

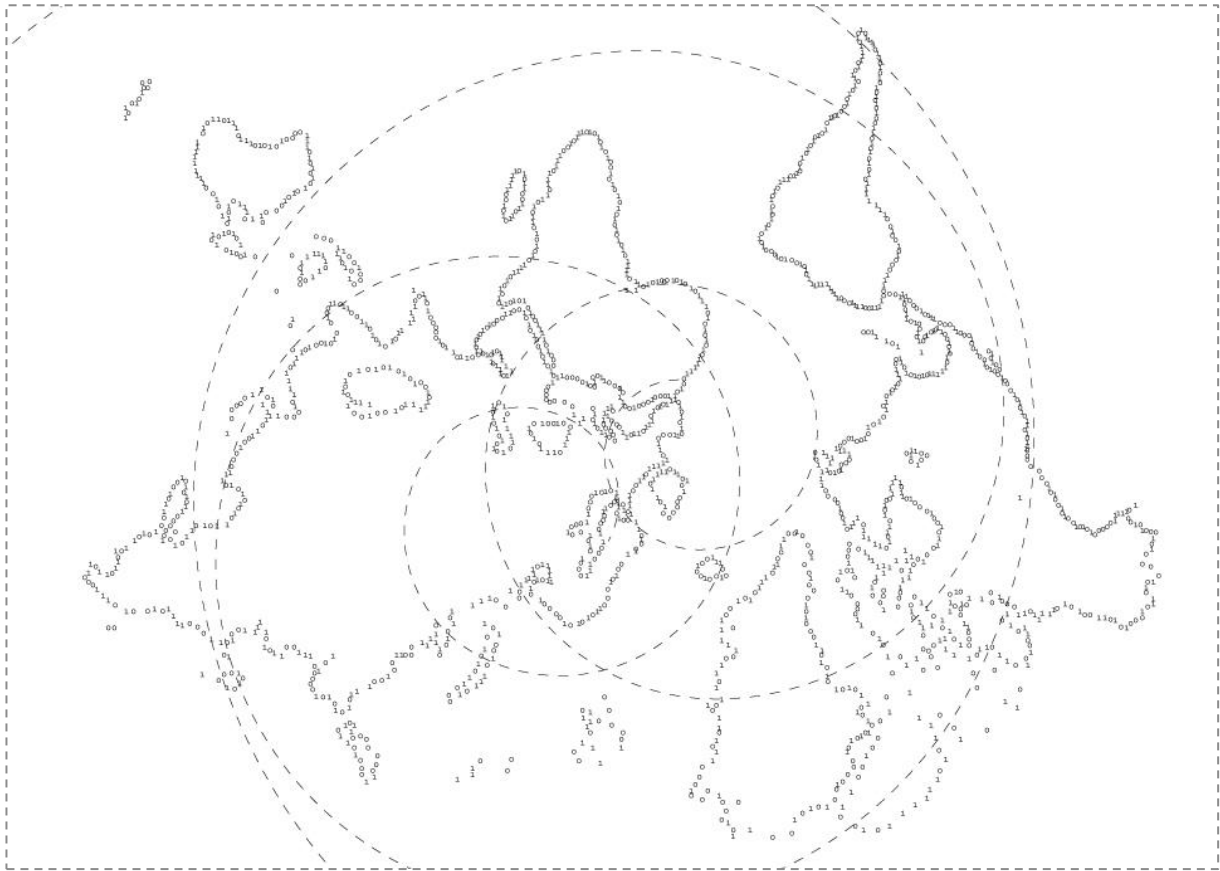
The Internationalization Process of Online Service Providers

Geographical Perspectives on the Emerging Online Economy

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The new information and communications technologies are among the driving forces of globalization. They are bringing people together, and bringing decision-makers unprecedented new tools for development. At the same time, however, the gap between information “haves” and “have-nots” is widening, and there is a real danger that the world’s poor will be excluded from the emerging knowledge-based global economy.

Kofi Annan (2002), UN General Secretary, 1997-2006

I think the focus needs to be that the Internet is exactly the same as society. People might realize that it’s not a really good idea to have all of our data and files on Google, Facebook and company servers. All of these things need to be communicated all the way to the political top, of course. But stop treating Internet like it’s a different thing and start focusing on what you actually want your society to look like. We have to fix society, before we can fix the Internet. That’s the only thing.

Peter Sunde, Founder of The Pirate Bay, in Motherboard, 11 December, 2015

I think my home is on the Internet. Twitter is my home and my nation and I feel very comfortable there. Otherwise, I don’t care that much about material life.

Ai WeiWei, Artist, in The Guardian, 26 October, 2015

ABSTRACT

This study is a compilation thesis consisting of an introduction and five separate articles. It explores the process of internationalization for Online Services Providers (OSPs) and its effect on the economic geography in terms of production and users of online services. OSPs are firms that provide services through the Internet. This type of firm is becoming increasingly important in the economy, and is claimed to be one of the building blocks of an emerging online economy. The aim of this thesis is to contribute to the theory of how OSPs internationalize and to extend the knowledge of the places where online services are produced and used.

The thesis emphasizes the importance of the balance between a firm's offline commitments vis-à-vis its online commitments in the internationalization process. It has been argued that the variances in the way OSPs internationalize are an effect of their *onlineness*. Onlineness is defined as the dependence on offline resources for the OSPs' service and business model. An OSP with a high degree of onlineness could enjoy a rapid and geographically vast internationalization process, referred to as *online spatial overreach* in the thesis. Although such a pattern could have positive effects in terms of reduced time to market, it could also backfire, leaving the OSP in a situation without any real contact with the international market.

The findings show that OSPs internationalize through controlled modes of entry, but are sometimes combined with viral marketing and codevelopment. In general, OSPs internationalize faster in comparison to traditional export firms. The OSPs from Sweden and Morocco studied in the thesis primarily expand regionally. For OSPs originating from the Global North, this means that existing geographical trade routes are reinforced, but for OSPs in the Global South the regional internationalization pattern could strengthen the heretofore underdeveloped intra-regional trade, for example in Africa.

From a geographical perspective, the main conclusion is that the internationalization of OSPs contributes to the heterogeneity of the online economy, mainly due to underpinning economic inequalities. OSPs are dependent on offline resources, which in turn are anchored in geographically bound and sticky networks. This heterogeneity is manifested by a maintained, or even increasing, digital divide, which can be seen as a contingency of economic inequality. In the close future, unless radical changes are made in Internet policy, we can expect further online gaps to emerge on the usage side (*online usage gap*), on the production side (*online entrepreneurship gap*), and also in terms of internationalization (*online internationalization gap*) between the Global North and the Global South.

Keywords: internationalization, Internet, Online Service Providers, online economy, digital economy, Global North, Global South, digital divide

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I would like direct my gratitude to my family. To my mother, Gun Wentrup, for being such a tireless source of self-confidence for me, and for helping me with some editing of Swedish texts that I published along the project. To my father, Downen Birkhed (whose academic record of more than 300 publications I will never reach), who has been standing at the ringside from start to finish with academic advice as well as emotional support. And to my sister, Cecilia Vonasek, thanks for the encouragement along the way.

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In Paris on the 28th of November 2016

Robert Wentrup

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LIST OF ARTICLES

Reference name in the thesis	Status	Authors	Paper	Main research question	Main content	Empirical material	Findings
Article 1	Published in the <i>Journal of International Entrepreneurship</i> (Wentrup, R. doi:10.1007/s10843-016-0171-2 not yet assigned to an issue)	Robert Wentrup	The online–offline balance – internationalization for Swedish Online Service Providers	How do OSPs internationalize in terms of speed, geography and mode of entry?	This timely study sheds light on the internationalization process for Online Service Providers (OSPs). Its contribution includes three case studies of some of the best-known Swedish OSPs, and it introduces new theoretical concepts and a spatial interpretation of the internationalization process. The spatial online–offline balance offers a new way of thinking about the internationalization process. Finally, the paper also provides managerial and policy recommendations.	Qualitative method based on three case studies and collection and analysis of primary data from 19 firms via databases and web sites and informal interviews.	The time gap between online and offline presence, the online-to-offline interval, seems to be a critical factor in the internationalization process. The speed of the Internet industry and the technically complex nature of online services could explain why the case firms chose controlled modes of entry. The case firms thus skip sequential steps, following a pattern that is in contrast to the Uppsala model. Overall, the paper suggests that finding the right balance between the online and the offline presence is a challenge in the internationalization of these particular Swedish OSP firms.
Article 2	Submitted to <i>European Management Journal</i>	Robert Wentrup and Patrik Ström	Online Spatial Overreach – a consequence of rapid internationalization for OSPs	How do OSPs with a high level of onlineness enter international markets? And what are the effects of such entry?	This paper highlights the blurred boundary between online and offline space and contributes with theoretical insight as to how an OSP internationalizes. It is a case study of the mode of entry and geographical trajectory of a Swedish OSP. The paper contributes an online internationalization flow model, which manifests connections between offline and online spaces, along with the collaborative space between the firm and the users in the internationalization process.	Qualitative method based on a single case study. Multiple interviews with the founders combined with secondary data.	The paper concludes that the underpinning mechanisms and main modes of entry for online internationalization are viral marketing, virtual communities and co-development. It contributes to the theory for the concept of online internationalization, and suggests that it has a strong characteristic of “online spatial overreach”, meaning that the proportion of the offline representation of the firm to its offline representation is low. This is not necessarily positive in the internationalization process.

Reference name in the thesis	Status	Authors	Paper	Main research question	Main content	Empirical material	Findings
Article 3	Published in <i>Journal of Science and Technology Policy Management</i> , Vol.7 No. 1, pp. 77-100	Robert Wentrup, H. Richard Nakamura and Patrik Ström	Digital oases and digital deserts in Sub-Saharan Africa	Is there evidence showing that the gap in online service usage in countries in Sub-Saharan Africa is narrowing vis-à-vis the rest of the world?	The objective of the paper is to analyse the geographical spread of online service usage within Sub-Saharan Africa in comparison with other regions by using the best available Internet-related data. This is a response to calls from scholars who argue 'that the trope of a "digital divide" should be pluralized, localized and grounded in more appropriate spatial frameworks'.	Quantitative analysis of Internet- and Facebook penetration coupled with economic strength (GDP/capita). Bivariate correlation of the independent variables GDP per capita (constant prices), GDP per capita (PPP adjusted), and Facebook and Internet penetration for 2000-2013.	The paper reveals a heterogeneous pattern with a few African countries being digital oases and close to European levels, whereas the majority of the countries are still digital deserts. A generalist picture of Sub-Saharan African digital levels, as well as a belief that Sub-Saharan Africa as a whole is on the trajectory of closing the digital divide, is an imprecise reflection of the reality.
Article 4	Published in <i>Globalisation and New Patterns of Services Sector-Driven Growth</i> , ed. by Niels Beerepoot, Bart Lambregts, Jana Kleibert. UK (Abingdon, Oxon): Routledge 2017	Robert Wentrup, Patrik Ström and H. Richard Nakamura	Online services – an equalizing force between the Global South and the Global North	Where (geographically) are online services consumed and produced today? Does the current geographical pattern of online demand and online supply reinforce existing geographical disparities of economic power between nations, or does it have equalizing effect?	In this book chapter, the spatial inequality of online services is analysed from firstly the demand side, where we study the usage of online services, measured as 'Internet penetration' with data from The World Bank. As a complement to Internet penetration we provide in-depth qualitative analysis of the user geographies of Twitter, Facebook, and Wikipedia. Secondly, from the supply side, geographical origin and internationalization of the world's largest online service providers on the firm level are analysed.	Literature review and data from The World Bank and ITU.	Most of the demand, and most of the supply, comes from the high-end urban districts in the Global North, which is a reflection of the global economy and its underpinning power structures. It is concluded that there is still an important digital divide on both the demand and supply side, although there are promising examples from the Global South, led by China.

Reference name in the thesis	Status	Authors	Paper	Main research question	Main content	Empirical material	Findings
Article 5	In re-submit phase in <i>Entrepreneurship and Regional Development</i>	Robert Wentrup, H. Richard Nakamura and Patrik Ström	Online entrepreneurship in the Global South - the online entrepreneurship – the case of Morocco	How does an emerging market like Morocco blend into the Internet geography, which up till now is dominated by the Global North? What characterizes their online entrepreneurs and what are their international ambitions?	This paper takes an internationalization perspective of digital entrepreneurship and is based on a field study of Morocco. With an export legacy of primarily agriculture, minerals and textiles, Morocco is a country with substantial social- and wealth inequality combined with a mosaic of cultures, ethnics and languages. One of the challenges for countries like Morocco is to move up in the global value chain. The research question of the paper is: What is the international positioning of Moroccan online entrepreneurship?	Qualitative method based on six case studies.	The results show that Moroccan online entrepreneurship is driven by a returning well-educated diaspora. The business ideas implemented in Morocco are predominantly of Kirznerian art and thus are in alignment with global norms, rather than Schumpeterian, or disruptive. The paper reveals numerous barriers for online entrepreneurship to flourish. These are mainly rooted in an ostensibly domestic reluctance to engage in the online business, which is reflected by the lack of domestic investors, programmers and startup clusters. On a general level, Moroccan OSPs struggle with the fierce competition from the Global North OSPs, which often benefit from an underdeveloped policy framework. The Moroccan online entrepreneurs should be regarded as beacons in Morocco's upward trajectory in the global economy and is a critical community in closing the online entrepreneurship gap between the Global North and the Global South.

