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User generated growth on social media platforms – weak ties and internationalization

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TIIVISTELMÄ:

Tämä tutkimus syventyy käyttäjälähtöisen kasvun tarkasteluun digitaalisilla alustoilla – tarkemmin rajaten sosiaalisessa mediassa. Aikaisempi tutkimus digitaalisten alustojen verkostojen saralla on tuonut esiin heikkojen siteiden roolin muussa tapauksessa kaukaisten verkostojen yhdistäjänä ja verkostojen välisen informaation kulun mahdollistajana. Verkostojen arvo muodostuu sosiaalisen median alustoilla käyttäjien välisen informaation vaihdon seurauksena. Aikaisemmat tutkimukset osoittavat, että heikkojen siteiden hyöty piilee juuri informaation jakelussa. Tästä huolimatta heikkojen siteiden arvo ja rooli born-digital alustojen kasvun mahdollistajana on vielä vailla akateemista näyttöä.

Tämä tutkimus yhdistää aikaisemman akateemisen näytön heikkojen siteiden luonteesta sosiaalisen median kontekstiin rakentamalla teoreettisen viitekehyksen pohjalta käsitteellisen mallin, jota analysoidaan yhdessä tutkimuksen empiirisen aineiston kanssa akateemisen tutkimuspohjan luomiseksi. Empiirinen tutkimus on toteutettu monimenetelmäistä lähestymistapaa hyödyntäen yhdistelemällä määrällistä ja laadullista tutkimusmenetelmää. Datankeruu toteutettiin tutkimuksessa luomalla anonyymi tutkimuslomake demografisesti hajautetuille sosiaalisen median käyttäjille. Tutkimuksen otanta koostuu Aasiasta, Euroopasta ja Afrikasta kotoisin olevista vastaajista.

Tutkimuksen tulokset vahvistavat käyttäjälähtöisten heikkojen siteiden omaavan positiivisen vaikutuksen sosiaalisen median alustojen kasvuun ja kansainvälistymiseen kasvattamalla käyttäjien sitoutumista ja muovaamalla asenteita. Tutkimus identifioi kolme ensisijaista muuttujaa, jotka vaikuttavat käyttäjien välille muodostettuihin heikkoihin siteisiin sosiaalisen median alustoilla ja analysoi käyttäjien asenteiden vaikutusta digitaalisten alustojen kansainvälistymisessä. Aineistosta on tulkittavissa, että käyttäjien tuoma arvo verkostolle vaihtelee asenteiden ja käytöksen seurauksena- näin ollen osa käyttäjistä toimii solmukohtina eri verkostoille ja tarjoaa korkean volyymin kanavan informaation levitykselle heikkojen siteidensä kautta.

Tutkimustuloksia käsitteellisen mallin perspektiivistä analysoimalla on huomattavissa, että tutkimus tarjoaa akateemista näyttöä heikkojen siteiden arvon muodostumiselle sosiaalisen median alustojen kansainvälistymisessä ja luo pohjan aiheen jatkotutkimukselle.

AVAINSANAT: weak ties, network effects, social media, internationalization, user engagement, user behavior

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ABSTRACT:

This thesis focuses on user facilitated growth on digital platforms – more specifically on social media. In previous research, weak ties have been recognized for their power of connecting otherwise distant networks and therefore facilitating distribution of information. In network effects the value of the network is created through value exchange. On social media, the network value increases through interactions – exchanging information between users. While prior research suggests that weak ties aid in spreading information, the value provided by weak ties in born-digital platform growth is yet to be discovered.

This study aims to combine the previous academic evidence on the nature of weak ties to social media context by building a theoretical framework and a conceptual model which are later analyzed together with the empirical findings to create a base for the research in the field. The empirical study is conducted with a mixed methods approach by utilizing both quantitative and qualitative methods in the data analysis. The data was collected with an anonymous questionnaire from demographically distributed social media users. The sampling consists of individuals from three different continents – Asia, Europe and Africa.

The results of the study verify that user generated weak ties on social media impact positively on platform internationalization by increasing the engagement and transforming the attitudes of platform users. This study identifies three primary factors that impact the generation of user-to-user weak ties on social media platforms and analyzes the consequences of user attitudes for digital platform internationalization. It can be observed from the data that certain users bring more value to the platform growth than others through their attitudes and habits, thus they act as junctions for different networks and provide a high volume channel for information exchange through their weak ties.

By analyzing the findings of the empirical study from the perspective of the conceptual model, this study identifies future research areas and forms a foundation for the academic research in the field.

KEYWORDS: weak ties, network effects, social media, internationalization, user engagement, user behavior

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Abbreviations

MSP	Multi-sided platform
WOM	Word-of-Mouth
GDA	Qualitative data analysis
DBP	Digital business platform
AI	Artificial intelligence
B2B	Business to business

1 Introduction

This chapter introduces the background for the research and identifies the research gap. In addition, chapter one presents the structure, objectives and the research questions of the study. Methodology is introduced in the chapter 1.3.

1.1 Problem area

In the time of digitalization and internet, most businesses are affected by the change. Digital transformation generates changes in companies, as new digital technologies become part of organizational operations (Parviainen et al., 2017). According to Ojala et al. (2023), digital change has impacted the way digital businesses approach internationalization.

Digitalization is a trend that changes business environments by transforming current operations with digital technology (Parviainen et al., 2017). Over the past years, digital businesses have significantly increased their position in academic research (Asadullah et al., 2018 b). Social media, a product of digitalization, has taken its place as a common communication tool, allowing interaction beyond everyone's personal networks and strong ties with friends and family. The definitions of social media platforms vary, however in all simpleness social media platforms can be defined as platforms that connect individuals (Aichner et al., 2021). Although some of these new companies find success in digitalization, many fail to keep their digital ecosystems viable (Asadullah et al., 2018 a).

Nowadays the number of people interacting with digital platform provided services is increasing (Ojala et al., 2018) and according to Reed (2001, p. 23) the value of internet is rooted in the connections it enables users to create. Network effects have proven their value by being the reason for 70% of all technological growth during the last 30 years (NfX, 2019), therefore the need for academic research in the field is needed as digitalization proceeds.

To form a picture of success factors aiding in internationalization and growth of these platform businesses, the phenomena of network effect should be discussed. Network effect is a phenomenon where the value of membership is influenced by other users joining the network (Katz & Shapiro, 1994). Network effects occur and often aid in growing platform businesses where the role of interactions (Parker et al., 2016) is highlighted. According to Parker et al. (2016) network effects are currently building the biggest companies of the 21st century, however not all platforms manage to succeed (Zhao et al., 2020, p. 17).

According to Marsden (1990, p. 435) the research on social networks has been active over the past couple of decades, however Zhao et al. (2020, p.1) state that platforms have remained under-theorized despite their increasing impact on value creation and capture in organizations. Platform is a business model which utilizes technology to connect with various stakeholder groups to exchange and create high volumes of value in an interactive ecosystem (Parker et al., 2016). According to Muffatto (1999, p. 145) platforms are a “relatively large set of a product components that are physically connected as a stable sub-assembly and are common to different final models.”

Often the research on platforms focuses on multi-sided markets (Bourdreau & Jeppesen 2015), however there are multiple other platform categories that have been identified. According to Asadullah et al. (2018 a), platforms can be divided into three categories: product platforms, multisided platforms and integrator platforms. In this paper platforms have been delimited to multisided social media platforms, where the formation of global impersonal connections is accommodated. Social media is often defined as a platform that connects people (Aichner et al., 2021), and the difference in interactions is the factor that differentiates social media from other platform models. Social media can function as a platform for interactions between individuals, businesses and brands (Aichner et al., 2021).

Platforms can be seen as complex (Parker et al., 2016), since they often are depending on external factors, like user interactions and the scale of networks. Interactions in a platform context can be defined as economic or social exchange that is happening on the internet or alternatively in the real world (Parker et al., 2016). According to Parker (2016), this can mean exchange of information, currency or goods and services. In this thesis the research is limited to social media platforms and therefore interaction in this context can be defined as exchange of information.

Platform businesses are increasingly dominating the list of fastest growing international brands (Parker et al., 2016). According to Parker et al. (2016), in 2014, three of the largest businesses by market capitalization were all platforms. The power of platforms has changed the traditional business development pace by offering an interactive ecosystem to help connect people, businesses and resources (Parker et al., 2016). This has led to pipeline businesses being replaced by platform businesses because of their high-volume value creation, supply and efficient scaling (Parker et al., 2016).

Despite the research on network value, the role of social media users in platform internationalization is incoherent. This research focuses on user generated networks on social media platforms and seeks to understand the value of users in the process of platform internationalization. Granovetter (1973, p. 1360-1361) argues that interpersonal connections have four strength impacting factors in network context including emotional intensity, intimacy, time and reciprocal services. Swann (2002, p. 417), highlights that according to Metcalfe's Law, users utility reacts in a linear function to the network size. Despite these approaches to interpersonal connection value definition, the field of positive network effects is assumed to be unknown.

1.2 Research questions

This study has one main research question:

What kind of impact do user generated weak ties have on the internationalization and growth of social media platforms?

With this question, the study aims to identify the user related networking perspective of weak ties to social media context and therefore determine the factors affecting international platform growth. In addition, the study aims to analyze the growth impacting attributes of social media users and to identify their current habits linked to facilitation of global networks and information exchange through weak ties on various social media platforms. However, as the research question is quite broad, the empirical part of the study is structured based on three sub-questions.

- 1. Which factors can be identified to impact the generation of user-to-user weak ties on social media?*
- 2. What is the role of these factors in born-digital platform businesses' internationalization?*
- 3. What is the value that users provide to the platform growth?*

The sub-questions are utilized to provide a deeper understanding of the user related value that platform providers can benefit from in their decision making. By collecting data from platform users, these questions aim to frame the process of weak tie formation from users perspective. Additionally, these questions examine the opportunities and risks related to internationalization of these born-digital platforms.

