002.

Ryan, D. & Jones, C. (2009). Understanding digital marketing: marketing strategies for engaging the digital generation. London and Philadelphia: Kogan Page.

Saad M (2007) The enablers of internationalization. paper presented 2007-05-24, School of Business, Economics and Law, Göteborg University

Sambamurthy, V., Bharadwaj, A., and Grover, V. (2003) "Shaping Agility through Digital Options: Reconceptualizing the Role of IT in Contemporary Firms," *MIS Quarterly* (27:2), 2003, pp. 237-263

Sapienza HJ, Autio E, George G, Zahra SA (2006) A capabilities perspective on the effects internationalization on firm survival and growth. *Acad Manage Rev* 31(4):914–933

Sarasvathy, S.D. (2001). Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency; *Academy of Management Review* Vol. 26, No. 2

Sarasvathy, S.D. (2008). *Effectuation, Elements of Entrepreneurial Expertise*; book - Edward Elgar publishing house

Sarasvathy, S., Kumar, K., York, J. G., & Bhagavatula, S. (2014). An effectual approach to international entrepreneurship: overlaps, challenges and provocative possibilities. *Entrepreneurship Theory and Practice*, 38(1), 71–93.

Sarasvathy, S. D., Dew, N., Read, S., & Wiltbank, R. 2008. Designing organizations that design environments: Lessons from entrepreneurial expertise. *Organization Studies*, 29: 331–350.

Silverman, D. (2000). *Doing qualitative research: A practical handbook*. London: Sage Ltd.

Sydow, J., Schreyogg, G. and Koch, J. (2009). 'Organizational path dependence: opening the black box'. *Academy of Management Review*, 34, 689–709.

Tapscott, D., 2014. *The Digital Economy Anniversary Edition: Rethinking Promise and Peril in the Age of Networked Intelligence*. McGraw Hill Professional.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.

Teece, D. J. (2010) Technological innovation and the theory of the firm: the role of enterprise-level knowledge, complementarities and (dynamic) capabilities. In: B. H. Hall, and N. Rosenberg (eds.), *Handbook of the economics of innovation* (vol. 1), Amsterdam and New York: Elsevier

Teece, D.J., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13–35.

Thomas, L. D. W., Sharapov, D., & Autio, E. (2018). Linking entrepreneurial and innovation ecosystems: The case of App-Campus. In S. A. Alvarez, E. G. Carayannis, G. Dagnino, & R. Faraci (Eds.), *Entrepreneurial ecosystems and the diffusion of startups*. Cheltenham, U.K.: Edward Elgar Publishing.

Thornhill, S., 2006. Knowledge, innovation and firm performance in high- and low-technology regimes. *Journal of Business Venturing* 21 (5), 687–703.

Tilson, D., Lyytinen, K., & Sørensen, C. (2010). Digital infrastructures: The missing IS research agenda. *Information Systems Research*, 21(4), 748–759.

Tiwana A, Konsynski B, Bush AA (2010) Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. *Inform. Systems Res.* 21(4):675–687.

Tiwana, A. (2014) *Platform Ecosystems : Aligning Architecture, Governance, and Strategy in Elsevier Science & Technology*

Tiwana A. (2015) Evolutionary competition in platform ecosystems. *Inform. Systems Res.* 26(2):266–281.

Tiwana A. and Balasubramaniam R. “E-services: problems, opportunities, and digital platforms” *Proc. 34th Hawaii International Conference on System Sciences*, Hawaii, 2001.

Townsend, D. M., Hunt, R. A., McMullen, J. S. and Sarasvathy, S. D. (2018). ‘Uncertainty, knowledge problems, and entrepreneurial action’. *Academy of Management Annals*, 12, 659–87.

Tranfiend, D., Danyer, D. & Smart, P. (2003). Towards a methodology for developing 40 evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, 207 – 222.

Van Alstyne M.W. , G. G. Parker, and S. P. Choudary, “Pipelines, platforms, and the new rules of strategy,” in *Proc. Harvard Bus. Rev.*, 2016, pp. 54–62

Van Dijk, Jan. 1999. *The network society, Social aspects of new media*. Thousand Oaks, CA: Sage.

Van Dijck, J. (2020). *Governing digital societies: Private platforms, public values*. *Computer Law & Security Review*, 36. <https://doi.org/10.1016/j.clsr.2019.105377>

Van Dijck J, Poell T, de Waal M (2018) *The Platform Society*. New York: Oxford University Press

Wen W, Zhu F (2017) Threat of platform-owner entry and complementor responses: evidence from the mobile app market.

Yang, M. and Gabrielsson, P. (2017), “Entrepreneurial marketing of international high-tech business-tobusiness new ventures: a decision-making process perspective”, *Industrial Marketing Management*, Vol. 64, July, pp. 147-160.

Yin, R. K. (1994). *Case study research: Design and methods*. 2nd ed. Thousand Oaks, California: Sage Publications.

Yin, R. K. (2011). *Qualitative research from start to finish*. New York, NY: Guilford Press.

Yoo, Y., Henfridsson, O., and Lyytinen, K. (2010). The New Organizing Logic of Digital Innovation: An Agenda for Information Systems Research, *Information Systems Research* 21(4): 724–735.

Yoo, Y., Boland, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in the digitized world. *Organization Science*, 23(5), 1398–1408.

Zahra, S. 2005. A theory of international new ventures: A decade of research. *Journal of International Business Studies*, 36: 20–28.

Zahra, S. A., & Nambisan, S. (2012). Entrepreneurship and strategic thinking in business ecosystems. *Business Horizons*, 55(3), 219–229.

Zhou KZ, Wu F. 2010. Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal* 31(5): 547–561.

<https://www.beroeinc.com/category-intelligence/digital-marketing-services-market/> (website visited, 18. June 2022)

<https://www.eib.org/en/publications-research/economics/surveys-data/eibis-digitalisation-report.htm> (website visited, 16. June 2022)

<https://www.macrotrends.net/stocks/charts/MSFT/microsoft/market-cap>

(website visited, 20. June 2022)

<https://www.macrotrends.net/stocks/charts/GOOGL/alphabet/market-cap>

(website visited, 20. June 2022)

<https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-capitalization/> (website visited, 20. June 22)

https://billwerk.com/?campaign=808003342&group=42208063376&creative=191875316368&keyword=billwerk&matchtype=p&targetid=kwd-477104288628&gclid=Cj0KCQjw39uYBhCLARIsAD_SzMT82_-JyVsybSul0G949FHA2A-ZXdoUBP6h1UGbRnN3ft2_O9JOMyYaAkh9EALw_wcB (website visited, 28. June 22)