ADDITIONAL RELATED PUBLICATIONS

Title	Authors	Type of publication	Time of publication	Volume / Journal	Key research question(s)
Heterogeneous economic space in a global archipelago: An economic geography perspective of emerging markets, <i>Handbook of Research on Emerging Markets</i> , ed. by Merchant Hermant, Cheltenham, UK: Edward Elgar Publishers	Claes-Göran Alvstam, Patrik Ström and Robert Wentrup	Book chapter	April 2016	<i>Handbook of Research on Emerging Markets</i> , ed. Merchant Hemant, Cheltenham, UK: Edward Elgar Publishers, pp. 38-61.	How are emerging markets viewed from an economic geography perspective?
Online Service Providers – a new and unique species? <i>The Responsibilities of Online Service Providers</i> , ed. by Luciano Floridi and Mariarosaria Taddeo, UK: Springer	Robert Wentrup and Patrik Ström	Book chapter	December 2016	<i>The Responsibilities of Online Service Providers</i> , ed. Luciano Floridi and Mariarosaria Taddeo, UK: Springer, (no page assigned yet)	What is the nature of an OSP? Are there any unique characteristics?
Crossing Digital Deserts in Sub Saharan Africa – Does Policy Matter? <i>Policy & Internet</i> , Volume 8, Issue 3 September 2016	Robert Wentrup, Xiangxuan Xu, H. Richard Nakamura and Patrik Ström	Original paper	August 2016	<i>Policy & Internet</i> , Volume 8, Issue 3 September 2016, pp. 248–269	What policy instruments have an impact on Internet penetration in Sub Saharan Africa?
Internationalization as innovation driver in services, <i>Service innovation: novel ways of creating value in actor systems</i> , ed. by Kyoichi Kijima and Marja Toivonen (Springer)	Patrik Ström and Robert Wentrup	Book chapter	June 2016	<i>Service innovation: novel ways of creating value in actor systems</i> , ed. Kyoichi Kijima and Marja Toivonen (Springer), pp. 269-281	What impact does internationalization have in the innovation process of services?

DEFINITIONS OF KEY CONCEPTS

Codevelopment: A process in which the firm interacts with its users/customers to develop new products, services, or markets, or “new value” in a joint space (e.g., through a website).

Digital divide: A broad term for the access and usage inequality of information technology (e.g., phone, Internet) between people in different places.

Digital economy: A term meaning that information and communication technology transform tangible objects into digitized objects and that the commerce built around this constructs a digital economy.

Electronic commerce (e-commerce): All commercial transactions made via electronic and digitized interfaces.

Global North and Global South: The categorization made by international bodies like the *International Monetary Fund* (IMF), suggest that the Global North includes the US, Canada, Europe, developed parts of Asia, Australia, and New Zealand. The Global South includes Africa, Latin America, developing parts of Asia, and the Middle East.

Internationalization: Internationalization is understood as increasing involvement for firms on international markets. The chain of decisions and actions following a firm’s internationalization is often referred to as the internationalization process.

Internationalization process: The internationalization process can be both outward- and inward-oriented. Generally, a firm’s internationalization process consists of decisions and actions on which markets to enter (geography), by what means to enter these markets (mode of entry), and at what magnitude (speed and resource allocation) to enter them.

Internet: The Internet is a massive network of networks; a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of languages known as protocols.

Online economy: A general term to describe business activity taking place in the online domain, most often on the World Wide Web.

Online entrepreneurship gap: Difference in entrepreneurial activity within the sector of online services between different geographical spaces.

Online usage gap: Difference between geographical space in terms of online use. The best available data to measure this is Internet penetration rates (percent of people who have access to and use the Internet).

Online internationalization gap: Difference between geographical space in export of online services, or the difference in number of international users of the OSPs from different countries.

Onlineness: The relative dependence of online resources as opposed to offline resources for the OSPs’ service and business models.

OSP (Online service provider): A firm that produces and commercialises services through the Internet.

Web 2.0: Web 2.0 describes World Wide Web websites that emphasize user-generated content, usability (ease of use, even by non-experts), and interoperability (this means that a website can work well with other products, systems, and devices) for end users.

Unicorn (business interpretation): A unicorn is a start-up company valued at over \$1 billion USD.

Viral marketing: A marketing technique based on existing electronic social networks, which enables messages (e.g., link to an app) spread via a self-replicating process. Also called electronic word-of-mouth marketing.

World Wide Web: A way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, only one of the languages spoken over the Internet, to transmit data.

CHAPTER 1: INTRODUCTION

1.1 Problem, aim, and research questions

There are few inventions in recent times that have had such an impact on the everyday lives of so many like the Internet. It is often positioned in economic history as the fifth Kondratiev wave (Malecki, 2002), and it has long since been claimed to be the root for a “new” online economy (Zook, 2006). A recent study¹ in Sweden showed that the average Swede spends about 21 hours per week using the Internet and 77 % of the Swedes access the Internet via their smartphones. According to estimates, close to 50 % of the world population has access to the Internet, and this figure is steadily rising (ITU, 2016).

Since the launch of the World Wide Web in the early 1990’s, “the web” has progressively developed into a marketplace for firms. Commerce on the Internet has often been described as a “new” online economy with a “new” business logic starkly characterized by speed. On the one hand, the Internet has become a sales channel for traditional firms, e.g., producers of goods and services, but on the other hand it has also been a catalyst for a new type of firms, i.e., firms that produce services that are only available and used via the Internet. This thesis deals with the latter form of firms, which I refer to as “Online Service Providers” (OSPs).² Some of the world’s largest enterprises, like *Google* and *Facebook*, fall into the category of OSPs, but OSPs also include micro-sized firms or startups, and they can be found in almost all countries today.

As the appearance of OSPs in the economy is quite recent, we still know little about their geographical expansion, their geographical mobility, and about how and at what speed and frequency they enter new markets. We know quite little about their *internationalization process*. The internationalization process of OSPs is important to understand given that OSPs are having an unneglectable and growing influence on the economy and society. The online services that we use, e.g., social media and infotainment, are mostly produced by OSPs. OSPs are also the intermediaries and part of the infrastructure in online commerce. Spurred by the emerging digitization of society, and consequently, the blurriness of what we regard as online and offline, we can thus expect OSPs to increase their role in the future economy. This transition will inevitably cause turbulence and, potentially, shifts in the geographical power balance in the world economy (Brynjolfsson and McAfee, 2014). Some geographical spaces (regions, countries, and cities) in the Global North and the Global South³ will be “winners”; whereas, others will end up in less favorable positions in the “new” online economy. How this power balance evolves will much depend on the internationalization pattern of the OSP.

Given the growth of OSPs in society, it is important to understand their internationalization patterns. There is little clarity of how OSPs enter new markets and about the effects this has on the economic geography. Therefore, the first aim of the thesis is to contribute with theory on internationalization of OSPs, and secondly to discuss how usage and production of online services are distributed throughout geography. Consequently, there are two main research questions in the thesis.

¹ See: <http://www.soi2015.se/sammanfattning/>, Accessed 10 October 2016.

² The author’s detailed definition of the concept of OSP is further elaborated in Section 2.4.

³ The author’s detailed definition of the concept of Global North and Global South is further elaborated in Section 2.7.

The first one concerns the internationalization process of OSPs, whereas the second one addresses the effects of this pattern from an economic geographic perspective.

RQ1. *How do OSPs internationalize in terms of speed, geography, and mode of entry?*

RQ2. *How are online users and online production dispersed in the Global North and the Global South?*

The thesis consists of five separate articles and a comprehensive introduction to the theoretical framework around the main research problem and the two specific research questions.

As shown in Table 1, the thesis is conceptually organized by viewing the internationalization process from an a) **production perspective** (the geography in which the OSPs are created, and the geographical origins of internationalization), and b) **user perspective** (the geography of the usage patterns). The internationalization process is, in addition, divided into the geographical dichotomy of the Global North and Global South, respectively. The upcoming four dimensions are related to different articles and research questions (put in parentheses).

Table 1. Overview of the articles in the thesis.

INTERNATIONALIZATION OF ONLINE SERVICE PROVIDERS		
	Global North	Global South
Production (supply)	Article 1 (RQ1) Article 2 (RQ1)	Article 5 (RQ1, RQ2)
Users (demand)		Article 3 (RQ2)
	Article 4 (RQ2)	

1.2 General structure

This introduction is structured into three main parts, each presenting a theoretical framework in which the OSPs are the central elements. Chapter 2 introduces the nature of online services and OSPs, focusing on whether this new phenomenon also requires a new theory. Chapter 3 deals with the production and internationalization of online services by OSPs. Hence, I analyse the OSPs as producers and international disseminators of online services. Chapter 4 accentuates online services from the users', or demand, perspective through a broader geographical lens.

The analysis in Chapter 3 is on a micro level, looking at specific firms, and Chapter 4 is on a macro level, with countries as the main elements of the analysis.

In regards to the choice of methods, Chapter 3 adopts mainly a qualitative approach, whereas Chapter 4 is mainly quantitative. The choice of level of analysis and methods has been made in regards to the research questions in combination with the available data.

Table 2. Structure of the thesis

Chapter	Articles	Perspective	Level of analysis	Main method
2	1-5	Introduction to online services and the nature of OSPs	Mixed	Qualitative
3	1,2,5	Production and internationalization	Micro	Qualitative
4	3,4	Usage and internationalization	Macro	Quantitative

1.3 Overview of the articles

The thesis is composed of five articles:

Article 1 (single author paper): The online–offline balance – internationalization of Swedish Online Service Providers. Published in the *Journal of International Entrepreneurship* (no assigned issue yet, available online since 27 April, 2016), this paper is about the internationalization process of OSPs. The purpose of the paper is to explore the granularities of the three key elements in the internationalization process—speed, geography, and mode of entry—for the most digitized types of firms, OSPs. The research question is as follows: *How do OSPs internationalize in terms of speed, geography, and mode of entry?* The paper reveals the importance of the home market as a springboard and of regional expansion in the early phase of internationalization. It emphasizes the balance in the internationalization process between an online and an offline presence in the new international market. The time gap between online and offline presence, the online-to-offline interval, is a critical factor in the internationalization process. The speed of the Internet industry and the technically complex nature of online services could explain why the case firms chose controlled modes of entry. They thus skip sequential steps, following a pattern that is in contrast to the Uppsala model. I suggest that finding the right balance between the online and the offline presence is a crucial challenge in the internationalization of Swedish OSP firms.

The findings reveal that existing internationalization theories do not quite fit the internationalization pattern of OSPs. The case firms internationalize rapidly, but mainly regionally. Hence, the online–offline balance takes place in a regional spatial domain. The OSPs presented are dependent on their home markets and may therefore not be defined as born global, and nor does the Uppsala model fully apply, given that the modes of entry are controlled from the start.

Article 2 (co-authored with Patrik Ström). Going Viral Across Borders: the Internationalization Process of an Online Service Provider. This paper, which has been submitted to the *European Management Journal*, sheds light on the balance between the online and offline geographies in the internationalization process of an OSP with a high degree of onlineness. The paper explores the modes of entry and spatial patterns of the Swedish OSP *Truecaller*, which has attracted over 100 million users across the globe in a few years. The research question for the paper is: How does an Online Service Provider enter a new international market? The paper conceptualizes the internationalization process by outlining its characteristics, particularly in terms of mode of entry and spatial realm. Findings show that viral marketing and online communities are important to create networks in the early internationalization process. An effect of these mechanisms is “online spatial overreach”, meaning low offline representation in proportion to its online representation, but that the role of local offline presence becomes increasingly important with time. The paper contributes with an online internationalization flow model, which manifests the entanglement of the offline and the online spaces, and the collaborative space between the firm and the users, along the internationalization

process. The authors interpret this as the emergence of a collaborative approach to internationalization, where the OSP may reach out to users, not necessarily professional firms, in order to facilitate the internationalization process. The challenge for OSPs is to find “stickiness” in online service and create sustainable brand loyalty. A way to increase loyalty and to avoid the online trap is to adapt the online service to the local cultural setting in a systematic manner, and invest in local online communities. Offline-presence could be a transcendent element in this process, and is needed to sustain a market position also in the online business.

Article 3 (co-authored with Patrik Ström and H. Richard Nakamura). Digital oases and digital deserts in Sub-Saharan Africa. Published by the *Journal of Science and Technology Policy Management* (Vol. 7, No.1, pp. 77-100). The objective of the paper is to analyse the geographical spread of online service usage within Sub-Saharan Africa and compare it with other regions by applying a quantitative analysis and using the best available Internet-related data. This is a response to calls from scholars who argue that the digital divide should be pluralized, localized, and grounded in more appropriate spatial frameworks (Graham, 2013a). The paper reveals a heterogeneous pattern with a few African countries being digital oases and close to European levels, whereas the majority of the countries are still digital deserts. The paper posits the conclusion that a generalist picture of Sub-Saharan African digital levels, as well as a belief that Sub-Saharan Africa as a whole is on the trajectory of closing the digital divide, is an imprecise reflection of the reality. It is argued that instead of measuring supply-side data, which has been the trend till now, the use of demand-side elements such as online service usage tells more about digital inequalities between countries. The article also encourages Internet firms to open their eyes to Sub-Saharan Africa as an investment opportunity with an untapped gap of online usage. The three and a half billion Internet users on the planet are unevenly spread and under-represented in Africa. By drawing a heterogeneous online usage landscape, digital policy can be accurately steered toward countries with the largest needs. The paper is a contribution in this regard.