These sub-questions aid in the categorization of the data and form a structure around the research analysis. By combining the data collected to answer these sub-questions, the study aims to find an answer to the main research question. These findings are then analyzed with the conceptual model formed on the basis of existing research in the field.

1.3 Objectives

Further research in the field of viable platforms is needed (Zhao et al., 2020). The main objective of the study is to answer the research questions and therefore provide new data on positive network effects and tie strength increasing the stage of internationalization and value growth of social media platforms. Based on the results and discussion, new topics for future research can be suggested in the field.

The second objective is to form a conceptual model based on the theoretical framework. This model will combine the concepts of weak ties and positive network effects and identify the impact these concepts have on the scaling of international social media platforms. This conceptual model is further utilized in the analysis of the empirical study. Additionally, the conceptual model produces a new approach to social media internationalization through analyzing existing research data and aids in filling the research gap in the field of platform businesses.

The third objective of the study is to link the prior research to global social media platform context and identify new research gaps for future research. While the international perspective is natural in the context of social media platforms, it aims to add to the research made on network effects and weak ties. Based on this objective, areas for further research are suggested and the reliability of research findings is analyzed.

1.4 Methodology

Empirically collected academic evidence on the nature of indirect network effects in international scaling is not often found in prior research (Stremersch et al., 2007). The methodology of this study supports the objective of producing new academic evidence to support future research in the field. The methodology of this study consists of the theoretical framework formed by combining the findings of literature review and the empirical research conducted on user behavior on social media platforms.

The conceptual model is tested by analyzing empirical findings through the model. By combining the findings of the theoretical framework and empirical findings the study aims to form an overview of network effects impact on social media scaling in an international context. Conceptual model on tie strength and social media platforms is created based on the literature review and that model is tested in the analysis of empirical research results.

In this paper, the empirical study is conducted by utilizing a qualitative research approach as it provides a deeper understanding of the reasons behind the complex phenomena (Sofaer, 1999). Anonymous questionnaire was distributed to collect data from social media users around the world. Both quantitative and qualitative questions were presented to participants, as the combination enabled further analysis of the findings.

1.5 Structure of the study

The structure of the study is divided to six chapters. Each chapter supports the research objectives and provides data, theoretical findings, background or discussion in aims to fill the research gap. The structure of the study combines the efforts of prior research and results of this study into a new approach to social media internationalization.

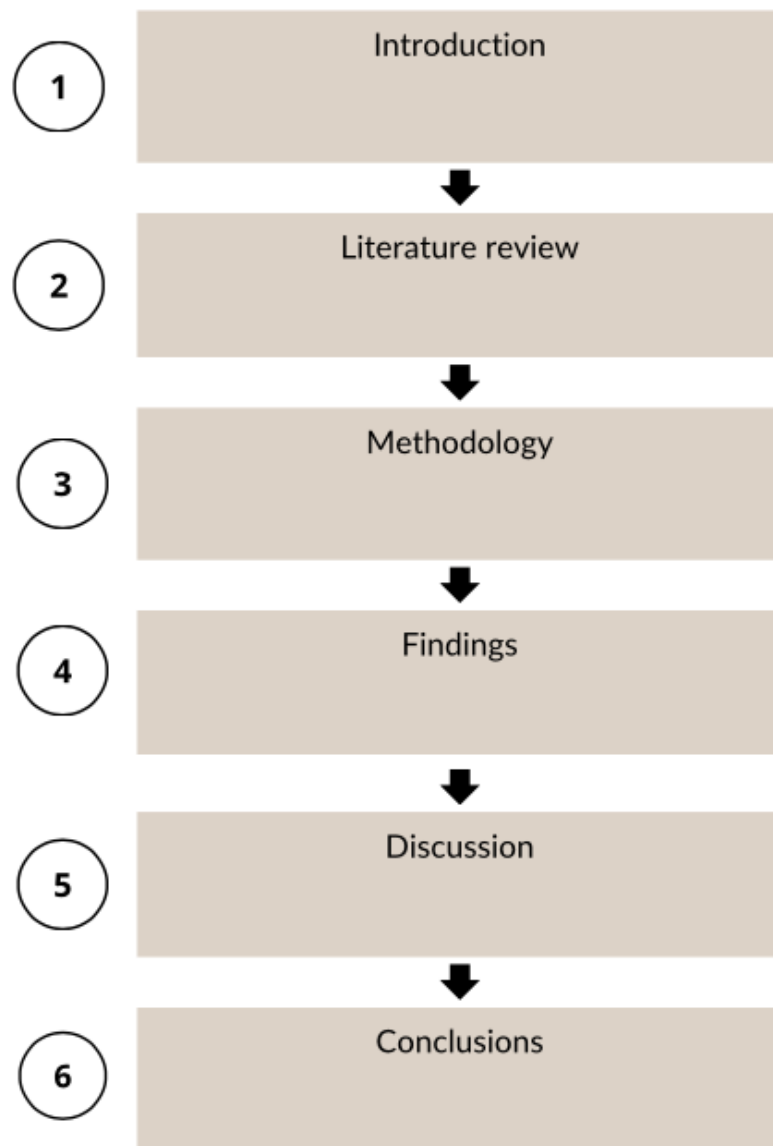


Figure 1 Structure of the study

The first chapter of the paper presents the background for the study in a form of a research gap and provides an overview of the problem area. In addition, it introduces the research question and the objectives of the study forming a foundation for the research. Methodology is briefly introduced in the first chapter to support the justification of the research topic and empirical approach. The structure of the study presented in the first chapter additionally supports the aim to provide a clear and concise overview on the problem area.

The second chapter provides a theoretical framework for the study. Theories, academic literature and previous research conducted on platform businesses, network effects and social media are introduced. Second chapter covers generally known theories and approaches on the topic and combines these to create a new approach to global social media scaling. On the basis of the literature review, conceptual model is compiled and it is later tested with the data collected from the empirical research.

The third chapter introduces the methodological choices of the research. In the chapter, selected methods are presented and argued based on the aims of the research. In the third chapter, data collection is discussed and the data analysis methods are justified. Thus, the methodology chapter forms the basis for the next chapters of presenting the research findings and discussion.

Fourth chapter introduces the results and presents visualizations of the findings. This chapter is divided by the sub-questions presented in the introduction chapter. The questionnaire used to collect the data is disassembled into three different categories. By categorizing and analyzing the data in these sub-groups, this chapter aims to find an answer to the main research question.

The last two chapters summarize the results and provide a conclusion of the study. Discussion presents authors own conclusions and critical views in the fifth chapter. The findings of the empirical research are discussed by testing the conceptual model formed as a result of the literature review. In addition, reliability of the study is discussed and critical perspectives are introduced in the end of the fifth chapter.

In addition, conclusions are presented in the sixth chapter. Based on the analysis conducted throughout the study, this last chapter presents the new research gaps identified and offers suggestions for future research. Finally, in addition to the research summary,

the sixth chapter identifies and discusses the managerial and theoretical implications of this study.

2 Literature review

Literature review presents relevant theories and previous research findings of the topic. The chapter is divided to two parts by the subjects of network effects and internationalization of digital platforms. Theoretical framework is presented in the form of a conceptual model.

2.1 Network effects

As the importance of digitalization in business has expanded (Cenamor et al., 2019, p. 198), network effects have started to function as a competitive advantage in the field of platform business models (Zhao et al., 2020, p. 2). The foundation of network effects on digital platforms can be explained by the increase in value as other users join the platform (Katz & Shapiro, 1994). While network effects have been studied in sociology for decades, the value network effects offer for digital platforms is not supported by the same amount of academic evidence.

2.1.1 Platform ecosystems – multi-sided platforms

Platform business models are continuously becoming more common. Participants of platform ecosystems can therefore pursue faster growth than before (Kapoor et al., 2021). Generalizing platform ecosystems offer compatible and adaptable product features enabling companies to answer consumers needs on occasion (Kapoor et al., 2021).

There are different types of platform models. In their article Zhao et al. (2020) recognize manufacturing platforms and multi-sided platforms. While the value of manufacturing platforms is rooted in product features and the product is owned by a “focal firm”, multi-sided platforms create value through user transactions (Zhao et al., 2020, p. 3-4). This exchange of value usually happens between two used groups often categorized as “sellers” and “buyers” (Evans et al., 2011, p. 5-6).

Multi-sided platforms can be defined as intermediaries facilitating user to user interactions (Zhao et al., 2020, p. 4). According to Zhao et al. (2020, p. 4) multi-sided platforms differ from traditional product pipelines by allowing platform users to own the product. Therefore it can be reasoned that multi-sided platforms operate as neutral service providers allowing user interactions and value transactions on the platform.

According to Parker et al. (2016), transactions can be divided to two categories - social and economic exchange. On multi-sided social media platforms users can exchange goods and services, currency and information (Parker et al., 2016). Examples of platforms creating value through exchange of information are TikTok, Facebook, Pinterest, YouTube, Instagram and Twitter. Mobile Pay is a platform utilizing currency exchange as a tool for creating value. Additionally, Facebook marketplace, Wolt and Uber are examples of platforms creating value through exchange of goods and services between users. In the context of this study the focus is on value creation that happens through information transactions.

According to Evans et al. (2011, p. 31-32), multi-sided platforms have two or more parties operating as customers. These roles can be defined as “buyers” and “sellers”, however they can alternatively change based on the transaction (Evans et al., 2011, p. 31-32). Evans et al. (2011, p. 31) explain that for example eBay users can be sellers and buyers on the same platform depending on their needs and the demand. Using the same paradigm social media users can act as information givers and information receivers depending on the occasion.

Two-sided platforms function as a value creation tool for its users in the platform ecosystem by decreasing costs, growing audiences and utilizing matchmaking activities (Evans et al., 2011, p. 9). Two-sided platforms facilitate the meetings and value exchange of two customer groups (Evans et al., 2011), however nowadays digital platforms offer possibilities for multiple roles on the platform. By analyzing both sides of these two-sided platforms the competitive offering can be understood (Evans et al., 2011).