**Article 4 (co-authored with Patrik Ström and H. Richard Nakamura) - Online services
An equalising force between the Global North and the Global South?**

This article is a book chapter published in *Globalisation and New Patterns of Services Sector-Driven Growth* (ed. by Niels Beerepoot, Bart Lambregts, and Jana Kleibert. UK: Routledge, 2016, pp. 55-71) that analyses first the spatial inequality of online services from firstly the demand side by studying the usage of online services, measured as ‘Internet penetration’. A complement to an Internet penetration in-depth qualitative analysis of the user geographies of Twitter, Facebook, and Wikipedia is provided. Secondly, the supply side is analysed by looking at the geographical origin and internationalization of the world’s largest online service providers on the firm level. It is concluded that most of the demand and most of the supply come from the high-end urban districts in the Global North, which is a reflection of the global economy and its underpinning power structures. Additionally, it is suggested that there is still an important digital divide regarding both the demand and supply side, although there are promising examples from the Global South led by China.

Article 5 (co-authored with Patrik Ström and H. Richard Nakamura) – Online entrepreneurship in the Global South – the case of Morocco

This paper is in res-submit stage in the journal *Entrepreneurship and Regional Development*. It is based on case studies of six Moroccan OSPs, and takes an online entrepreneurship perspective on the discourse of the digital divide. It is in the resubmit stage in the *Journal of Entrepreneurship and Regional Development*. The objective is to portray an emerging market and its online entrepreneurs in the midst an online and global shift. It particularly looks at the internationalization perspective of the Moroccan OSPs and shows that the online entrepreneurship is driven by well-educated returnees. It reveals some barriers for online entrepreneurship to flourish. These are mainly rooted in an ostensibly

domestic reluctance to engage in online business, which is reflected by the lack of domestic investors, programmers, and startup clusters. On a general level, Moroccan OSPs struggle with the fierce competition from the Global North OSPs, which often benefit from an underdeveloped policy framework.

1.4 Delimitations and limitations

There are some delimitations as well as limitations that are important for the reader to be aware of.

The first delimitation is the number and spread of geographical origins of the case studies, which have been delimited due to time and scope reasons. The thesis only covers OSPs in two different geographical markets (Sweden and Morocco) and the number of observations is limited. In total, four in-depth case studies from Sweden and six from Morocco are presented in the thesis. However, in the case of Sweden, desk research data was also collected from an additional 16 Swedish OSPs, and complementary informal interviews were made with their managers. In the case of Morocco, the limited size of OSPs matching the criteria had an impact on the number of case studies. It is argued that the six case studies are representative of the Moroccan OSP industry. Nevertheless, in a geographical context, a total number of 10 case studies of OSPs is only a fraction of the global OSP population, which must be considered when assessing generalizability.

A second delimitation that has been evoked above is the limited time period that has been allocated to following the OSPs' internationalization patterns. It could be argued that longitudinal studies and a larger OSP dataset might have added value to the analysis and the conclusions drawn. As mentioned, such data is not yet available due to most OSP being young firms and that the online service geography is an emerging and novel sub-discipline. In regards to this delimitation, the consideration should be noted that the field of the Internet's effects on internationalization is still a moving target.

The thesis uses Internet penetration data from ITU. Internet penetration data has been criticized due to homogenous data collection methods and, consequently, lack of comparability. In Article 3 I highlight this issue, and I claim that, despite its weaknesses, it is the best available data to capture Internet usage.

Another limitation is that the case studies only include OSPs that have had some kind of "success". Most firms, including OSPs, never reach the stage of engaging in internationalization. For example, of Sweden's 886,414 firms, only 4.5% conduct export activity.⁴ This means that the generalizability of the findings in Articles 1, 2 and 5 are restricted to OSPs with quite a high level of financial and business maturity.

⁴ See SCB statistics available at: http://www.scb.se/sv_/Vara-tjanster/Foretagsregistret/Aktuell-statistik-ur-Foretagsregistret/Antal-foretag-november-2015-fordelat-pa-omsattningssklass-omsattning-avser-2014/ and http://www.scb.se/sv_/Vara-tjanster/Foretagsregistret/Aktuell-statistik-ur-Foretagsregistret/Antal-export-importforetag-2014-avser-handel-2013-fordelat-pa-exportimportomsattningssklass/ (Accessed 4 November, 2016)

CHAPTER 2: INTRODUCTION TO ONLINE SERVICE PROVIDERS

2.1 The role of services in the economy and the rise of the Internet

Since the 1960s services have driven the world economy by creating new jobs, fueling innovation and increasing international trade (Beyers, 2012). This post-industrial period has been characterized by a shift away from manufacturing to service-dominated labor (Bryson et al., 2012). The service economy accounts for more than 70% of the employment in the OECD area, and more than 80% of the GDP of the US. The geographical consequences of the rise of the service industries are important, not only for the location of labor but also for the flow of capital and knowledge. The transformation and control of information and knowledge has led to diversities in expertise where some key global cities have become the command and control centers of the global economy (Rusten and Bryson 2008). The relocation or “outsourcing” of both manufacturing and service activities from the Global North to the Global South have dominated during the last decades, leading to a “second global shift” (Bryson, 2007). The geographical concentration of knowledge to certain business districts in cities, not least in the ICT sector, has been exemplified by the knowledge clusters in concentrated areas within global cities in the Global North, like San Francisco, Boston, Tel Aviv, London, Berlin, and Stockholm (Warf, 2013).

The shift to a service-led economy has been driven by many factors, including globalization, urbanization, flexible production and outsourcing, policy and institutional changes, and by the development and vast spread of information and communication technologies (ICT). One of the pillars in ICT has been the Internet, which is a key driver for entrepreneurship, innovation, economic growth, and job creation. Alcácer et al. (2016, p. 509) argue that we have entered a form of capitalism which is information-based and internationally networked-based:

...in which the role of the firm shifts from being a global organizer of geographically dispersed productive facilities that it owns, to becoming an integrator of streams of new knowledge creation across key nodes in a system of connected internal and external networks.

For policymakers, not least in the aftermath of a long and morose financial and economic crisis, it is critical to understand how the Internet and online services will affect the economy. One of the key issues concerns job creation (or unemployment) as an effect of the online economy. Another policy challenge is to make sure that a fair international tax framework is implemented (OECD, 2015). For entrepreneurs, it is important to prepare the terrain and a strategy for capitalizing on the Internet growth and to understand which geographical markets are likely to generate profits. Given the “international” nature of the online industry, internationalization issues are particularly relevant for online entrepreneurs. Yet, geographical markets are, from an economic geography perspective, increasingly difficult to distinguish. In the article offering an economic geography perspective on emerging markets, Alvstam, Ström, and Wentrup (2016, pp. 38) argue that:

In the eyes of the geographer, a ‘market’ can be defined along a continuous spatial scale from the global to the local. For practical reasons, and due to access to statistical data, it has usually been more suitable among academic scholars as well as by policy-makers, to apply the country/national level as the standard geographical level of description.

Globalization and the rise of services have made the common term of “market” lose its dominance in the economic discourse in favour of the more modern and complex geographical concepts such as “global value chains” or “global networks”. Alvstam, Ström, and Wentrup (2016, p. 53) suggest that:

In these highly globalized sub-sectors of the service economy, nation-bound economies are becoming blurred. (...) These market structures can sometimes be difficult to foresee, and successful firms sometimes see their service offering and game take off with viral speed in less anticipated areas that might not be contained within national borders.

As indicated above, the Internet can be seen as an additional layer of this spatial complexity or blurriness of geographical markets. An individual online user can cross the national borders of Internet websites by clicking on a screen. The geographic mobility for online services over the Internet is technically sophisticated and close to instant in terms of speed. OSPs can thus technically make their services available for consumers beyond geographical borders. But, and as the thesis emphasizes, the local context and the importance of adapting to local rules is important in the online economy.

Thus it is important to analyse which places and regions benefit and which will not from the thriving online economy in order to adapt adequate regional strategies. Regional digital policies are high up on the political agenda, for example in Europe, where the “Digital Single Market” (European Commission, 2015) is currently being discussed. One of the key issues in the European debate is to enable the Internet for what it was originally created to be – a borderless space for citizens and Internet companies and hopefully a platform that makes it easier for firms to internationalize. The EU-discussion exemplifies that the “global” Internet has swiftly become a regional or even a local affair. The Internet came with hopes of helping to level the playing field – both between large and small companies (Beyers, 2012) and also between geographical spaces (Graham, 2013a). However, research shows that the geographical divisions in the online economy are still flagrant, and that periphery regions are lagging behind (Warf, 2001; 2013). So one critical question is whether online services distributed by OSPs will further reinforce geographical disparities, or if the Internet will enable OSPs in the periphery to internationalize and thus enter the global arena for online services, which in turn would have an equalizing economic effect on the disparities between the Global North and the Global South. The online service industry could potentially be a vehicle for emerging markets to move up in global value chains.

2.2 The emergence of an online service geography

The evolution of the Internet geography is starkly characterized by the force of speed. The World Wide Web (www) was opened up thanks to contributions of Sir Tim Berners Lee and his colleagues at CERN in Geneva, Switzerland in the beginning of the 1990’s, and today it approximately three and a half billion users, or close 50% of the world’s population (ITU, 2016). This corresponds to a speed of approximately four new Internet users per second worldwide since 1990. The Internet has sparked new social behaviours and new industries. Founded in 1998, Google (now included under the holding company “Alphabet”) belongs to some one of “oldest” surviving OSPs, and today is the 27th largest company in the world (Forbes, 2016). Facebook, an online social network service provider, was founded in 2004 and has 1.7 billion users. Both companies have internationalized at a fast pace and most of their users are outside their home country (the US).

Sweden has a strong record when it comes to OSPs, and Stockholm is often cited as the city in the world with most Internet “unicorns”⁵ per capita, i.e., an OSP with a valuation of \$1 billion USD or more. From the mid-1990s until the dotcom crash in 2001, the growth of Sweden’s Internet industry was fueled by large investments in broadband infrastructure (Jansson, 2008). Historically, Sweden has

⁵ Swedish unicorns: Klarna, Spotify, Mojang, King, and Skype. Source: <http://www.technologist.eu/sweden-the-land-of-unicorns/>, (Accessed 11 October, 2016).

had a strong track record within ICT with many technological pioneer firms, e.g., *L.M Ericsson*, but also firms related to the mass media sector, like the *Kinnevik* group. Even though many of the early Swedish dotcom firms, e.g., *Framfab*, *Icon Medialab* (Forsgren and Hagström, 2007) suffered or even went bankrupt when the dotcom bubble burst, there was an important learning process and knowledge injected into the Swedish Internet sector in this period. In combination with technological advancements in web technologies, this development lay the foundation for a second wave of Swedish OSPs such as *Skype* and *Tradedoubler*, which were created by a small group of entrepreneurs where:

the local milieu in central Stockholm made up a fundamental infrastructure for creating spontaneous and formal meeting points where knowledge and information were effectively circulated, and also negotiated and discussed into strategies of how to do things in a new and emerging industry. (Jansson, 2011, p.516)

Sölvell (2015) shows that today's OSP industry has its origins in three historical clusters: telecom (with roots in the late nineteenth century and Ericsson's incorporation); mobile technology (since the 1950s), and broadband technology (since the 1990s). The Internet industry in Sweden is concentrated in the largest cities in Sweden, primarily Stockholm, followed by Göteborg and Malmö. As a recent example, in the third quarter of 2016, 66% of all investment rounds were located in OSPs in Stockholm, 11% in Göteborg, and 10% in Malmö.⁶ New Swedish OSPs (and Stockholm-based) have been born in the last decade and some of the most well-known, like *iZettle* (*online payment service*), *Klarna* (*online payment service*), and *Truecaller* (*online phone registry*) have been selected as case studies in this thesis and are representative of a new generation of OSPs.

Although the online geography is a quite new phenomenon, researchers have been quick to produce studies on its progress and evolution. Castells (1996, 1997, 2002), Malecki (2002, 2003), Kellerman (1993), Leamer and Storper (2001), and Warf (1994) were some of the pioneers to set the frame of the research field. Today the flora of Internet geography-related research is broader, and it is progressively evolving into its own sub-discipline within the field of economic geography (Graham et al., 2015).

One might think that a firm, which only provides services packaged in bits and bytes and transmitted via electronic signals, ought to have rather good chances in reaching vast geographical spaces as long as there is broadband infrastructure to support it. This simplistic and quite utopian view came across with theories of ICT as means to provoke the "death of distance" (Cairncross, 1998; 2001). This view became criticized by scholars Florida (2005) and Malecki and Moriset (2007), who prefer to describe the online geography as spiky or double-edged and not necessarily having a space-limiting capacity. In a similar vein, Warf (2013) stresses the many misconceptions of the geography of the Internet are often based on technological determinism that underestimates complex social, political, economic, and personal networks.

Within an economic context, the Internet has, up till now, been analysed as a social media and advertising platform (Okazaki and Taylor, 2013) from an infrastructure angle, as portraying the landscape of servers and broadband networks (Zook, 2002), and also through the lens of e-commerce (Ekeledo and Sivakumar, 2004). A new stream of spatial features research emerged with papers by Zook and Graham (2007) and Warf (2013), which discussed various Internet geographies such as the geography of Twitter (Graham et al., 2013), the geography of Wikipedia (Graham, 2013b), etc.

⁶ See <http://digital.di.se/artikel/malmo-slar-goteborg-i-tech-investeringar>, Accessed 2 November, 2016.

2.3 The emergence of the species OSP

The firm's place and trajectory in the online geography has been captured in research of internationalization (Petersen et al., 2002; Yamin and Sinkovics, 2006; Gabrielsson and Gabrielsson, 2011; Sinkovics et al., 2013). Yet, this field is still under-researched. Calls from scholars (Axinn and Matthyssens, 2002, Ball et al., 2008) were evoked long ago to investigate if the Internet would be a driver for new internationalization patterns for firms, or if the classical internationalization theories such as the Uppsala model (Johanson and Vahlne, 1977, 2009), the eclectic paradigm (Dunning, 1980, 1998, 2001), or the born globals theory (Rennie, 1993; Madsen and Servais, 1997) were still accurate. Although attempts have been made to distinguish the internationalization pattern of Internet-related firms, research has still not provided a real answer to this question. The specific angle in this study is the internationalization pattern for OSPs, i.e., firms that provide online services over the Internet. One dilemma is the lack of a common understanding in an Internet-related firm. Like the phenomenon of "born global" firms, Internet-related firms have been given different names and interpretations, making accuracy and comparability a cumbersome task. Brouthers et al. (2016, p. 513) concur to this assessment and make a point in saying that:

...studies tend to use different terms, but view electronic business companies (denoted as E-business companies) as any firm operating online that provides its products/services to customers using the Internet and other CBIS⁷ technologies.

For example, Jansson (2008, p.216) defines "Internet firms" as: '*firms whose activity/existence is dependent on the internet and whose production and distribution of goods and services are dependent on the internet*'. Firms with a dependence on the Internet have also been labeled as "digital information good providers" (Mahnke and Venzin, 2003) or "e-commerce corporations" (Singh and Kundu, 2002). These broader definitions have included both traditional software firms and retailers using the Internet as a sales channel. I claim that OSPs are a more distinct species of firm, which for example does not deal with physical goods, which both the broader terms "e-commerce corporations" and "Internet firms" could well do. An alternative definition of Internet firms would be Brouthers et al.'s (2016, p.514) "iBusiness", which they define as:

a special type of E-business companies that use the Internet and other CBIS technologies to provide an Internet based platform, which allows users to interact with each other. iBusiness firms offer CBIS-based platforms that create customer value by channeling and managing the input and interaction between users. Thus these firms do not act alone in the marketplace but depend on the participation of various actors.

Hence, as the field of Internet-related is maturing, there is a tendency to narrow down the scope of various sorts of Internet-related firms. I would position "OSP" as a broader term than "iBusiness" but more narrow than the general "Internet firm" (see further discussion in the next section).

Nevertheless, there is an abundance of literature of internationalization of firms, but little has been written about the internationalization of OSPs. Extant internationalization research focuses solely on the specific internationalization characteristics, such as mode of entry (Ellis, 2007), speed (Oviatt and McDougall, 2005), and geographical patterns (Rusten and Bryson, 2010).

⁷ CBIS: Computer-based information system

2.4 Definition of Online services, OSPs, and onlineness

I interpret online services as a service that is used while being online. Online services could be information services such as search engines, social media, and online payment services. Logically, I define OSPs as firms, which produce such online services. As mentioned above, there exist many different terms for Internet-related firms in the literature. In Article 1, I argue that the term OSP is the most adequate and comprehensive definition. OSP is one of the most accepted terms in research. OSP is defined as an emerging species of a firm that has progressively gained influence in the global economy:

Since the emerging of Web 2.0, OSPs have become major actors, which significantly shape the informational environment (infosphere) and influence users' experiences and interactions within it. OSPs went from offering connecting and information-sharing services to paying members to providing open, free infrastructure and applications that facilitate digital expression, interaction, and the communication of information. (Taddeo and Floridi, 2015, p. 2)

One could rightfully ask if OSPs differ in any way in comparison to other firms. I argue that there are few features that distinguish OSPs as a unique species. These features are discussed in a publication by Wentrup and Ström (2016) in which we attempt to answer whether OSPs should be defined as a new species. We depict the metamorphosis of OSPs from their infancy till their growth period in order to address the question of the OSPs' uniqueness. A few common characteristics for OSPs are outlined, such as the intermediary role, the dependence on network effects, and the ability to swiftly reach out to a large user base beyond national borders at a low cost due to their relative 'onlineness':

OSP's have many typical features such as their intermediary role, the dependence on network effects, and a capacity to grow rapidly across borders via the online medium, but that there are few features that distinguish them as a unique species. Yet, it is argued that the intertwined social relation with end-customers, often in co-development milieu combined with the lack of a direct monetary relationship, could be one such unique feature. (Wentrup and Ström (2016, no page assigned yet)

The only unique character suggested is thus the 'non-monetary co-development' feature between the OSP and the user, described as '*intertwined social relation with end-customers, often in co-development milieu combined with the lack of a direct monetary relationship*' (Wentrup and Ström, 2016, no page assigned yet). This could have an effect on the internationalization pattern insofar that it could contribute to a fast and geographically broad spread of the online service. Moreover, the actual transaction of an online service is not bound to any offline (human) interaction. I argue that, would there have been a financial constraint, or some kind of human friction, e.g., human dialogue or interaction in the moment of the transaction, or a monetary relationship, the spread of online services would naturally have become more tedious and geographically restricted.

In order to use an online service, some kind of physical device needs to be connected to the World Wide Web, in most cases a smartphone or a laptop. For some online services there are more physical devices required, such as web camera or a card reader. Hence, I argue that online services could have various degrees of *onlineness* depending on the physical devices that are required.

An online service and the business model of the OSP could be more or less dependent on offline resources in the supply chain, e.g., distributors or resellers, but also of local staff in the international markets. I consider this as an arbitrary scale where one extreme point is the “minimum dependence” and the other extreme is the “maximum dependence” of offline resources, i.e., physical devices and humans. This line of thought is illustrated in Figure 1.

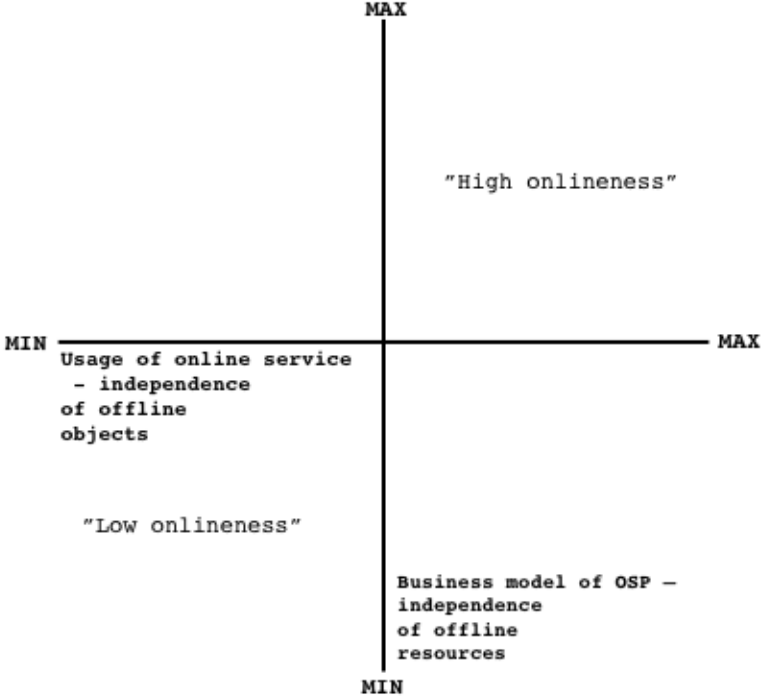


Figure 1. Illustration of onlineness in terms of usage of online services and business model for OSPs. Source: Author.

For example, *iZettle* (case firm in Article 1), needs both a physical card reader in order to make its online service work, as well offline partnerships with local financial authorities in order to be compliant with a specific international market. Henceforth, I claim that *iZettle* has a rather low degree of onlineness for being an OSP. An example of an OSP with high onlineness, both in terms physical objects for usage as well as in terms of dependence of offline resources, is the online phone book service Truecaller (case study in Article 2). It does not require any additional physical objects apart from a smartphone, and it could be distributed instantly across the globe to the user via an online application store.

In Article 1 I put forward the argument that the business model determines the speed in the internationalization process. Hence, B2C-oriented OSPs tend to have a higher degree of onlineness than B2B ones, particularly in the early stages in the internationalization process. I want to nuance this argument to be the following: it is the onlineness of both the online service itself and the business model of the OSP that affects the internationalization process of OSPs. However, the business model, B2C or B2B, often coincides with the degree of onlineness, but the onlineness of the online service itself must not be neglected.

The degree of onlineness could affect the speed and the geographical spread in the internationalization process. However, as OSPs internationalize, offline establishments and offline networks will become increasingly important. I argue that OSPs, with time, will become increasingly dependent of offline resources on the international markets. Although the physical dependence of offline objects of the service may decrease as an effect of a constantly more advanced technology integration, the offline

dependence of the business model will most likely move in the opposite direction due to increasing offline commitment to the local markets. My suggestion is, therefore, that as OSPs internationalize they will end up becoming highly dependent on offline resources in their business model. In Figure 2 this is illustrated with the dashed circles representing OSPs with different degrees of onlineness. If they engage in two concurrent phenomena (digitization and internationalization), my suggestion is that they will move towards the right lower box, i.e., being independent of offline resources in terms of usage of their online service, but gradually more dependent on offline resources in their business models.

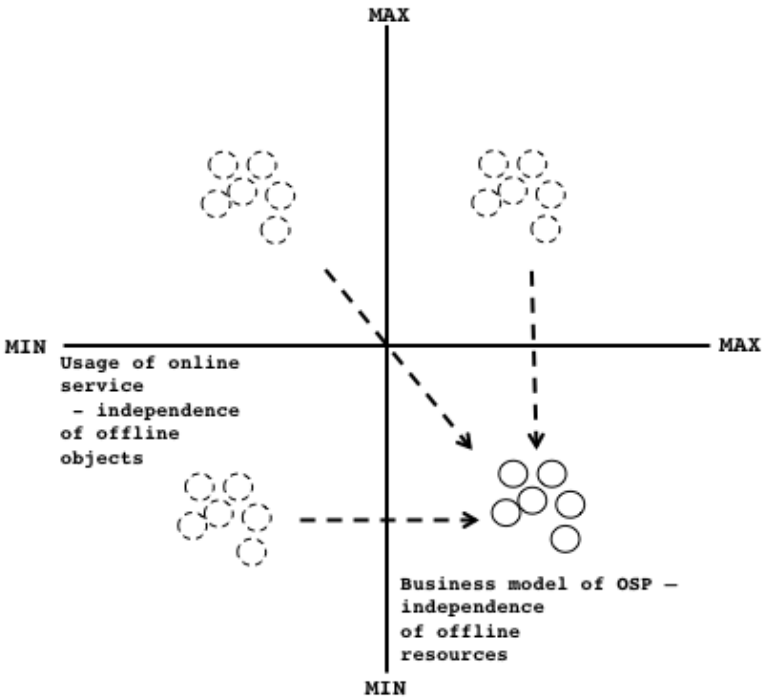


Figure 2. Illustration of an expected time-bound evolution of onlineness of OSPs as they internationalize and become increasingly digitized. Source: Author

2.5 Action-oriented dichotomy: Production and usage

I analyse internationalization from two perspectives: production and usage. This view of online services is an action-oriented interpretation. Online services can be seen as being either produced or being used. This dichotomy has been accepted in economic geography since the works by scholars like Zook (2002) and Malecki and Moriset (2007). An alternative terminology would be to use “supply” and “demand”, where supply would constitute the available “OSPs services” on the Internet, and where demand would correspond to the “users” using them. In Article 4 I use this terminology more frequently than in the other articles, but I claim that there is no fundamental semantic difference between them, but rather a question of stylistic preference. In Article 5 I apply the term “online entrepreneurship” more frequently than “online production”, given that the focus in this article is more on the entrepreneurial aspects, and in order to be coherent with the terminology of returnee entrepreneurship. Yet, I argue that the term “entrepreneurship” is a broader term than “production”, which is why I prefer to use the later one.

On a macro level, there are different measures that could be used to analyse the production of online services and OSPs, e.g., number of registered domain names, sales volumes of e-commerce, number of OSPs registered in a country, number of unicorns per country, size of the OSP ecosystem, etc. Parameters such as servers, fiber cable networks (e.g., Internet hosts, bandwidth, etc.), data traffic, and

Internet penetration (Zook, 2002) bound to specific locations have been some of the most common measures to assess usage of online services.

From a geographical perspective, I mainly delimit “space” in regards to both production and usage parameters on a country level, but when data is available I also discuss it on a city level. Due to primarily data availability and thus comparability I do not go into a deeper spatial granularity.

2.6. Technology-oriented dichotomy: Online and offline

As already indicated above, the online–offline dichotomy should be seen as an arbitrary scale from something being completely online, e.g., a website, which is available and used over the Internet, to something that is completely offline, e.g., a physical store. It is the technology used, or the degree of “webification” that determines the value of the onlineness along this arbitrary scale.