More recent literature (Jacobides et al., 2018) on ecosystems explains them as group of companies interacting with together while being dependent on each other. In social media platform context this phenomena appears as users, companies and advertisers who seek to interact with other groups or users. In their study, Jacobides et al. (2018) argue that modularity allows ecosystems to emerge by enabling companies to operate without hierarchy.

On social media this means that users are attracted to the platforms by other users information that they are able to exchange on the platform. According to Evans et al. (2011, p.136) example the demand is impacted by the offering on these platforms. For example, if all the users with new information are blocked from a platform, other users are likely to decrease their engagement on the platform as they are not able to exchange information.

2.1.2 Strong and weak ties

According to Panico and Cennamo (2022), user demand is impacting platform ecosystem growth as it facilitates indirect network effects. Ojala and Lyytinen (2022) highlighted that indirect network effects are a mandatory building block for platform success. In their study, Ojala and Lyytinen (2022) identified competitive moves of entrepreneurs and formed a dynamic model to combine the concepts of competitive moves and the sequence of the moves in the context of indirect network effect growth. The study suggests that based on the time of the moves determine whether the outcome of the process is enabling platform scaling or allowing broad range of interactions on the platform by changing the platform architecture (Ojala & Lyytinen, 2022)

Granovetter (1973) presented a sociological theory focusing on the strength of dyadic ties. In 1970s prior research had suggested that the overlap between personal networks of two separate individuals impacts the strength of their interjacent tie strength (Granovetter 1973, p. 1360). According to the study, ties can also appear negative by their effects.

According to Granovetter (1973) strong ties tend to have same individuals in their network. Therefore, the information spread through weak ties is more efficient, as they will reach larger amount and broader scale of individuals through their network. Strong ties are connections between individuals who are having frequent interactions – for example friends and family (Hu et al., 2019, p. 246). Weak ties, on the other hand, are mostly encountered between strangers or distant acquaintances, whose interaction is not frequent (Granovetter 1973; Hu et al., 2019). These relationships can be perceived more distant than relationships between strong ties (Hu et al., 2019).

Strong ties often have similar interests, beliefs and views. Bessi et al. (2016) highlighted that users have a tendency to look for information that supports their own aspirations. They are prone to form groups and make connections with other users that share the same beliefs or interests and many social media platforms support this view by tailoring the algorithm to promote content based on user behavior (Bessi et al., 2016).

Network effects grow their value as more users join the network (Katz & Shapiro, 1994) and this eventually leads to platform growth and according to Metcalfe's Law (Metcalfe, 1995) this has a positive impact on the number of connections inside the network therefore increasing the value of the network. In social media this could mean the number of potential connections increasing when other users join the platform.

According to Granovetter (1973) the power of weak ties in social networks is often overlooked. While strong ties bring together people with similar interests, weak ties connect otherwise disconnected parts of our social structures therefore allowing new information to flow (Granovetter, 1973). Research has subsequently supported Granovetter's (1973) theory on tie strength, however this theory has been criticized.

According to Granovetter's (1973) theory on the strength of weak ties, interpersonal ties form their strength over the following independent yet interconnected measurements.

Granovetter (1973, p. 1361) defined these factors as the “(probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding) and the reciprocal services which characterize the tie”. These weak ties are especially visible on platforms like social media, where the interaction between new people is strategically facilitated.

In Word-of-Mouth (WOM) marketing it is generally believed that weak ties function better at optimizing WOM effect – thanks to its macro-level impact (Hu et al., 2019). However, Hu et al. (2019, p.252-253) concluded that the impact strong ties have in WOM marketing can be stated to be significantly more substantial compared to weak ties. This challenges the generally adapted beliefs.

Strong ties’ effect on WOM may be impacted by advertising (Hu et al., 2019, p.252-253), as companies work for spreading brand awareness. However, in global context weak ties can be seen as bridges spreading information (Hu et al., 2019, p. 253) between different markets, groups and target audiences. According to the study, it is the global reach that plays a key role in analyzing the importance of tie strength – weak ties have more volume and therefore are more impactful compared to strong ties in international context.

According to NfX (2019), the size of the network can be calculated by the number of nodes a network has. Based on their research nodes are people or devices that are connected via links which can be measured by their strength (NfX, 2019). According to the article, these measuring variables can be defined as “ function of the durability, closeness, and activity between two nodes”.

Network density has been defined as “the mean strength of connections among units in a network” (Marsden, 1990). Marsden (1990) have focused on “egocentric” network data which refers to the ties surrounding individual units or nodes. Sohn (2009, p. 354-355) presented a model of dense and nondense network principles, which suggests that while in nondense networks there are more connections to people outside the network,

dense networks have more ties within the network. In this model, nodes in nondense network hardly know one another but are connected to the ego.

2.1.3 Positive and negative network effects

The value platform users place on a platform depends on the number of users utilizing the platform (Cennamo and Santaló, 2013: p. 1331, as cited in Zhao et al., 2020 p. 2) – this phenomenon is called the positive network effect. Top et al. (2011, p. 1575) present a supporting definition to positive network effects in their article. Usually network effects have a positive impact on the users behavior as “the last consumer increases the utility of all consumers by participating network” (Top et al., 2011, p. 1575). However, this is not always the case.

While most network effects are positive, negative network effects have been identified in prior research. Top et al. (2011, p. 1575) define the negative network effect as the utility of the network decreasing as more users join the network. In the case of negative network effects the value of the platform or product decreases as more users are joining the network. This phenomenon can be tied to the limited capacity of a network (Top et al., 2011, p. 1575). In social media platform context this is not often the case as the capacity of the network is limitless, therefore the value of the platform has a positive impact as more users are joining the network.

2.1.4 Previous research on network effects

While network effects have been studied for decades, the value and concept of network effects on social media platforms is still unknown. According to Metcalfe’s Law “the value of a communications network is proportional to the square of the size of the network” (Odlyzko & Tilly, 2005, p.1). This theory has been discussed a lot during the past years, even though it has been proved by Facebook data back in 2013-2015 (Zhang & Xu, 2023). According to Zhang and Xu (2023) Metcalfe’s law has been criticized for overestimating and underestimating the power of a network effects.

As an alternative to Metcalfe's law ($V = n^2$), multiple other theories have been proposed to explain the relationship between the number of users in the network (n) and the value (V) of the network (Zhang & Xu, 2023). According to Zhang and Xu (2023), alternative approaches include for example Reed's law (Reed, 1999) where $V = 2^n$, which suggests that there are groups inside proportionally growing networks which grow faster thanks to influence or impact of interconnectedness. According to this law, networks that are prone to clustering, scale and therefore experience an increase in value faster than networks that are not prone to clustering.

Katona et al. (2011, p. 425) explain clustering as a phenomenon where "the density of connections in a group of already adopted consumers has a strong positive effect on the adoption of individuals connected to this group". According to Briscoe et al. (2006), Odlyzko's law ($V = n \log(n)$) claims to prove the value creation occurring through acquisition of new network members. However, Odlyzko's law is not adaptable for measuring the value created for connecting two or more separate networks nor does it take into account the power of weak clustering (Briscoe et al., 2006). When the impact of clustering is weak and users are not in the same network as their strong ties (e.g., colleagues, family members, friends) the value of combining networks can be increased above the formula of Odlyzko's law (Briscoe et al., 2006). Another approach known widely in this field of research is Sarnoff's law ($V = n$), which suggests that the value of a network is directly linked to the size of the network, therefore increasing proportionally as more units join the network (Reed, 1999; as cited in Swann, 2002).

2.2 Internationalization of digital platforms

Digital platforms are changing the environment for various markets and businesses (Asadullah et al., 2018 b). As more companies are benefitting from digitalization and moving their business online, internationalization of these businesses has become more common. Social media platforms are one example of businesses that have utilized digitalization as their favor.

Cenamor et al. (2019) studied the digital platform use of entrepreneurial small and medium sized businesses - SMEs. According to Cenamor et al. (2019) digitalization has changed the competitive market of SMEs. According to the article, new opportunities are occurring as digitalization proceeds. This is also affecting the formation of new digital platforms and business models.

According to Castellion (2008), there are two types of business platforms – one-sided and multisided platforms. According to the article, on one-sided platforms, the platform provider owns the products sold on the platform or produces them before reselling. In this study, we are focusing on multisided platforms which consist of multiple customer groups and create value through enabling interaction between these groups (Castellion, 2008, p. 410).

2.2.1 Facilitation of digital platform growth

According to Wirzt et al. (2019, p. 453) platform business models have created “intermediated industries” thanks to the quick development of digital tools. Artificial intelligence (AI), mobile technologies and development of analytics have all played a part in this fast change of our business environment (Wirzt et al., 2019, p. 453).

Digital business platforms (DBPs) function as a link between potential customers and service providers (Vakeel et al., 2021). As Vakeel et al. (2021, p. 478) cited in their article, most DBPs create network effects by prioritizing growth in the beginning stages of scaling a platform (Schreieck et al., 2018), there are multiple factors to consider when analysing the positive and negative effects of the network growth.

Hagiu & Wright (2015) studied indirect network effects in the context of multi-sided platforms (MSPs). They based their study on the assumption of the volume of the suppliers on a platform attracting more buyers to buy through the same platform. Although the study focused on MSPs, the same kind of supposition can be adjusted to social media

platforms as it is possible for them to gain value in network effects. According to Katz & Shapiro (1994) the amount of users joining a platform impacts the network growth.

According to Reed (2001, p. 24) the value of the network grows in three different stages of changing information – broadcasting, transactional and group-forming information exchanges. Broadcasting allows information to be shared from one person to many (e.g., news, public videos and posts on social media) whereas transactional communication allows one to one conversations through messaging (Reed, 2001, p.24). According to Reed (2011, p.24) group-forming activities like chat rooms allow users to communicate through many to many model in group chat rooms or business to business (B2B) relations.