Geographers like Kellerman (2016) have suggested differentiated spatial models and alternative geographic metaphors of onlineness, ranging from wide to narrow: virtual space, cyberspace, Internet, and Internet screen-space. They build upon concepts defined by Batty (1997) of “virtual geography” and the projection a “cyberspace” on traditional space. Tranos and Nijkamp (2013) postulate that physical distance, but also different relational proximities, have a significant impact on the structure of the Internet infrastructure, highlighting the spatiality of the Internet. According to their findings, Internet infrastructure appears to be strongly curved by agglomeration forces.

As for the offline space, the online space can also be expressed in distance, (e.g., number clicks), boundaries (e.g., geoblocking of specific domain names or firewalls), speed between places (e.g., broadband speed allowing a certain time between accessing two IP addresses), networking, and proximity (e.g., how online traffic will be structured based on social relations). Yet, there are important differences between the online and the offline space, particularly the lack of embodiment as well as the shorter time perspectives in the online space. Kellerman (2016, pp. 515) suggests that:

First, cyberspace experiencing is normally much more extensive in its spatial extent as compared to that of real space. Second, cyberspace use may be temporally much more intensive given its continuous use. Third, cyberspace experiencing is shallower than that of real space in its perceptual imprint on users, and fourth, cyberspace experiencing lacks almost any bodily involvement by its users.

From an internationalization perspective, I understand full online presence as an OSP that makes its service available only via a website in a specific geographical market (most often on the country level). On the contrary, a full offline presence is then understood as a permanent establishment, which could include premises and staff physically located on a specific geographical market. In reality, though, there is often a mix of online and offline presence. The balance between two spatial engagements, the online and the offline, and how this could affect the internationalization process is highlighted in Article 1.

An illustration of the scale between something being completely online to something being completely offline could help the reader to disentangle this blurriness (Figure 3). Onlineness has been explained above, and consequently I could regard offlineness as a permanent establishment (which is also a legal term when assessing tax liability) in the geography. Offlineness thus implies geographical stickiness. In theory, we could therefore also expect full onlineness to be associated with greater geographical mobility, but most likely with less geographical stickiness, i.e., sustained interregional specialization of economic activity (Zander, 2004).

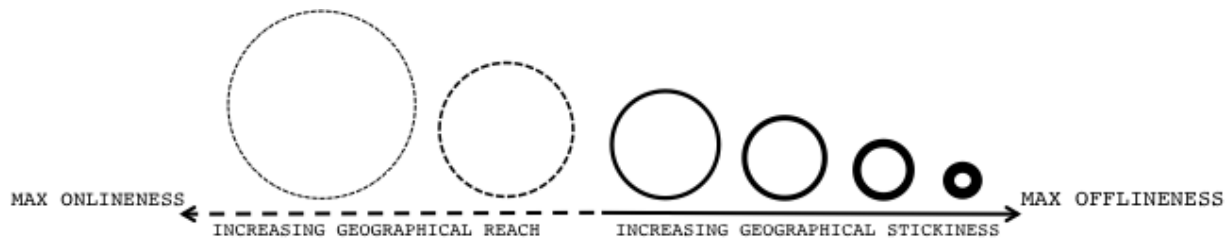


Figure 3. Theoretical illustration of geographical mobility and geographical stickiness in regards to onlineness and offlineness. Source: Author.

Given the complexity of data traffic routing over the Internet, it is, from a data collection perspective, a challenge to track location to a specific online service. This complicates geographical and internationalization assessment of online services. Aligned with other Internet geographers I claim that it is important to geographically categorize data. Geographical place-names of data can help our spatial understanding of place. According to Graham and De Sabbata (2016, p. 1254), geographical categorization of information gives data more meaning and can help to further analysis if it is put in a geographical, cultural, and political context. *‘Within the context of this datafication of everything, the need to geographically locate secondary datasets (like news or social media) becomes ever more important’* (p. 1254).

Additionally, and given the technology advancements hitherto, there is an increasing blurriness between what we regard as online and what we regard as offline. In the ‘Online Manifesto’, Floridi. (2015, p. 7) point to: *‘the blurring of the distinction between reality and virtuality; and the blurring of the distinctions between human, machine and nature’*.

On the other hand, we know that today it is still humans that are in control of the online world and thus manage the representation of the Internet. Graham (2013a) argues that the Internet should not be seen as an abstract space but as a network of individuals. There are (still) real people and geographies behind what many call cyberspace or virtual worlds.

There is also a perceived blurriness between online and offline in relation to production and usage of online services. Users are increasingly involved in product and service development and firms seek to harness the user’s knowledge (Grabher et al. 2008) in order to gain competitiveness and customer loyalty. The “online” metamorphosis fuels this entanglement further (Floridi, 2015) and puts the embodiment of technology-mediated representation into a new perspective (Goodings and Tucker, 2014). Co-development (Grabher and Flohr 2008) and sharing economy (Richardson, 2015) are phenomena that have gained terrain in research and are terms that adhere to the indistinctness between what is produced and what is used (and by whom) in specific spatial domains.

In regards to the online–offline dichotomy, a challenge is to understand what is considered a trustworthy geographical representation of data. Let us take the example of a South Korean person living and working in Nairobi. This person adds a self-produced instruction video, e.g., a programming lesson, onto the Facebook platform. This person is then both a user of the Facebook platform and also a voluntary co-producer of content to the online service of Facebook. His or her Facebook identity probably diverges from the human identity, so we could claim there are both an offline and an online representation of the individual. How should we geographically determine the origin of this online service? Is it Korean, Kenyan, or American? Given that the OSP enabling the Korean person to add the service is Facebook, it should be geographically bound to Facebook’s geographical representation, if possible to a Facebook Kenya branch (or the permanent Facebook

establishment managing the Kenyan market) since the Korean is based there during offline while uploading the video onto the platform (online-wise the Korean could have registered as belonging to Facebook's Korean domain by entering a Korean place as principle location). Although most cases are not as complex as this example, it illustrates the blurriness between the online and the offline, and between production and usage in the online economy. It also underscores the challenges in policymaking in the online economy and how difficult it is to assess geographical participation and representation.

2.7 Geography-oriented dichotomy: Global South and Global North

A third spatial dichotomy, which is relevant to the thesis, is the one between the Global South and the Global North. One could also imagine other terms such as “mature” or “emerging markets”. The economic geographic view of the concept of emerging markets and the categorization of geographical markets are discussed by Alvstam, Ström, and Wentrup (2016). For the purpose of this thesis, I adhere to the broad economic division between the Global South, i.e., Africa, Latin America, and developing parts in Asia and the Middle East; and the Global North, i.e., Northern America, Europe, and developed parts of Asia, Australia, and New Zealand. I acknowledge that there is no perfect definition and that places are constantly changing. Furthermore, there is flagrant heterogeneity within these regions and countries. As outlined by Alvstam, Ström, and Wentrup (2016, pp. 56), emerging markets could be seen as:

heterogeneous economic space in a global archipelago, consisting of small pockets of advanced local technological knowledge and high economic welfare surrounded by oceans, containing all varieties from extreme poverty to tomorrow's economic power centres.

2.8 Summary

The species of OSP has emerged in the global economy due to the growth of the services industries and the introduction of the Internet, followed by the World Wide Web in the late 1990s. The geographical context of OSPs, i.e., the clusters of expertise within connected global cities, has been accentuated, and the withstanding inequality of online access has been noticed. Further, the problem within both the business community and among researchers of finding a common definition of the species I refer to as OSP has been highlighted.

Although OSPs have many common features in comparison with traditional firms, they also hold some typical characteristics. The dependence of network effects and the intertwined online social relation, often without direct monetary exchange with the user, are such typical features. In this chapter I have introduced the dichotomy of “online–offline” and explained how it is becoming increasingly blurry in today's society, including in the context of business. The relative onlineness of the OSP is a determinant for its international expansion. Onlineness, hence the independence of offline resources in the online service itself and in the business model could help explain why some internationalize faster and are more geographically extended than other firms. Onlineness could be seen as an arbitrary scale of something being completely online to something being physical and geographically rooted. But at the same time, a too large dependence of onlineness, which could have positive effect in terms of geographical mobility and geographical reach, could come with the cost of lack of geographical stickiness. Therefore, it is the balance between the online and the offline that OSPs must master as they expand geographically.

The section has also highlighted how internationalization of online services could be seen through the lens of either production or usage, and I have presented the geographical dichotomy of the Global North–Global South, which is relevant to understanding the internationalization of online services. The above dichotomies are all relevant for this research and are summarized in Table 3.

Table 3. Key dichotomies in the thesis.

Spatial dichotomy	Sub character	Representation	Blurriness
Online-offline	Technology	The representation is dependent on its composition of binary data. Hence, a maximum onlineness is pure binary representation, whereas the maximum offlineness is full physical representation	When there is a mixed representation. For example, in the case of business when there is both a physical shop and an online shop.
Production-usage	Action	The representation is dependent on the space where online services are produced and used.	In some cases a producer is also a user and vice versa. Users become producers, or co-developers of software or content on web platforms.
Global North–Global South	Geography	The representation is on a country level.	The concept could also be interpreted to have a political and social meaning, but the divider is primarily the geography.

CHAPTER 3: PRODUCTION AND INTERNATIONALIZATION OF ONLINE SERVICES

3.1 The geographical origins of the largest OSPs

From a theoretical perspective one might think that the nature of the online service industry itself would drastically reduce the importance of spatial proximity, and thus enhance the geographical mobility. People working in the online service industry can be accessible anytime and anywhere via mobile devices and through distributed networks of fiber cables and servers. This could potentially open up for periphery locations to become more easily embedded in the world economy. It is indeed an appealing thought that OSPs could emerge anywhere in the world, even in the most periphery locations.

However, the empirical findings and the results in this thesis divulge an opposite picture. The world's largest producers of online services come from the area around Mountain View in California in the US. In terms of users and turnover, some of the largest ones are Google, Facebook, Twitter, LinkedIn, WhatsApp, and Yahoo!. Of the top 10 largest web communities, five originate from an area of a few square miles in Silicon Valley. This is significant for the online service industry – it is physically concentrated to a compromised geographical area but is virtually vastly spread. Zook's (2001) analysis of e-commerce in the US suggests that e-commerce is not bringing about destruction of place. On the contrary, the importance of agglomeration and localities persists. The findings in the articles in the thesis are aligned with the discourse of geographical concentration of the production and the location of OSPs. Articles 1, 2, and 5 demonstrate the importance of the micro localization and concentration of entrepreneurial networks in the city centers of Stockholm and Casablanca. Stockholm has more than 100,000 people working in the ICT industry in over 40,000 firms, 20,000 of which have been created since 2008. The OSPs are concentrated in a few areas within Stockholm (City, Östermalm, and Vasastan). The ecosystem of entrepreneurs, firms, universities, and institutions have played a key role in nurturing the innovation system (Sölvell, 2015). The concentration and localization pattern to restricted areas within cities contradicts predictions made by O'Brien (1992), Cairncross (1998; 2001), and Negroponte (1999) who have claimed that ICT will loosen the ties of spatial proximity and the proclaimed the "death of distance" or the "end of geography".

On a global level, online services, e.g., online media, online banking, online commerce, online search, email, etc., are produced in many parts of the world, albeit most in city centers. We often find alternatives for Silicon Valley originals such as Facebook and Twitter, not at least in countries which have a high degree of censorship like China and Russia (Warf, 2011). There are currently three Chinese firms among the 10 largest virtual communities in the world in terms of number of users (see Table 4). China's version for Facebook is called Renren (<http://.renren.com>) and Russia's version is VK (<http://vk.com/>). Both have more than 100 million users. In India, for example, there are many OSPs, such as Snapdeal.com and Ola Cabs (The Wall Street Journal, 2014). But unlike the US online services, the OSPs from emerging markets often target the local market and the diaspora whereas the US and other online services from the Global North tend to have a larger international reach. This problem, i.e., the lack of Schumpeterian entrepreneurship, which limits the international potential for Global South OSPs, is evoked in Article 5 about Moroccan OSPs. This portrait may appear gloomy from a Global South perspective, and is discussed in Article 3. The fact that there are so few examples of OSPs from the Global South reaching a large international audience and the low level of indigenous online production is problematic and is discussed further in Chapter 4.

Table 4. The world's largest OSPs (Source: Wikipedia, 2016:
https://en.wikipedia.org/wiki/List_of_virtual_communities_with_more_than_100_million_active_users)

Name	Registered users	Active user accounts	Date launched	City and country of origin
Facebook	2+ billion	1.71 billion	2004	San Francisco, USA
Facebook Messenger	2+ billion	1+ billion million	2011	Boston / San Francisco, California
WhatsApp	1+ billion	1 billion million	2011	San Francisco, California
Tencent QQ	1+ billion	899 million	1999	Nanshan District, Shenzhen, China
WeChat	1.+ billion	806 million	2011	Nanshan District, Shenzhen, China
Tencent Qzone	1+ billion	652 million	2005	Nanshan District, Shenzhen, China
Instagram	500+ million	500 million	2010	San Francisco, USA
Twitter	1 billion + million	313 million	2006	San Francisco, USA
Skype	750+ million	300 million	2003	Stockholm, Sweden
Baidu Tieba	1.5 billion	300 million	2003	Beijing, China
Sina Weibo	503	300 million	2009	Beijing, China
Viber	754	249 million	2010	Tel Aviv, Isreal
Google+	2+ billion	212 million	2011	San Francisco, California

The OSPs in Articles 1, 2, and 5 are all from either Stockholm or Casablanca. This is aligned with Warf (2013), who states that most of the Internet production, i.e., OSPs, are located in so-called global cities and, also in accordance with theories of clusters and agglomeration effects, are seen in many business sectors (Porter, 1990, 2000; Krugman, 1991; Zook, 2000; Scott, 2010), and thus are not unique to the online industry. On the contrary, the concentration of online activity in cities has given reasons to apply rubric such as “cyber places” or “social network machines”, implying the dense data flows between individuals and machines in urban areas (Arribas-Bel et al., 2015). Research has shown that production of knowledge-intensive services is often more strongly concentrated in global cities than other sectors (Leamer and Storper, 2001; Dicken, 2015; Rusten and Bryson, 2010). Bathelt and Turi (2011, p. 528) argue that the importance of spatial proximity withstands despite more and more sophisticated computer-mediated communication, and claim that ‘*virtual interaction will eventually eliminate the benefits accrued from geographic proximity makes little sense when evaluating complex economic realities*’. The most common reasons for this is that entrepreneurs, experts, customers, and rivals tend to gather in areas where they can profit from the buzz, build up tacit knowledge, and thus increase their chances of staying competitive (Storper and Venables, 2004; Beyers, 2012; Zander, 2004; Scott, 2010). In producer service industries, the need to socialize and meet face-to-face is crucial for loyalty and trust, both on a formal as well as an informal level (Hermelin and Rusten, 2007).

The micro-localization pattern is also true for places in the Global South, as shown in Article 5. This shows the importance of offline resources in the online economy. In the light of the core-periphery discourse, my findings concur with those suggesting that the production side of the online service sector is to a high degree core-oriented (Ball et al., 2008; Dicken, 2015; Brynjolfsson and McAfee, 2014; Sölvell, 2015). Yet, online networks can help to create linkages between spatially distant clusters. We can thus expect urban areas as centers of creativity and entrepreneurship to be even more important with time despite growing online interaction. As Article 5 argues, this may have the effect that OSPs in the Global South will suffer from an online entrepreneurship gap, meaning that they have a hard time catching up with the international competition and fully accessing Global North markets.

3.2 From local production to global diffusion: Internationalization theory

Internationalization theory has its roots in theories about international trade, notably Ricardo's theory (1817) of comparative advantages, which holds that every nation will produce the commodities that comparatively are most suited in terms of its national endowments, e.g., climate, soil, capital, means of transport, etc.⁸ The nation will produce these products in excess of its own needs and will exchange the surplus with imports of goods from other countries.

One of many cited internationalization contributions is the Uppsala model, which emphasizes the step-by-step internationalization pattern (see Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; 1990 2003; 2006; 2009; Vahlne and Johanson, 2013). The Uppsala model emphasizes that internationalization is a tedious process that evolves incrementally. It suggests that firms commence with markets with short psychic distance (often geographically close) and then expand progressively with increasing involvement. Market commitment and incremental learning are key elements in the Uppsala model. The Uppsala model has developed with time and has increasingly accentuated the network aspect, i.e., that markets should be viewed as business networks of relationships where firms are connected to each other. The firm uses these networks to handle the liability of foreignness (Johanson and Vahlne, 2009; Johanson et al., 2011; Johanson and Vahlne, 2013) and to engage in international markets.

As a reaction to this theory, the born globals theory was introduced by Rennie (1993). The born globals theory proposes that firms can commence with far distant markets and are not bound to a stepwise expansion. As indicated by its name, firms can become global (or international) at, or shortly after, inception. The emergence of firms that operate globally at very early stages of their existence has been cited by many scholars and the literature herein is copious (e.g., Knight and Cavusgil, 1996; Oviatt and McDougall, 1994, 2005; Andersson, 2011; Gabrielsson and Pelkonen, 2008).

With the base in the Uppsala model and born globals theory, internationalization theory has gradually spread into new research avenues, such as international entrepreneurial theory (see McDougall 1989; Jones and Coviello, 2005; Mathews and Zander, 2007; Schweizer et al., 2010), which argues that the entrepreneur should be in focus when analysing a firm's internationalization process. Internationalization theory is also closely linked with the field of economic geography, which mainly analyses trade, foreign direct investments (FDI), and firm patterns from a geographical perspective using a toolbox of aspects such as location, distance, agglomeration, and cluster theory to describe spatial dynamics. In regards to internationalization theory, the discussion about continuous global shifts (Bryson, 2007; Dicken, 2015) is central. The most recent "global shift is how firms from emerging countries establish themselves as global investors in industrialized economies, particularly in

⁸ For an in-depth review, see the seminal works by Coase (1937) and Hymer (1960).

North America, Australia, and Europe (Alvstam et al., 2014). For example, there are several Indian software firms that have entered the Swedish market (Hermelin et al., 2011; Hedberg et al., 2014).

The above theories have been *behavioural*-oriented, but the internationalization of firms has also been analysed from an economic perspective. The dominating contributor is John Dunning with his eclectic paradigm (Dunning, 1980, 1998). The idea behind the eclectic paradigm is to merge several isolated theories of international economics in one approach. Three basic forms of international activities of companies can be distinguished: export, foreign direct investments, and licensing. Dunning identifies three categories of firm advantages, namely the “ownership, advantages, locational” (OLI) as well as internalization advantages. Dunning accentuates internalization theory, which itself is based on the transaction cost theory; hence, this theory is closely linked to economics. *‘The eclectic paradigm has been widely recognised as the preeminent theoretical paradigm within IB’* (Cantwell et al., 2010, p. 567).

Cross-fertilization attempts between the eclectic paradigm and the Uppsala model have also been made, e.g., Johanson and Vahlne’s discussion (1990, 2013) on how the eclectic paradigm and the Uppsala model can be integrated, although their basic assumptions may deviate.

3.3. An OSP internationalization model

In order to understand how OSPs internationalize, it is first important to outline the internationalization process. In this thesis, this process is broken down into three elements: 1) mode of entry (how firms enter the market, e.g., via partners); 2) speed (how fast and how often firms enter new markets); and 3) geography (which markets they choose and which location on the market they choose). These main elements are illustrated in Figure 4, which is an elaborated model from Article 1. The model also includes the macro context and the online and offline resources as fundamental cornerstones in the model.

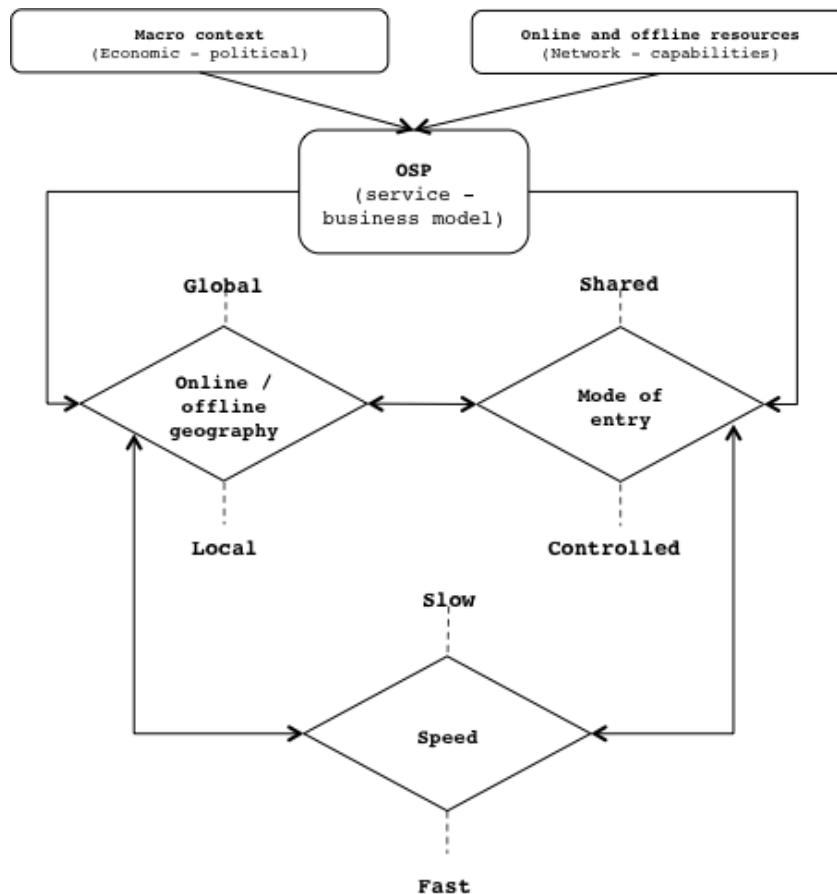


Figure 4. Internationalization model for OSPs. Source: Author.

3.3.1 Macro context

The macro context should first be considered when assessing a specific OSP's internationalization pattern and when gauging whether the geographical pattern deviates from that of other firms. Naturally, there is a correlation between trade statistics on a country level and the choice of international markets for firms. Such patterns can be explained by geographic, economic, political, cultural, and language proximity.

In Articles 1, 2, and 5, the OSPs investigated are from Sweden and Morocco, which are two countries with different geographical, economic, and political contexts. By looking at both countries' trade partners, one can conclude that the trade pattern differs in its character. Sweden is dependent on geographically close and similar markets (economic and socio-culturally), whereas Morocco's trade pattern is more geographically dispersed and entails, in comparison, relatively richer countries than Morocco. In contrast to Sweden, Morocco exchanges relatively low trade volumes with neighboring North African markets, e.g., Algeria, which signifies the underdeveloped intraregional trade in Africa. Both countries have a high dependence on the EU as well as on the world's largest economy, the US. Thus, in order to assess whether the geographical internationalization path is different for OSP as opposed to "normal" trade paths, the macro context needs firstly to be analysed.

Apart from the trade partners, the economic climate in the country is important. As already highlighted, it is the countries from the Global North that today are leading in the OSP sector. There is a high correlation between economic strength and number of OSPs per country. This phenomenon is highlighted in Article 4. In terms of quantity, we can thus expect fewer OSPs per capita from countries in economically weaker countries.

3.3.2 Online and offline resources

Another factor that has an impact on the OSP internationalization patterns is the online and offline resources at hand. On a macro level the readiness for a country to produce OSPs is rooted in both online and offline resources. Online resources are resources that are dedicated to enable OSPs to emerge and grow in the online space. These are resources that spur Internet traffic, e.g., the speed and reliability of the Internet network and the online entrepreneurial capability and network. We could imagine technical material and infrastructure that enables Internet access, e.g., fiber cable networks and servers, but also more soft resources as the OSP's online regulatory surrounding. This will affect how the OSP is positioned in the online trade network, i.e., the accessible networks and the online communities. Other online resources could be the OSP's access and utilization of e-government initiatives, financing dedicated to the online sector, or access to incubators for online startups.

In offline resources I include human resources and offline infrastructure. It could be measured in how large a part of the population is online, the programming skills of this population, and the education level in the country. It could also be seen as broader infrastructure that indirectly facilitates entrepreneurship, e.g., electricity, access to housing in business clusters areas, offline access to entrepreneurial networks, etc. For instance, in Sweden a recent debate in the startup community has been around how Stockholm-based OSPs have trouble accessing affordable housing for their employees.⁹ This is an example of how offline resources could have an impact on the OSPs' localization in both domestic and international markets.

3.3.3 Mode of entry: Controlled modes dominate the online space

Mode of entry can range from controlled modes, e.g., ownership of international subsidiaries, to less controlled, or shared modes, e.g., exporting through intermediaries, contractual licensee, franchisee, or joint ventures (Buckley and Casson, 1998). As argued in Article 1, the literature on mode of entry for OSPs is scarce. My conclusion is that the entry form for OSPs should be seen in the light of the online–offline dichotomy, and not simply as a choice of either controlled or shared mode.

From an online perspective, the OSP's establishment on a new market is mostly executed via a controlled mode. The establishment process is controlled from the headquarters. The case studies in Article 1 show that this has to do with the complex and technically advanced nature of OSPs' services. OSPs are able to control their foreign operations in the online space whilst assuring offline presence in the headquarters. The need for being offline-present is thus lower than for a manufacturing company, particularly in the early phase of the internationalization process.

The case of Truecaller (Article 2) demonstrates that the process to make an online service available on a foreign market's online market is less complex than for a tangible product, since no offline supply chain is required. The challenge for an OSP is to create an online buzz and reach a "viral" state on the local market, and rapidly build up a large online user database. In order to achieve this, offline resources are often needed.

The proportion of "shared mode of entry" therefore gradually increases along the internationalization process, given that more and more offline resources are needed. The offline presence requires shared

⁹ See article (in Swedish): <http://www.svt.se/nyheter/lokalt/stockholm/spotify-stockholms-bostadsbrist-kan-tvinga-oss-lamna-landet>, Accessed: 10 May, 2016.

modes of entry to be considered. The OSPs often engage in local partnerships, recruit staff, and invest in offline resources. By doing so, OSPs gradually become more involved in the local market. This also is demonstrated in the case example of *Kamal Reggad* (founder of Hmizate and Hmall) in Article 5, where the entrepreneur launched the online service from the US, but increasingly got dragged into the offline space of Morocco. The controlled mode of entry can only be held for a limited time interval, and progressively becomes more shared as the need for offline resources increases.