2.2.2 International scaling of social media platforms

Platform businesses are transforming industries internationally (Xu et al., 2021). While internationalization of various platform businesses has been studied and theorized, the impact of tie strength on social media platforms global scaling is still very new area for academic research. Global scaling has been defined as a logic which can be utilized to seek fast paced international growth by replicating a globally adapted business model to new markets (Reuber et al., 2021, p. 1031). As it is understandable for academic research not to keep the same pace as fast developing digitalization, this study aims to provide evidence to form a base for upcoming research.

Vadana et al. (2020, p.14), defined born-digital (BD) companies as companies who's value chain is either highly digital from the establishment of the company or companies who's value chain becomes highly digitalized soon after establishment. The same logic goes to the definition of born-global companies according to Vadana et al. (2020). Born-global (BG) companies are either global at inception or internationalize rapidly (Vadana et al., 2020, p. 20-21).

Many social media platforms are both; born-digitals and born-globals. The process of internationalizing rapidly is natural in case of social media platforms, as they are not

dependent on geographical location the same way as traditional business models are with their production chains. Digital platforms have an optimal baseline for global scaling. However, according to Ojala and Tyrväinen (2009), the internationalization processes can vary between born-global companies.

Ojala et al. (2018, p. 763) presented a theoretical model for digital platform internationalization. This model consists of four phases – establishment, early internationalization, commercialization and globalization. According to Ojala et al. (2018, p. 763) the theoretical concepts of “loosely and less controlled networks” and “ecosystems” are specifically linked to the globalization phase of the process of platform internationalization.

In the early stage of internationalization, as firms enter target markets, they benefit from networking and connecting with partners who have relevant architectural resources (Johanson & Vahlne, 2009; Ojala et al. 2018). According to Ojala et al. (2018) these resources can be seen as a value proposition related to a service that will add to the ecosystem’s present selection. This theory can be adapted to user driven social media platforms by observing this ecosystems’ service selection as the variety information new networks and individual users are able to bring to the ecosystems and therefore distribute on the platforms.

The stage of internationalization process has been linked to the network relationships in prior research. Coviello and Munro (1997) studied the internationalization process of small software firms in the context of network relationships and the stage of internationalization. According to Coviello and Munro (1997), the relationships that facilitate internationalization processes have an impact on various business activities including market selection and diversification, product development and the mode of market entry.

According to Stallkamp and Schotter (2021, p. 58) network externalities can be inspected in two subcategories “within-country” and “cross-country” externalities. There is a

difference between platform companies that operate by creating separate user networks in every foreign market and network externalities which are not restricted by national borders (Stallkamp & Schotter, 2021). Stallkamp and Schotter (2021) highlighted that according to their study, the internationalization strategies are crucially impacted by the nature of the network externality in question. According to the study, these key factors impacted by the phenomena are entry to foreign markets, selection of and possible exit from foreign markets and the dilemma of choosing between global or multidomestic strategies.

In addition, other theories for internationalization have been studied. Zhou et al. (2007) presented a network theory on born-global SMEs internationalization which suggests that despite localized roots companies achieve strategic growth by internationalizing by utilizing social networks. According to the study, early internationalization is especially likely to occur when companies utilize the “broader appeals of social networks” (p. 685).

Gomes and Ramaswamy (1999) studied the relation between multinationality and company performance by analyzing various factors like benefits and costs of multinationality in business by utilizing a curvilinear model. According to the study there is proven to be an optimum level of multinationality in companies which benefits their performance. Passing the optimal limit of multinationality can decrease the performance curve as costs of enhancing multinationality increase (Gomes & Ramaswamy, 1999).

2.3 Conclusions of theoretical framework and a conceptual model

The theoretical framework presents an alternative approach to the role of strength of network connections in the context of social media. As a summary of the literature review, conceptual model is formed based on previous research on network effects and internationalization of digital businesses. The model presents the relation between user engagement, number of weak ties and information exchange between social media users.

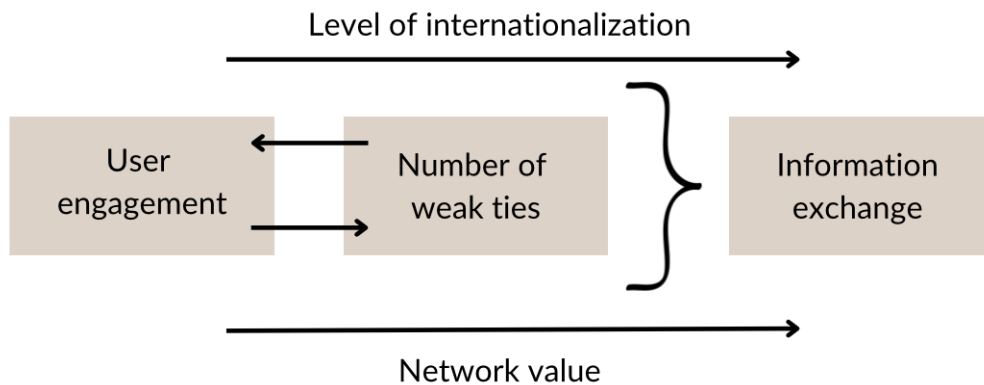


Figure 2 Conceptual model - user created value on social media platform internationalization

As the theoretical framework suggests, the role of tie strength on internationalization of social media platforms is significant. Indirect network effects have proven to have an effect on platform ecosystems' development in prior academic research (Panico and Cennamo, 2022). Number of weak ties in the network can be observed to have an impact on the user engagement, as weak ties create value through facilitating interactions on the platform. On the basis of prior research user engagement can be assumed to increase the number of weak ties as networks connected by user-to-user weak ties grow as new members join the platform.

This relation between the number of weak ties and the intensiveness of user engagement facilitate information exchange on the platform. As networks increase their value on social media through the exchange of information, level of internationalization increases by information flowing between otherwise distant networks. The conceptual model therefore indicates that the network value and level of internationalization on social media platforms are dependent on the same factors of user behavior.

According to the definitions of Born-globals and Born-digitals provided by Vakeel et al. (2021), most of the social media platforms could be classified as both. These platforms

both internationalize quickly and are digital from the establishment of the company. Despite of their fast global scaling, competition is quick-tempered and therefore the knowledge of internationalization is needed in the field.

The power of weak ties can be defined as these connections providing access to new opportunities as they connect otherwise distant individuals who have different information and networks (Granovetter, 1973). Weak ties can be seen as a way of access to traditionally inaccessible connections and information. Even as the distance between weak ties is larger than with strong ties (Hu et al., 2019), the value that weak ties create for facilitating broad scale network effects is recognized (Granovetter, 1973).

As companies internationalize, multinationality often increases. Multinationality impacts company performance and to some extent the impacts are positive according to a previously conducted study (Gomes & Ramaswamy, 1999). With this formed conceptual model the theory on the relation between multinationality and performance could be further tested.

According to Vakeel et al. (2021) platforms could be seen as a link between service and product providers and potential customers. In the context of this study platforms function as a link between multiple different stakeholders which include users, advertisers, sellers and buyers. On these social media platforms the roles of different stakeholders can also waver through different situations. While this makes the equation of networking on social media complex, it provides a broad scale of growing opportunities that traditional product based businesses cannot compete with.

As many written articles in prior research on network effects, this conducted model supports the view of widely known network effect definition – the value of the network grows when new users join the network (Top et al., 2011; Katz & Shapiro, 1994).

Platforms role is to support user interactions and value exchange through the interactions (Zhao et al., 2020; Parker et al., 2016). Thus, this model shows the value creation through the information exchange on the social media platform. Network effects increase their value for the platform providing companies as the information exchange volumizes.

3 Methodology

This chapter presents the methodological take of the research and justifies the decisions made on research methodology for this study. Additionally, data analysis process is discussed as a part of the methodology chapter.

3.1 Methodological choices

The empirical study aims to increase understanding around social media growth by answering a qualitative research question. The questionnaire sent to participants for data collection combines both qualitative open ended questions and quantitative numerically measured questions. Qualitative questions in the questionnaire seek to find answers to broad concepts as quantitative data collected from the participants provide an overview of the sampling. According to prior research both qualitative and quantitative research methods are combined and used in cases where there is a need for broader understanding of a subject (McKim, 2017; Sofaer, 1999).

Therefore the choice of method for this study is justified as the data analysis demands the qualitative data to be analyzed in the light of quantitative data. By this the study aims to link the user attitudes, demographics and social media behavior together as it seeks to find an answer for the main research question. Mixing both methods in the questionnaire was required to study the generation of weak tie connections on social media in a way which took all the variables into account.

The choice of the methodological approach supports the later analysis conducted on the relation of factors impacting social media use and creation of networks around the world. This approach to the empirical part of this study enabled numerical categorization of the sampling while still leaving room for unfiltered answers on open ended questions. The chosen research method supports the research objective and offers a foundation for collecting data relevant in context of the chosen research questions.

In the questionnaire, quantitative questions were formed by focusing on understanding the demographics of the sampling. Quantitative questions were also used when asking participants to evaluate the value of certain factors impacting their social media use. With quantitative questions the study aimed to leave out the possibility for interpretation and ease the identification of certain relations between studied phenomenon.

However, qualitative questions were included in the questionnaire as they offered unfiltered data on certain open ended questions. Qualitative questions aid in understanding the phenomenon on a higher level and in forming the framework for the studied problem area. Together both qualitative and quantitative data build a base for further mixed methods analysis.

3.2 Data collection

When gathering network data, self-reports on social ties have been proven to be the most common data collection method (Marsden, 1990, p. 441). Therefore the data collection for this study was conducted with an anonymous questionnaire which was first tested with a pretesting group of recipients. By securing the anonymity of participants the threshold for participating was ensured. The data collection choice additionally aimed to delimit the impact of social pressure on the answers.

According to Bengtsson (2016, p. 10-11), the verbal and non-verbal communication flowing from the researchers to the informants of the study has an indirect effect on the findings through shaping of the collected data. Before filling out the survey, participants were informed about the anonymity of the study. In addition, they were aware of the data handling process. By taking these actions the study aims to provide ethically collected data.

In the study sampling method was random sampling which enabled more scalable results thanks to the international sample achieved. Population was defined as social media users from around the world and the questionnaire was distributed through social

media channels. International distribution was ensured by utilizing platforms that by their algorithm enable public posts and promote international reach – TikTok for example.