Similarly, neither Facebook, nor Twitter, nor Google have shared modes of entry, e.g., a distributor, but have all entered new markets primarily in the online space by creating a user base via the online medium and then gradually building up their offline presence. I see this way alternating the commitment of both online and offline resources as the online–offline balance. This balance is, as discussed in Article 1, a critical factor in the early internationalization process for OSPs.

Overall, I argue that the OSPs onlineness in terms of online service and business model determines the need for offline resources, and also the timing when the offline resources should be engaged. In the case of Truecaller (Article 2), the offline resources were triggered rather late in the internationalization process, at a point when Truecaller had the feeling that the number of online users was picking up. In contrast, the firms in Article 1 had a need for offline resources rather early in the market entry process.

In the literature of mode of entry, the network approach to internationalization (Coviello and Munro 1995; Moen et al. 2004; Johanson and Vahlne, 2009; Alcácer et al. 2016) is central to explaining how companies use business networks to internationalize. It suggests that companies, by acquiring networks, can reduce the time to reach international markets. A limitation of the network theory, in the light of internationalization for OSPs, is that it accentuates the long and slow process of network building in order to create trust and commitment. This stands in contrast to the internationalization for OSPs with a high degree of onlineness. For them, a market entry can be made swiftly in the online space without any pre-constructed offline networks at all, simply by using an online service on the Internet via online marketplaces. For OSPs, which are dependent on rapidly creating a large user base, viral marketing and co-development are important means to entering new markets. As highlighted particularly in Article 2, this is a different kind of entry mode for OSPs and one not previously assessed as an entry mode for traditional export firms. Yet, the offline networks are not necessarily important in the early stage for the OSP, which is the case for a traditional firm, but, as already highlighted, they become gradually important as the OSPs expand in the local market.

3.3.4 Speed: the online – offline interval

Speed is often regarded as a key element of firms' international strategies. A firm that internationalizes too slowly might find itself outcompeted on new markets prior to entry, and in a presumably locked market position. Networks effects (Rochet and Tirole, 2003) and the high pace of technology innovation in the OSP business foster a sense of urgency to internationalize fast. Speed must be configured in such a way that it balances the firm's internal resources vis-à-vis the arising business opportunities on international markets (Chetty et al., 2014). A general assumption among managers is that rapid speed is something positive in the internationalization process, and in the online business it is often true. Phrases like “we must reduce the time to market” or “first mover advantage” are quite common. Such a culture induces a constant sense of time pressure. The testimonies of the managers in the case firms presented confirm this pattern. Nevertheless, a too rapid internationalization could potentially lead to overextension and unreflective decisions, which could have negative effects for the business. For instance, Chetty and Campbell-Hunt (2003) found that rapid internationalization can destabilize for SMEs due to their limited resources. This is also exemplified in Article 1, where the case firms progressively realized that a too high internationalization speed was not sustainable.

Regardless of the effects of the speed, there is a lack of empirical evidence showing whether OSP firms internationalize faster or slower than other firms. Does the culture of rapidness in the OSP business have any effect on the actual pace of internationalization? Some researchers have implied that manufacturing firms are rather slow in their internationalization process, while services firms are quicker (Gabrielsson and Gabrielsson, 2011; Johanson et al., 2011). The internationalization process of born globals has been characterized as rapid, with firms becoming established and committed internationalists in as little as three years or less (Coviello and Munro 1995; Andersson, 2011; Chetty et al., 2014). Luo et al. (2005) found that e-commerce firms internationalize faster than traditional firms mainly due to the entrepreneurs' international experience. Ziyae et al. (2014) found that in addition to the entrepreneurs' international capacity the innovation capability and marketing capability also positively influences the speed. Gabrielsson and Pelkonen (2008) found that digital-based born globals reached their first international market only 2.1 years after inception, and thus much faster than traditional firms. In Article 1, the case firms have a longer time interval than 2.1 years for their first international entries. Article 2 shows the extremely rapid internationalization of Truecaller, which has obtained 100 million users worldwide just six years after its launch, clearly indicating a fast internationalization speed.

The OSP industry has other examples of an even faster pace. For example, and as shown in article 1, the Swedish firm Spotify was founded in 2006 and is today present in the online space in 66 markets, with 21 (offline) offices.¹⁰ Facebook has established 37 international offices since 2004 and 1.7 billion active users worldwide.¹¹ Such a remarkable international spread within such a compressed time frame is not seen in any other sector. Hence, although we do not know exactly how much faster OSPs can internationalize, there are sufficient examples to claim that once OSPs engage in the internationalization process, the speed is generally faster than it is for traditional export firms. The few research papers that exist on this topic clearly point in this direction.

Researchers have made the distinction between two speed elements: 1) *time lag to first entry* - the time lag between the founding of the firm and its first international operation; and 2) *sequencing* - the speed of the firms' subsequent international growth (Yamin and Sinkovics, 2006).

In Article 1, I present the time gap between online presence and offline presence. I call this time gap the *online–offline interval*. If we look at the speed of the case firms, we could differentiate between the interval to becoming online present in a new market and the interval to becoming offline present. In terms of online presence, the internationalization speed for an OSP could be very fast, almost instant, as shown in the Truecaller case. But the speed to reach offline presence lags. Truecaller has, for example, few offices internationally in comparison to its number of international users. For the case firms in Article 1, this online–offline interval is more compressed.

Thus far, my main conclusion regarding online speed is that OSPs, once they reach the stage of internationalization, and particularly if we look at the speed element of online presence, they tend to be faster than traditional firms. Regarding the speed to offline presence, this is more difficult to assess with the given data. The cases presented indicate that the speed to offline presence does not necessarily differ from traditional firms.

¹⁰ See: <https://www.spotify.com/se/select-your-country/>, Accessed 15 October, 2016.

¹¹ See: <http://newsroom.fb.com/company-info/>, Accessed 16 October, 2016.

Unsurprisingly, if we look at the speed between different OSPs, I claim that OSPs with a high degree of onlineness in the character of the online service and the business model are, in general, faster to reach a geographical spread in the online domain. They also enjoy a longer online–offline interval than OSPs with a low degree of onlineness. However, this does not necessarily have any impact on the performance on the firms, but should be put forward as a conclusion concerning the internationalization speed perspective. Again, the online–offline dichotomy is helpful for explaining the different internationalization elements for OSPs.

3.3.5 Geography: regionally bound versus ‘online spatial overreach’

In international business literature as well as in economic geography, distance can refer to either to the distance from the home market to the international market or to a socio-cultural space, often called psychic distance (Johanson and Vahlne 1990; O’Grady and Lane, 1996). The latter refers to how close markets are in terms of (business) culture, history, religion, political views, and language. Yamin and Sinkovics (2006) argue that online internationalization reduces psychic distance, but that firms that rely too much on the Internet are prone to fall into the “virtuality trap” as a negative outcome of not investing sufficiently in foreign market knowledge to become locally embedded. In order to reduce the liability of foreignness, it might be insufficient to rely on offline commitment.

This strand of reasoning is accentuated in Article 1, which argues that there is a risk that OSPs rely too much on the online presence and does not balance it up with offline presence. They risk ending up in a situation where they have no control or real contact of the international market. Zott et al. (2000), who studied value creation of online firms, concluded that geographical boundaries were reduced in online internationalization, and that digital representation, (absence of physical contact) was a typical characteristic of online markets. In a similar vein, Yamin and Sinkovics (2006) outlined isolation from host markets as one characteristic of online internationalization. Isolation from host markets could mean that managers become home-oriented, and there is not sufficient learning taking place in the foreign markets. Consequently, online internationalization appears to be an enabler for rapid virtual access to foreign markets, but potentially at the cost of too little local commitment, which could eventually backfire for the foreign firm. This insight is further developed in Article 1, which discusses the critical online–offline balance in the internationalization process. Relying too much on the online presence in an initial stage could lead to a lack of integrating important business networks, but too much offline presence could lead to high initial costs. Hence, the OSP has to find a sound balance between online and offline presence.

In terms of choice of international markets, the literature presents diverging theories about the geographical paths of OSPs. On the one hand, the born-globals-influenced stream suggests that technology-intensive service firms have greater geographical mobility than labour-intensive service firms because of the possibility of separating back office and delivery (Philippe and Léo 2011). Forsgren and Hagström (2007) found that incremental behaviour does not seem to be of major concern for our Internet-related firms, meaning that they could choose their market more ad hoc. Chen (2006) holds a more neutral stance and found that Internet companies generally entered countries where the Internet market was growing fastest, regardless of the actual distance.

In contrast to these studies, Kim (2003) suggested that American Internet firms follow a regional geographical pattern, which is more aligned with the Uppsala model. Article 1 presents findings in accordance with Kim (2003) with a dataset of 19 Swedish OSPs. The Swedish OSPs are born at home and internationalize regionally, more or less similarly to other Swedish export firms. In Article 5, the Moroccan OSPs also tend to follow a near market regional expansion. Yet, an exception is presented in Article 2, with Truecaller, which has followed a more ad hoc-oriented internationalization path.

Although the home market, Sweden, was the first and still is an important market, Truecaller’s current largest market is India. This shows that geographical patterns for OSPs are not homogenous, but depend on the onlineness in the business model and the online service. Truecaller, which has a very high degree of onlineness, has developed a much wider geographical spread of its online service in the online realm (without offline presence).

Truecaller’s case evokes a particular spatial pattern for OSPs with a high degree of onlineness. We call a situation where there is a geographically spread user base, which is matched with a low offline presence, “online spatial overreach”. We could regard this as a development of Yamin and Sinkovics’ (2006) virtual online trap, where the host is isolated and thus not engage sufficiently to reduce the liability of foreignness. Such a situation could be a consequence of a too rapid internationalization and where the OSP does not have time to build up offline presence. From a theoretical point of view it could be calculated as:

$$\text{Online spatial overreach quotient} = \frac{\text{Number of online users in international markets}}{\text{Number of international offices}}$$

where the dividend is the number of online users in international markets, the divisor is the number of offices in international markets, and the result is a quotient, which in some cases indicates an online spatial overreach. I argue that this situation occurs more often for firms with a high degree of onlineness. If we look at the example of the case firms Klarna, iZettle, and Truecaller and compare them with Spotify and Facebook, we get the following approximate results:

Table 5. Example of the online spatial quotient between some OSPs. Source: Author’s extensions from the respective firms’ websites in October 2016.

Company	Klarna	iZettle	Truecaller	Facebook	Spotify	Twitter
International online users	45,000,000	400,000	100,000,000	1,710,000,000	60,000,000	313,000,000
International offline offices	8	5	3	37	21	35
Quotient	5,625,000	80,000	33 333 333	45,945,946	2,857,143	8,942,857

The examples in Table 5 show that the firms with a higher degree of onlineness (particularly Truecaller and Facebook) also obtain a larger value of the online spatial overreach quotient. They are not so dependent on offline resources in their online service and their business model, and could thus be more restrictive in their offline presence. Although cost efficient in the short term, it is difficult to foresee the consequences for an OSP to be in online spatial overreach mode, but I argue that there is an overhanging risk that it is not sustainable due to the fact that the importance of offline resources will increase over time in the internationalization process.

Figure 5 shows how the case firms in Article 1 follow the Swedish export pattern, but also that the case firm in Article 2 takes a geographically more mobile path. The light grey circles on the map show the largest Swedish export markets as a percentage of total Swedish export, and altogether they account for more than 80% of Swedish exports. As illustrated on the map, the presence of Swedish OSPs in Article 1 in foreign markets is correlated with the size of Swedish exports on the markets; hence, we cannot detect any radical difference in the geographical path. In contrast, Truecaller’s presence in the dark grey circles is on relatively small export markets. The heterogeneity in the figure illustrates that there is no simple answer to the question of the geographical trajectories of OSPs.

My main conclusion is that their trajectories are bound to existing trade patterns and to geographical proximity. This was clearly shown in Articles 1 and 5. But there can be exceptions in geographical mobility, particularly for OSPs with a high degree of onlineness.