Sampling of the research included participants from different countries and age groups, which enabled broad scale of answers and opinions. The dispersion in participants' ages bring variety in recipients' digital skills and habits of using digital platforms. Thus, the findings offer a better overview of the situation over the whole population.

3.3 Data analysis

Data analysis was conducted as mixed methods analysis (McKim, 2017) by analyzing both qualitative and quantitative answers received through the questionnaire. Analysis was done objectively on the data that was collected by random sampling and transferred onto an Excel sheet for further analysis. In the analysis both qualitative and quantitative data was analyzed separately and relations between answers were further examined by combining both numerical data and written answers.

Qualitative data analysis (QDA) methods included organizing and analysing received questionnaire answers and interpreting the collected data. The aim of this study was to recognize patterns and themes relevant in terms of the research questions and identifying the answers for the set research questions. Qualitative data analysis contributed to the process of understanding the broad phenomena of tie strengths and network effects on social media.

Quantitative methods in this study included the analysis of numerical data which demanded identification of trends, patterns and relationships between concepts and found phenomenon. Quantitative data analysis contributed especially to the categorization of participants and finding relations between platform user patterns and tie strengths. Together these two different data types formed a picture of the studied phenomenon and provided academic evidence on user behavior and platform internationalization. As

social media platforms are deeply depending on their users, the role of users in the internationalization process was to be researched.

4 Findings

The fourth chapter presents the findings of the study through the empirical research data on social media use around the world. This study seeks to create an overview of social media users' attitudes and habits of building networks on social media platforms. Findings are presented by addressing the sub-questions of the main research question: *What kind of impact do user generated weak ties have on the internationalization and growth of social media platforms?*. This chapter analyses the findings by dividing the analysis in groups based on the introduced sub-questions – factors identified to impact the generation of user-to-user weak ties on social media, the role of these factors in born-digital platform businesses' internationalization process and the value that users provide to the platform growth.

4.1 Overview of the data

The survey of the study reached 62 participants, who shared their experiences regarding social media use. The data collected was anonymous. However, some demographics of the participants were determined to use in the analysis of the data.

Demographics of the sampling include geographical location, age and habits of using social media. The data analyzed in this study was provided by survey participants located in three different continents: Europe, Asia and Arica. In addition, the sampling covers all age groups between under 18 to 54 years old.

How old are you?

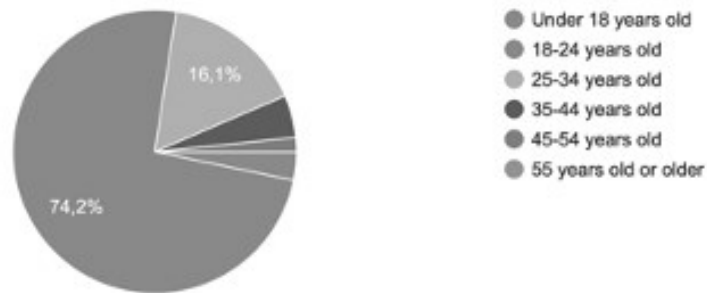


Figure 3 Age distribution between participants

Age distribution and geographical location was defined in the survey to allow further analysis of the research findings and to define the generalizability of these results. However, it is important to mention the distribution mentioned in percentages, as majority of the participants identifies as 18-34 years old and located in Europe geographically. As the data amount is limited to 62 participants, the value of differences between generations is more clearly visible in the answers. Participants in their 50's have grown up in a different society than people under 20 who were brought up with digitalization and therefore the ways and reasons for using social media differ based on the respondent's personal experiences.

Where are you from?

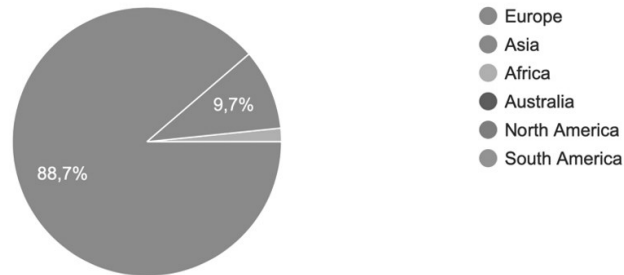


Figure 4 Geographical reach of the study

88.7% of survey recipients located in Europe. Thus, the cultural variation in the sample was not significant. This variation in geographical distance brought some varying perspectives to the collected user data, however broader scale of research should be conducted to get more scalable results.

How often do you use social media?

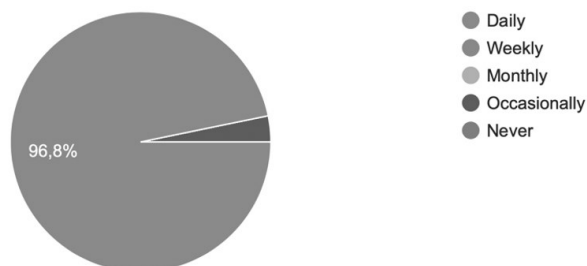


Figure 5 Habits of using social media between respondents

Habits of using social media varied between respondents. However, all respondents identified some social media platforms that they use actively. 96.8% of the respondents identified themselves as daily social media users, while 3.2% answered that they use social media occasionally.

Which social media platforms do you use?

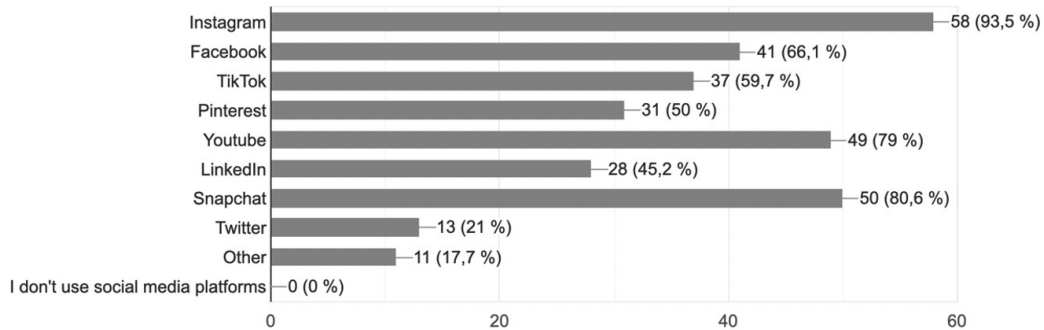


Figure 6 Most used social media platforms

The most used platforms within this test group in no particular order were Facebook, Instagram, TikTok, YouTube and Snapchat. Instagram was the most used platform with 93.55% of the respondents using it. TikTok was used by 59.7% and YouTube by 79%. Most of the participants in the survey used four or more platforms in their daily life, while 17.74% of the respondents used one to three platforms.

According to the data, the number of platforms in use is also linked to the users activity on social media. 18.18% of the users utilizing one to three platforms were participants who utilized social media occasionally. However, all the participants using more than three platforms were using social media daily.

Besides demographical information on participants, the survey produced qualitative data on social media use and tie strength between global social media users. Quantitative data was also collected as participants were asked to estimate the importance of weak ties in their social media networks. This qualitative and quantitative data was combined in the mixed methods analysis.

4.2 Factors impacting the generation of user-to-user weak ties on social media

The collected data revealed that the factors impacting the generation of weak ties on social media can be divided into three main categories – attitudes, aspirations and the level of activeness on the platform.

The study presented data that linked attitudes and aspirations. Attitudes towards global networking were expectedly settling to different stages of the scale from positive to negative. To form a coherent overview of these attitudes, global networking habits and behavioral patterns of social media users were determined. Aspirations in this case indicate the objectives users have for their own social media use. These findings showed a difference in user attitudes towards weak ties linking to the aspirations they have set individually for their social media use.

Based on the overview, these social media platforms are analyzed as facilitators of users' global connections. Both attitudes and aspirations impact the level of user activeness on the platform. According to the data, these three factors feed user engagement on the platform.

4.2.1 Global networking habits

As most of the participants (83.9%) use social media for connecting with friends and family, 16.1% of the participants answered that they use social media mainly for professional networking, exploring global opportunities or other reasons.

Why do you use social media?

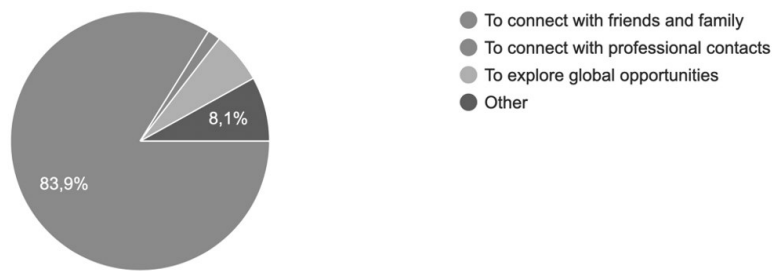


Figure 7 Reasons to use social media

From this it can be interpreted that while most people use social media channels for their natural purpose of connecting, chatting and sharing information with their strong ties, more users prioritize their connections with weak ties than what has previously been believed. The reason for social media use within the group of participants answering “other” can be ambiguous, however this distribution of answers can be seen as proof of the existing research gap.

Participants were then asked about their social connections on these social media platforms. 83.3% answered that most of their interactions on social media happen with strong ties – friends or family. However 16.7% of the respondents identified more active interaction with their weak ties.

The difference between users’ motivation to use social media platforms is an observation that should be noted as the findings are further analyzed. Respondents use social media to gain different benefits. Some social media users aim for maintaining their current connections, therefore engaging more with strong ties and some look for new opportunities to learn, gain global networks and reach a larger audience, therefore focusing on networking through weak ties.

Do you interact more with weak ties (e.g. acquaintances/ strangers) on social media compared to strong ties (e.g. close friends/family)?

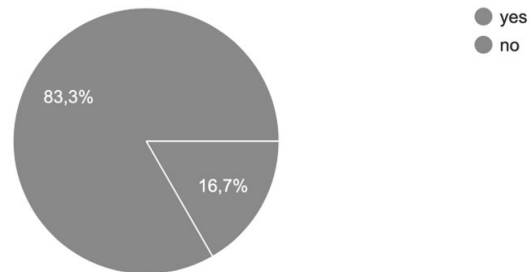


Figure 8 Weak ties and strong ties in user's network on social media platforms

These numbers function as evidence and support for prior beliefs on tie strength distribution, however if the relation of these numbers stayed the same when generalizing these results and scaling the research to cover a bigger population, this 16.7% would be significant amount of users for platform providers to consider in their decision-making and planning of global scaling strategies.

Questionnaire recipients social media habits were then researched by determining the relation of user consuming content provided by weak ties to users not consuming content of weak ties on social media. When asking the question openly, without making the participants prioritize their connections by tie strength, almost everyone recognized weak ties impacting on their network. 9,7% of the participants did not consume the content of weak ties on social media.

Do you follow or consume the content of people who you do not know in real life on social media channels?

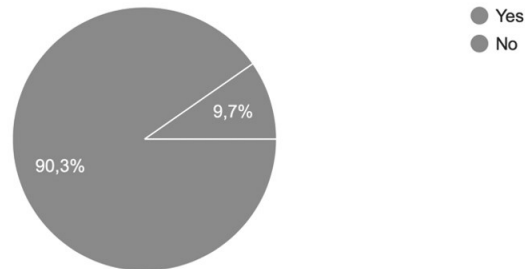


Figure 9 Majority of social media users consume content created by weak ties

The participants were then categorized by their weak tie provided content consumption by asking them to estimate the activeness of their interaction with weak ties. With this question the scale was set to cover very active interaction to never happening interaction. From the results it can be observed that majority of the recipients are either very actively in contact with content provided by their weak ties (27.4%) or actively interacting with it (50%).

From the data it can be observed that social media users who actively use different platforms were more likely to notice the possibilities weak ties offer for themselves. Active social media use was also linked to a more positive attitude towards weak ties. The frequency of content consumption from weak ties indicates that the more actively interactions take place through the exchange of information, the more positive the attitudes and user's own aspirations are towards weak tie connections.

How actively do you consume social media content from creators you do not know personally?

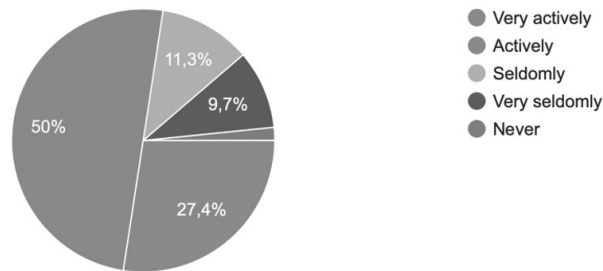


Figure 10 Weak tie content consumption

The number of participants who either consumed the content of weak ties on social media seldomly, very seldomly or never indicates that over a fifth of global users trust their strong ties to deliver the information needed from their social media use. This analysis explains that the aspirations of these users do not prioritize new information from social media content as high as the users actively consuming content from their weak ties.

4.2.2 Social media facilitating global connections

Participants were also asked to describe the relation between their weak ties and global connections – *how do you think your weak ties (i.e., connections with acquaintances or people you have not met) facilitate your global connections?*. Answers varied between respondents as some saw bigger benefits than others. The findings suggest that the value users set on their weak ties is affected by their personal aspirations and attitudes towards networking on social media.

Users who had personal goals that supported the possibilities provided by weak ties, valued the connections higher than those users who were not pursuing a large network of their own on these platforms. It could also be observed from the data that users with more than three social media platforms were more likely to look for global opportunities

on the platforms. The users who did not use social media for their personal networking in global context, did not prioritize their weak connections as high.

“It depends on people and culture. I have close connections and acquaintances overseas and I feel these people are a link to other people, that I do not yet know, for example if I'm in need for help or so. If I have met people in real life even for a short moment, I have stronger connection than in social media.”

“Weak ties help me to understand different kinds of people so that way it helps me to connect globally.”

“They allow me exposure to more opportunities and individuals.”

The same question also received some answers that were not directly related to the purpose of the question. These answers are proof that the risk of interpretation affecting the data collected is always there in a qualitative study, however these answers offered insights on the attitudes and habits of social media users answering the survey. Hence, some of the answers are included in the findings.

“It's more easy to talk or connect with other people you don't know in social media.”

The threshold for connecting with new people and other users on social media is lower than in real life. Therefore, making new connections can be observed to happen more rapidly online. As social media platforms gather users from distant networks to the same platform, it is more likely to be exposed to these new possible connections through same kind of interests.

The survey received some direct recognition of the value of network effects. According to the participants, weak ties expose them for learning in a way their strong ties are not

capable of doing. However, some respondents highlighted the role of different social media platforms in the function of weak tie based network effects.

“One acquaintance can lead to more acquaintances.”

“I believe they have limited value. Platforms like LinkedIn, however, can greatly facilitate global connections and improve career prospects.”

The attitude towards weak ties in participant’s personal social media network was also analyzed based on the numerical data they provided on their social media and networking habits. From the analysis, it was observed that the participants who interacted more with weak ties on social media (figure 8), saw more opportunities and had a more positive attitude towards weak connections and identify their power in facilitating global opportunities.

4.3 Tie strength and user engagement on social media platforms

To further analyze the user engagement on platforms determined as social media channels, tie strength was measured to provide a base for the analysis. The data was analyzed to understand the relation between tie strength and user engagement on social media. Based on the conceptual model (Figure 2), user engagement is one of the building blocks defined to impact network value and internationalization of digital platforms like social media. This empirical study aims to find proof to validate or invalidate the claim.

4.3.1 Tie strength distribution on social media platforms

After the questions regarding general information and networking attitudes, the participants were asked about their estimation of weak tie importance in their personal social media network. This question provided Likert scale data on weak tie value for users. This question was used to further analyze the attitudes that participants had towards different connections on digital platforms like social media channels.

How would you rate the importance of weak ties (connections with e.g. acquaintances/ strangers) in your social media network from a scale of one to five? (1 - not important, 5 - very important)

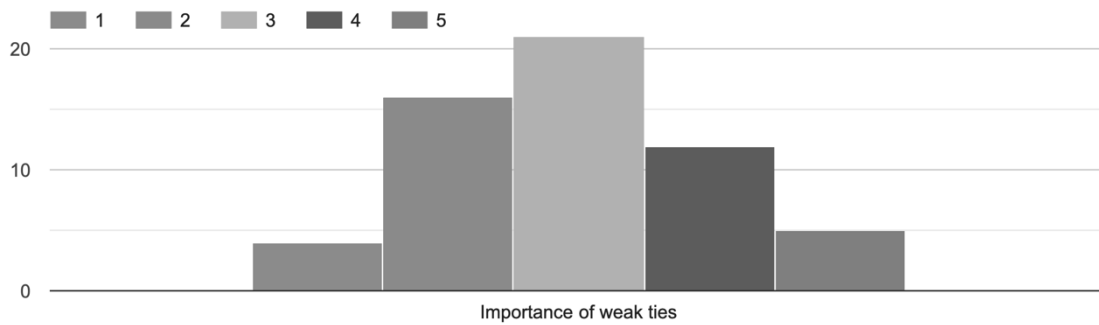


Figure 11 Distribution of estimations on weak tie impact on network effects

As the results show, majority of the participants saw the value of weak ties significant or somewhat significant. Minority of the participants estimated weak ties to be not important for their social media network. In addition, more participants estimated the value of weak ties as “very important” compared to the participants who did not recognize the importance of weak ties in their own network. However, this visualization of the collected data follows the data collected from general information part of the questionnaire, as the participants who clearly valued their weak ties (participants who answered 4 or 5) were a minority compared to the entity of the sampling.

Social media users participating in the study were additionally asked why do they interact more with weak or strong ties. As many of the answers were not thorough, the data is limited. One concept that was mentioned in many answers was the weak tie presentation on social media. Participants found weak ties to be more visible and on display on social media and therefore the main focus of their interactions on these platforms.

“I use social media mainly for inspiration - so I approach social media as something to get inspired and inspire, not necessarily as a platform to connect with the people I already know.”

“Weak ties are more active. That's why, but more deeply with strong, I use more time to look and engage with them.”

“I believe I connect with weak ties more because those are more prevalent on social media in general.”

Despite of these approaches to weak ties power on social media platforms, many of the answers referred to connecting more with strong ties as they are the reason these participants are using social media overall. Some of the answers additionally stated that it depends on the platform and on the content the connections are providing. People seek different things from social media so the impact of the reason for using these platforms cannot be forgotten when analyzing the results.

Some participants felt like they rather connect with strong ties in real life and use social media for networking with people that they don't otherwise interact with as often. Some stated that they may interact, for example follow, comment or like, more of their strong ties posts on social media, however considering the answers given to questions earlier in the questionnaire, many of these participants stated that they actively or very actively consume content from people they would consider weak ties.

The question that arises from these findings is: what is the value of weak tie in the network when the exchange of information is one sided. Consuming the content of other users might function as a tool for exchanging information on social media. Watching a video or reading a post from another user is a way to exchange information and affect the recipients decisions, engagement and thoughts. However, if the recipient is not

engaged enough to interact with the content creator, does the value of the weak tie decrease.

4.3.2 User engagement on social media platforms

The participants were asked how do you think their weak ties (connections with acquaintances/ strangers) on social media influence their engagement on the platform. Answers differed between participants, however most participants found inspiration from their weak ties. Besides inspiration, weak ties were described to offer perspective for life.

“Weak ties make social media more interesting so they increase my engagement”

“Usually this “stranger” can be a source of inspiration for small matters like fashion etc. but also they can help me dream big academically too because I see other relatively normal people achieve big milestones, therefore I do engage with certain strangers on certain platforms more than I would without them.”

“I love to follow knitters and other makers on different platforms, sometimes I can use hours just looking for inspiration, so I definitely spend more time on social media because of them.”

From the answers it can be interpreted that while weak ties provide entertainment value, they simultaneously impact other users’ decisions and inspire by their own content. These weak ties also provide informative value for other users. As Parker et al. (2016) classified, information exchange is one form of value exchange which effects platform viability.

Participants also noted the scale of these social media related network effects. From the data it can be interpreted that the increase in user engagement on social media value increases as these weak ties connect on the platforms. While the value of weak ties in

everyone's personal network is highlighted, however the value it brings to the whole network on their own part is hazy for some participants.

"I believe that my network of contacts and their contacts and networks meet all the time and create new networks. I have very little control over my connections even though it seems that I am in control. I feel like I am a piece of market, an instrument. If I'm not in social media, I'm not missed- no one really cares or notices it."

It is an important observation to make that without every individual in the network, these network effects would not happen in the way they do. From users point of view it might seem like their role is insignificant, however their contribution to the network is multiplied with the amount of individuals they connect to the network from previous networks. Therefore, users attract other users on social media platforms.

4.4 Value of tie strength

Participants were asked about their opinions on advantages and disadvantages of both weak and strong ties in their social media network. These answers were categorized as separate sections for the study. This question provided data from multiple different viewpoints as the attitude and networking habits between the participants varied.

"I don't know if any ties really have disadvantages when making connections. Its always good to know someone from somewhere even if it would be a weak tie."

Some participants saw the value in every tie created on social media, however some of the answers analyzed the strength of the tie in the process even further. Based on the collected data, it is inevitable that the ties are preserved differently amongst social media users. These values and opinions are linked to the attitudes users had expressed and aspirations they had proposed towards tie strength during the survey.

4.4.1 Benefits of strong ties

Participants were asked about the benefits of strong ties they have in their network. As most of the participants admitted to mainly using social media to connect with their friends and family, the benefits regarding strong ties were expected. In addition, some of the participants linked the strength of the tie to the activity and engagement on the platform. This is an example of an answer received to the question of weak ties impacting user engagement on social media.

"I'm less likely to interact with their posts than with the post from people I know well."

Participants also mentioned the value of strong ties in the formation of weak ties in the network. As people tend to trust and place higher value on information exchanged through strong ties, the power that strong ties have in creating new weak ties between social media users is present in the data. Here is an example of one participant's answer:

"Strong ties can help create global weak ties better than weak ties can."

4.4.2 Disadvantages of strong ties

According to the collected data, strong ties are more difficult to form on social media compared to weak ties. This has impact on the scale of the network according to the survey participants. As strong ties tend to take more effort from users, the amount of these connections might be limited in the network.

"Maintaining strong ties takes more effort and so I tend to only have a few, thus limiting the reach of my network."

As one of the participants mentioned the scope of reach with strong ties is limited, which affects the network growth and prevents the formation of new international connections.

According to the data, strong ties take more time to form and although the connection with strong ties is more powerful in terms of trust, speed does have an impact on internationalization of the platform.

4.4.3 Benefits of weak ties

The collected data showed that according to participants weak ties are easier to form compared to strong ties. This might be associated with the perfunctory nature of these ties. For example one participant summarized the effects they have experienced like follows.

“Weak ties are easy to make but harder to maintain. Strong ties are harder to make but easier to maintain.”

Further analysis of the data referring to weak tie advantages revealed that users value the information they receive through weak ties. The opportunity to learn and receive new information as new connections are made was important to a segment of participants. This might be information that they would otherwise not have access to, however, as weak ties connect separate networks and therefore separate knowledge bases, the information gets to flow globally through different individuals in the network.

“Your impressios on other cultures and people grow.”

“Access to a lot of impressions, opinions and experiences.”

Social media users who rated the importance of weak ties higher in the scale of value they bring to the network, were also more likely to mention benefits of weak ties as they filled in the questionnaire. Some participants highlighted the value of weak ties in the process of connecting with users globally. Here is an example from one participant:

“With weak ties you get to see a whole new environment and it opens new doors for global connections.”

As the networking and connecting with weak ties is faster, this allows the scale of these network effects to grow fast and to disperse globally. According to the experiences of survey participants, weak ties are faster to form on digital platforms than strong ones. Therefore, weak ties function more effectively in building and connecting networks, which eventually forms an optimal foundation for global networking.

4.4.4 Disadvantages of weak ties

Despite the benefits of weak ties, social media users analyzed the tie to be more difficult to maintain if it was formed between individuals who were considered strangers or acquaintances. While this enables the efficiency in generating new connections, it indicates that the connections once made might not be as long-lasting as connections with strong ties. From the perspective of network effects, it does not prevent the global connections.

One other disadvantage of weak ties that was observed from the answers was the reliability aspect of weak ties. As there is no real life connection to prove the reliability, information distributed via weak ties demands more filtering and critical approach. Information distribution creates value for the network through the exchange of information that happens between two social media users. These information exchanges can happen once or multiple times through the same connection.

Therefore the disadvantage of losing connections could be overwritten by the speed of forming new connections. According to the collected data, the challenge of losing weak tie connections impacts user engagement. Losing connections leads to the challenge of choosing between low effort and possibly short-term weak ties and high effort and mostly long-term strong connections.

5 Discussion

The fifth chapter combines the theoretical framework with the empirical research findings and analyses the application of these results.

5.1 General discussion

Internationalization of social media platforms is a primarily different process than the internationalization of other platform businesses. When the value creation happens through information exchange rather than traditional currency or goods and services exchange (Parker et al., 2016) the role of users in the process of platform internationalization becomes more relevant. Hence, collecting information from social media users provides new perspectives on the nature of social media scaling through network effects.

The power of weak ties in global scaling of social media platforms is supported by the empirical findings of this study. From the findings it can be observed that most of the social media platform users in the study prioritize their strong ties over weak ties, however most of them still interact with weak ties actively. The value of weak ties to users themselves depend on their motivation to use social media – as some participants prioritize their communication with strong ties on social media, some rather seek global opportunities through learning and growing their network of weak ties.

According to the conceptual model (Figure 2), weak ties support the generation of global network effects. This phenomenon proves that while strong ties are perceived as more valuable to users themselves, the value of weak ties is often crucial for the platform viability. Therefore the findings are secondarily highlighting the weak tie value for the users themselves.

Rapid and broad scale internationalization demands weak ties to connect different networks efficiently. According to the empirical findings, users seem to connect with weak ties faster than strong ties, which forms a foundation for network effects to occur and

networks to grow. The findings additionally highlight the impact of user behavior in the effectiveness of creating network connections. This study identifies three factors impacting weak tie generation on social media – user attitudes, user’s own aspirations and the level of activeness on social media.

As all of the three factors can be organized under the hypernym of user behavior, the value of an individual social media user in facilitation of these worldwide networks is clear. Based on the collected data, attitude, aspirations and activeness form a metric for analyzing the risks and opportunities related to social media channels internationalization. Therefore it can be highlighted that supporting positive user attitudes, motivating users towards common aspirations and supporting high level of engagement and activeness on the platform should have a positive impact on the number of weak ties within these social networks – thus creating an optimal base for the increase of internationalization.

In addition, this indicator of user behavior provides valuable data on user value to platform providers. According to the empirical findings, not all users bring the same value to the network as others in the context of facilitating social media platform’s internationalization process. Users with high engagement and activeness on the platforms are more prone to having a positive attitude towards weak ties and recognizing the possibilities that global connections bring to their network. These users are more valuable to social media businesses as they collect connections from other networks and therefore aid in spreading information globally.

When applying the conceptual model to these empirical finding, it can be observed that the findings support the approach of the created theoretical model. As the empirical findings show, user engagement is related to the number of weak ties in the user’s network. In addition, weak ties seem to attract more engagement as they predispose users to new cultures, information and distant connections.

According to the conceptual model (Figure 2), the high volume of weak connections in the network increase user engagement and therefore create value to the network through allowing information to flow. The same process can be observed from the findings. Users who are highly engaged value the information received through weak ties which encourages them to actively network and form new connections with people they do not have a personal relationship with. Reciprocally, users who have active contact with weak ties are more engaged on the platform than users who primarily interact with their strong ties on social media.

This process leading to information flows between networks seems to increase the level of internationalization and network value to the platform providers. As the empirical findings support the conducted theoretical framework on the topic, it can be concluded that user's attitudes, aspirations and activeness on social media have an impact on the network value and the stage of internationalization. These three factors build a foundation for internationalization strategy and value growth for social media platform businesses.

Besides the positive effects of these factors, fast growth of network effects can create challenges to platform providers as the competition increases and changes in the market are rapid. In these cases the value of user focus should be highlighted in the organization's decision making process. As social media users are in charge of platform success, the risks regarding internationalization lay on the same shoulders.

Users with low engagement create risks for social media platforms. These users are dead-ends on the path the information uses to flow from a user-to-user and from a network to another. If the proportion of users with low engagement is unbalanced with the amount of highly engaged users, the process of internationalization slows down as the information distribution becomes slower.

These empirical findings together with the review of the existing literature identify the painpoints of user facilitated internationalization on otherwise fast scaling social media platforms. Empirical findings additionally support the theoretical framework and created approach to digital platform internationalization. On user driven platforms, users determine the growth and value of the network and therefore should be studied to comprehend the phenomena of weak tie value in platform internationalization.

Although the study supports the theoretical findings, the theory on multinationality provided by Gomes & Ramaswamy (1999) should be discussed in the context of internationalization of social media platforms. According to Gomes & Ramaswamy (1999) there is a optimum level of multinationality to be achieved for companies and crossing that limit leads to increased costs of increased multinationality. Is the risk of increasing costs relevant when examining social media platforms?

On social media platforms, multinationality can be interpreted to benefit the network and internationalization of the business according to empirical data of this study. Increased level of multinationality positively affects the information flow and value of the information in user-to-user interactions. However, the costs of increased multinationality were not covered in this study.

When analyzing social media platforms internationalization processes, the starting point is atypical compared to traditional product businesses. As social media platforms are digital tools, they can be categorized as born-digitals – companies that are digital from inception or become digital soon after (Vadana et al., 2020). Vadana et al. (2020) also defined born-global companies as companies that are global from the beginning or as companies internationalizing quickly after establishment. This means that most social media platforms are both born-digitals and born-globals, which indicated that new internationalization processes are needed as the timeline of the process adapts to the fast paced digitalization.

In further examination the role of networking is additionally tied to the phase of internationalization process the reviewed company is in. According to Ojala et al. (2018), active networking appears and aids often in the phase of early initialization. As networks and ecosystems become less controlled in the late stages of digital platform internationalization (Ojala et al., 2018), the role of individual users in the global scaling becomes more relevant.

As this study provides an overview of the topic, new research in the field is justified as the starting points for internationalization of businesses develops. As internationalization processes depend on the situation of the business in case (Ojala and Tyrväinen, 2009) and therefore vary between seemingly similar companies, research in the field only manages to provide guidelines for applying strategies into practice.

5.2 Reliability and limitations

Several issues should be observed, as the reliability and limitations of the study are discussed. Firstly, this study focuses on positive network effects in social media platforms. Therefore the findings cannot be generalized include all platform ecosystems. Application of these findings demands critical analysis and further research in the field. However, this study aims to offer a starting point for the future research in a continuously developing topic area.

As in all studies, some reliability challenges and limitations can be identified from the empirical research. There is no study that can be described as perfectly designed (Bengtsson, 2016). Some of the challenges in this study relate to the literature used in the literature review, however there can be challenges identified regarding the empirical research as well. While the limitations impacting this study are relevant, the findings can be used in future research with critical approach to these factors affecting reliability.

In addition to the deficiencies noted in the results of the empirical research, the lack of generalizability of the research results is also caused by chosen limitations. The problem

area of the study was carefully limited to concern social media platforms and even further defined to include the platforms where the value of the network effect is created through the exchange of information (Parker et al., 2016). Thus, the findings produced are not adaptable for other platform businesses directly.

Firstly, the academic literature utilized in the creation of the theoretical framework for this study was chosen based on timeliness, accuracy and distribution of information. The academic literature used consists of peer reviewed research articles released on recognized journals and relevant academic books, theories and company based material published on internet. While most of the information stemmed from previous research on the topic, the impact factor of these articles was evaluated in the process.

Secondly, the research method of the study should be critically evaluated. The empirical study was conducted with an anonymous questionnaire by combining quantitative and qualitative questions, which increases the possibility of unreliable answers to both directions. As anonymity increases the risk of untruthful answers, it simultaneously decreases the threshold for answering the survey with participants' own unregulated opinions.

As the research method included some qualitative analysis of the collected data, one relevant concern is the objectiveness of the analysis. This was tackled in the analysis process by systematically categorizing the data and justifying the findings with evidence. However, there is always a risk of the chosen data collection method not "capturing the real context of the informants" (Bengtsson, 2016, p.11). More detailed data should be collected in the future to make reliable observations on the topic.

Despite the risk of person-centered interpretations, in this case an anonymous mixed methods questionnaire offered more valuable data, understanding of the research area and scalable results than quantitative questions would have offered alone. As the sampling method was random sampling, the data collected came from a very broad group

of participants. Recipients were geographically dispersed to multiple continents and age groups. Thus, the findings cannot be localized without further research and critical evaluation.

It is also a prominent observation to make that this study managed to collect data from 62 social media users. While this data can be analyzed, scaling and generalization of these results would need broader collection and analysis of international data. According to Dixon (2023) social media platforms had 4.59 billion users worldwide in 2022. Therefore, when putting the sample of this study in a global perspective, it can be noted that the proportion of sample compared to the global population of social media users is not significant enough for the findings to be applied to the whole population.

In addition, geographical distribution should be evaluated on continent level, as it could be observed that majority of answers were received from participants located in Europe. Thus, the findings lack cultural variety which could be assumed to have an impact on attitudes towards and accessibility of social media platforms.

Another factor impacting the reliability of the study is the language level differences between participants. While the study was conducted in a group of English speaking participants, the level of language skills differs within the sampling. This variation in language skills might affect the interpretation of the research questions between participants.

6 Conclusions

The sixth chapter summarizes the research paper and provides suggestions for future research in the field. Implications are presented in two chapters – managerial and theoretical implications separately.

6.1 Summary of the findings

The main contribution of this study is the answer provided to the research question. From the analysis of this research it can be interpreted that the role of weak ties in internationalization of social media platforms is multilateral. As the findings of the empirical research show, users create the foundation for network growth and therefore define the pace of platform internationalization.

The research question, *What kind of impact do user generated weak ties have on the internationalization and growth of social media platforms?*, was answered through three sub-questions. These questions provided a profound idea of the value tied to user behavior in the internationalization of social media and identified the main factors impacting the success of internationalization on these platforms.

Through the process of identifying factors related to the user value in the network and analysing the value of these in the metric of network growth and information flows, the study verifies that user-to-user weak ties on social media have a positive effect on the engagement of set users on the platform, thus having a positive effect on the information distribution from network to network. This concludes that the increasing number of weak ties on social media platforms seems to impact the stage of internationalization positively as it supports the three identified user metrics of attitude, aspirations and activeness on the platform.

By combining the empirical findings and analysis with the research on previously published academic research and literature, this study identifies research gaps and provides a foundation for future research.

6.2 Theoretical implications

Theoretical implications of the study represent the standard created for the academic evidence in the field. This study combined the prior research on network effects and internationalization in the fields of sociology and business and therefore provided a new approach to digital platform growth. As previous academic evidence on the topic of platform user groups, “sellers” and “buyers” (Evans et al., 2011), has focused on marketplace platforms, the findings provided by this paper create a base for academic research on social media platforms and formed a framework for the relation between user-to-user tie strength and internationalization.

6.3 Managerial implications

Theoretical implications show that the need for practical measures in the field demand research data to form a foundation and a policy for data-driven and fact based management. The analysis of the data collected for this study suggests that user engagement should be the focus when weighing the practical actions taken to achieve platform growth and internationalization with social media platforms. According to the findings and the tested conceptual model, this study suggests that by focusing on supporting beneficial user behavior, the number of weak ties in the network increase and eventually lead to platform growth as weak ties allow information to flow rapidly from network to network.

The study additionally presented a metric for risk evaluation regarding the user’s value in internationalization of social media platforms. By examining the user’s attitude, aspirations and the level of activeness on the platform, the risk of them being a high or low value user to the network can be estimated. This can be further utilized by determining

the risks and opportunities of considered strategical actions to achieve successful internationalization and growth.

6.4 Suggestions for future research

The findings of the study provide a base for research in the field of social media platforms' internationalization. However, the study identifies gaps that are yet to be researched. As prior research has provided theoretical framework for the network effect phenomena, these research suggestions focus on recent new developments that have not been as thoroughly studied.

First of the identified research gaps concerns the role and the value of a social media user in the managerial decision-making. By understanding the value individual users bring to the platform business, platform providers are able to plan and execute strategies and additionally alter their user experiences. More detailed data collection and numerical analysis would provide better foundation for calculating risks and probabilities related to user value in the internationalization process of social media platforms.

Second gap that should be studied further is the relation between network size and the stage of social media internationalization. By examining the correlation between these two concepts, further evidence could be collected to support the social media platform providers as they develop new strategies for entering new international markets. Research in the field would additionally aid in verifying the conceptual model presented in this paper or alternatively provide a deeper understanding of the phenomena by invalidating the suggested approach.

Finally, this paper encourages to model the study with a larger amount of respondents to guarantee the validity of the data and to enable the generalization of findings. As this empirical study collected answers from 62 respondents, it is not possible to accurately apply the findings globally and for all social media users. To form a better overview of user value the paper suggests that geographical distribution is executed on a broader

definition and the social media platforms are separately combined by characteristics to ensure the reliability of the findings.

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Appendices

Appendix 1. Questionnaire structure

Background information

1. How old are you? (multiple choice question)
 - a. Under 18 years old
 - b. 18-24 years old
 - c. 25-34 years old
 - d. 35-44 years old
 - e. 45-54 years old
 - f. over 55 years old

2. Where are you from? (multiple choice question)
 - a. Europe
 - b. Asia
 - c. Africa
 - d. Australia
 - e. North America
 - f. South America

3. How often do you use social media? (multiple choice question)
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. Occasionally
 - e. Never

4. Which social media platforms do you use? (tic box)
 - a. Instagram
 - b. Facebook
 - c. TikTok

- d. Pinterest
 - e. Youtube
 - f. LinkedIn
 - g. Snapchat
 - h. Twitter
 - i. Other
 - j. I don't use social media platforms
5. Why do you use social media? (multiple choice question)
- a. To connect with friends and family
 - b. To connect with professional contacts
 - c. To explore global opportunities
 - d. Other
6. Do you follow or consume the content of people who you do not know in real life on social media channels?
- a. Yes
 - b. No
7. How actively do you consume social media content from creators you do not know personally? (multiple choice question)
- a. Very actively
 - b. Actively
 - c. Seldomly
 - d. Very seldomly
 - e. Never

Networks on social media

8. Have you ever recommended a platform to a friend or colleague?
- a. Yes
 - b. No

9. Have you noticed an increase in your platform activity after inviting someone or being invited by others?
 - a. Yes
 - b. No

10. How do you think your weak ties (i.e., connections with acquaintances or people you have not met) facilitate your global connections? (Open ended)

11. How do you think your weak ties (connections with acquaintances/ strangers) on social media influence your engagement on the platform? (Open ended)

12. How would you rate the importance of weak ties (connections with e.g. acquaintances/ strangers) in your social media network from a scale of one to five? (Likert scale)

Engagement

13. Do you interact more with weak ties (e.g. acquaintances/ strangers) on social media compared to strong ties (e.g. close friends/family)?
 - a. Yes
 - b. No

14. Why do you feel like you connect more with weak or strong ties on social media? (Open ended)

15. In your opinion, what disadvantages and advantages do strong ties and weak ties have when making global connections? (Open ended)