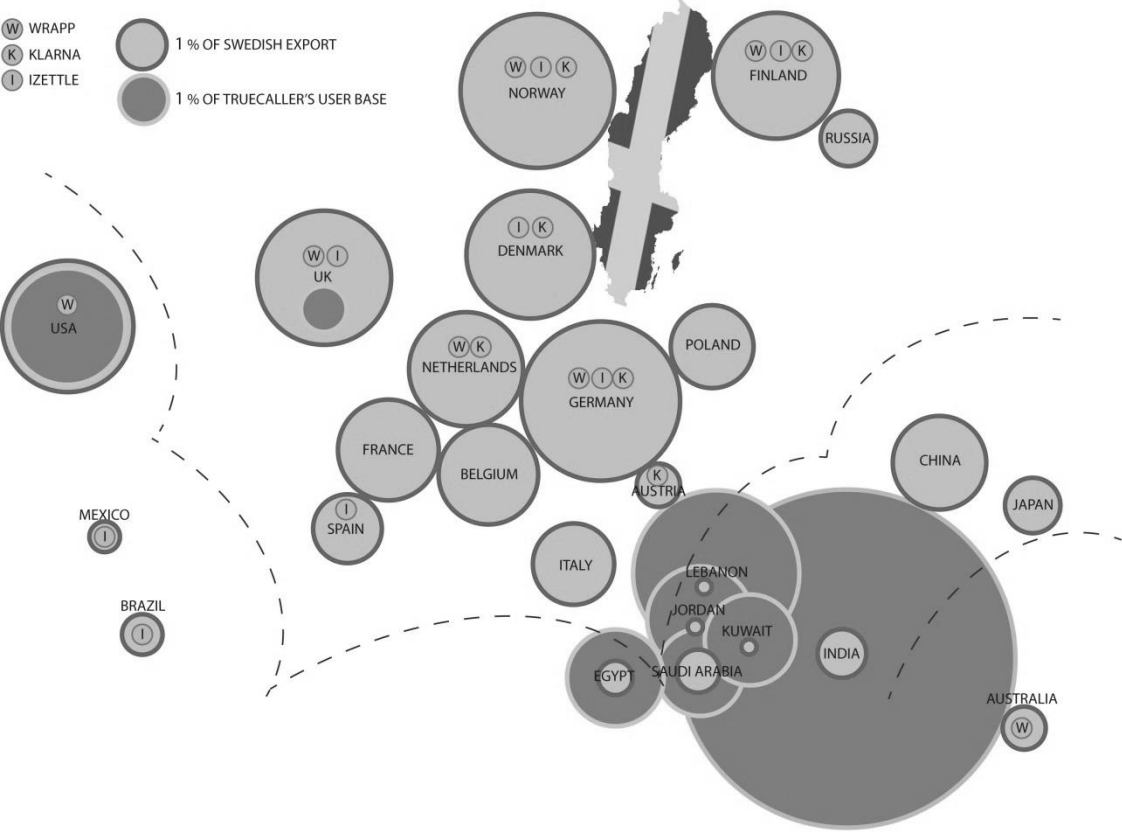


Figure 5. Geographical path of the Swedish OSPs in Article 1. Source: SCB (2015) and Articles 1 and 2.

3.4 Summary

In this chapter I have discussed the production and internationalization patterns of OSPs. Although OSP is a new species, its influence on the economy and society has already been remarkable. Research has, up till now, concluded that the world’s largest OSPs come from concentrated spatial areas in the Global North. This is aligned with the findings of economic geographers stressing the importance of cluster stickiness to certain urban spaces in producer services. The example of Stockholm as an area of dense flows of knowledge of Internet technology skills as a consequence of converging technological clusters has been put forward. As Article 1 and Article 2 show, the case firms (iZettle, Klarna, Wrapp, and Truecaller) in Stockholm belong to the same entrepreneurial network operating offline within a regionally limited area. This can appear as a paradox. At the same time as the Internet has a geographically decentralizing capacity, the entrepreneurial activity remains geographically bound to specific micro localizations in rich urban areas.

Further, an internationalization model for OSPs, which accentuates the three main elements in the internationalization process, namely speed, geography, and mode of entry, has been presented through an internationalization model. It has been suggested that the relative onlineness in terms of the OSP’s business model and the service itself is important to understanding the speed, the mode of entry, and also the geographical choice of an OSP. Although some OSPs enjoy a high degree of onlineness and

with a high online spatial quotient (online users per offline offices), most OSPs are highly dependent on offline resources, which also explains why most OSPs enjoy a regional internationalization path and why they keep their headquarters in distinct geographical areas over time. Again, the offlineness, or the geographically bound stickiness, does matter. Zander's (2004, p. 169) suggestion about clusters and their stickiness could help us understand the importance of this offlineness:

The limited geographical movements of (prospective) entrepreneurs and the associated bias against recognizing latent and emerging opportunities in geographically distant locations may be sufficient to explain why clusters tend to develop in locally distinct ways.

In terms of mode of entry, the OSPs studied use controlled modes due the complex nature of the OSP services, which is explained in Article 1. Regarding speed, it is an uncontroversial statement among Internet geographers that OSPs internationalize fast in comparison to traditional firms, although there is yet little empirical evidence supporting it. I do not make any quantitative claims regarding the actual speed of OSP, but I notice a difference in the speed depending on the OSPs' relative onlineness. OSPs with a high level of onlineness, e.g., B2C-oriented OSPs, can enjoy a longer online to offline interval than OSPs with high level of offlineness, e.g., B2B-oriented businesses. Therefore, a key contribution for OSPs is to carefully manage the online–offline balance in the internationalization process. Putting too much commitment in the online domain might backfire in the offline domain.

I have stressed the importance of agglomeration effects and the dependence of offline context for the OSPs, both at their home market, but also in steering their choice of international markets. These two factors underpin the heterogeneity in the online economy and are the roots for the diverse online gaps, which are discussed in the fourth chapter.

CHAPTER 4: THE ONLINE SERVICES GAPS

4.1 A model for online service gaps

As argued in both Article 3 and Article 4, there are persistent global disparities of online users and online production across the globe. Some of the key issues for researchers are to: 1) understand whether these gaps are closing or growing; 2) to assess what factors determine technological progress, and 3) to contribute with policy advice on measures on how to advance technology and, if possible, how to limit technological asymmetries between geographical regions. Peck and Sarkar (2015, p. 371) posit that:

At the high end of use in the developing world, with good underlying starting base of infrastructure, the transition to moderate or high ICT level is often swift and fairly easy, but for the ICT-poor nations at the lower end, the challenge is much greater and their divide may actually enlarge with time.

The above statement elucidates the fact that a too large online services gaps may be complicated to close in a foreseeable time frame. In this section I will present empirical evidence that production, usage and internationalization of online services are not equally distributed globally, and that there are new emerging types of digital divides. One of these gaps is what I call the *online usage gap*, which is central in Article 3. A second gap is *online entrepreneurship gap*, which is accentuated in Article 5. Although some countries in the Global South are closing in terms of absolute Internet penetration and online usage rates, some are still in what I regard an almost permanent gap in terms of online usage and online entrepreneurship until they reach the same economic levels as the countries in the Global North.

A third gap is the *online internationalization gap*, which I seek to develop as a general synthesis of Articles 3,4, and 5 in the thesis. As shown in Chapter 3, one of the findings is that the internationalization of OSPs primarily reinforces regional patterns and fortifies the core-periphery pattern. As an effect of this gap, already leading countries in the global economy, specifically countries in the Global North, will benefit most from the online service sector. It is among the countries in the Global North that the OSP trade has been most developed. In sum, the evolution of these different gaps between the Global North and the Global South is illustrated in a model (Figure 6).

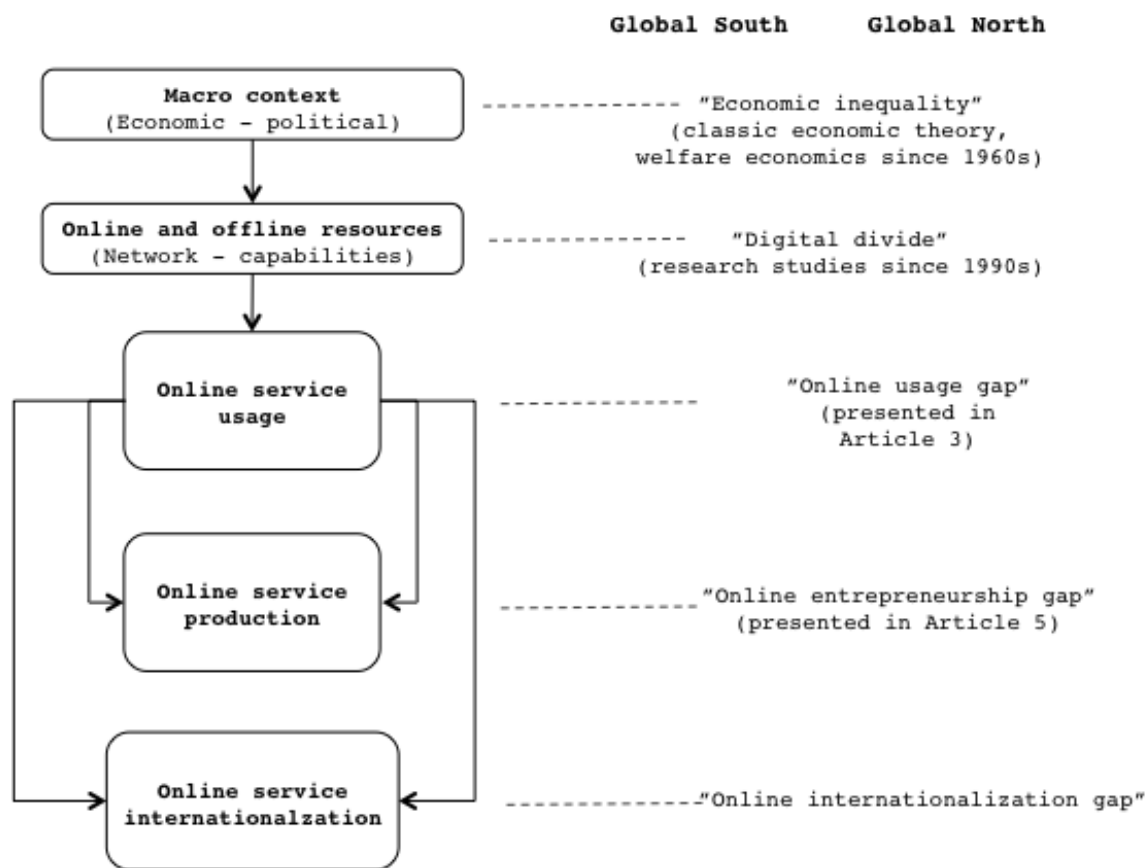


Figure 6. An illustration of the various online gaps presented in the thesis. Source: Author.

The three latter online gaps are mainly caused by economic and geographic inequalities and inequalities of access to offline resources, such as business networks and human capabilities between different places. By unfolding these three specific online business gaps, I want to extend the theory of the digital divide, which has been developed by van Dijk (2006), van Deursen and van Dijk (2015), and Castells (1996, 1997, 2002). I also critically analyse the unfounded belief that the Global South is on its way to catching up in online business (e.g., Manyika, 2013).

In this chapter I suggest that in the current world order with prevailing economic imbalances the online service sector does not contribute to a more equal economic playing field; on the contrary, it seems to fuel its unevenness. The international online services sector is just a reflection of underlying economic power structures. The online resources of a country are reflections of its offline resources. The identified online gaps call for immediate policies empowering countries in the Global South to move away from passiveness of only being users in the online sector, and instead become producers and eventually international actors in the online economy.

4.2 The core – periphery

The three online gaps presented in Figure 6 could be seen as evolutionary rudiments of economic–geographic inequalities. The discourse of inequality, and particularly economic inequality, is central for explaining these online gaps. The public debate of economic inequality is probably as old as modern civilizations. It was discussed by the Athenian intellectuals and it was the subject for Jean-Jacques Rousseau’s *A Dissertation on the Origin and Foundation of the Inequality of Mankind*,

dedicated to the Republic of Geneva on the 12th of June, 1754 (Sen, 1973). Differences between the economic performance and geographical location have kept economists busy since the days of Adam Smith's "Wealth of Nations" in 1776, including contributions of contemporary economists like Michael Porter's "The Competitive Advantage of Nations" in 1990, Paul Krugman's "Geography and Trade" in 1991, and Thomas Piketty's "Capital in the Twenty-First Century" in 2014. The geographical paradigm of "core and periphery" as an expression of uneven economic development between geographic space, is a cornerstone in economic geography (Aoyama et al., 2011). Krugman (1991) developed the core-periphery model, which shows how economic integration can lead to geographical concentration of production and a self-reinforcing agglomeration process (Forslid and Ottaviano, 2003; Martin and Sunley, 2011). Contemporary economic geographers have stressed the importance of distance and geographical proximity to obtain accessibility to natural resources, labour, markets, knowledge, transport networks, and also ICT (Dicken, 2015). For instance, Alvstam, Ström, and Wentrup (2016, p. 43) claim that:

There is a huge literature where geographers have taken up the issue of the connection between location and physical endowments – climate, topography, soil, geological structure and so on – on the one hand and economic success on the other, for example the Yale scholar Ellsworth Huntington, who classified civilizations in a hierarchical order, and found that the most economically successful societies were located in the temperate zone (Huntington, 1943).

Yet, the picture could be nuanced insofar that:

Contemporary economic-geography research will generally contest the physical factors as the sole, or even the main, explanans of the geographical distribution of emerging markets in the global economy. Instead, we would generally admit that political, structural and general institutional conditions are the decisive factors behind economic take-off and inclusion into the exclusive club of emerging economies. (Alvstam, Ström, and Wentrup, p. 44)

Moreover, economic geographers, particularly when discussing regional development for knowledge-intensive sectors, point to the importance of being integrated in networks in order to profit from the "buzz", which increases the chances to yield business opportunities (Storper and Venables, 2004). "Being there" (Gertler, 2003) and being integrated into a network of entrepreneurial elites seems to be particularly relevant in the online service sector due to its rapid growth and network effects and its geographic concentration to few production centres in the Global North.

The core-periphery paradigm has gradually fused with theory of international business, for instance in research about multinational enterprises (MNEs) and their locations, internalization, and internationalization patterns. The MNEs have been targets for studies of continuous global shifts in trade and production patterns between countries in the Global North and the Global South. As an effect of an increasing degree of internationalization of MNEs and the emergence of new economic powers, particularly in Asia, the definition and boundaries of what is actually the "core" and what is the "periphery" have been perceived as increasingly blurry and complex due to the emergence of so-called global value chains, on- and offshoring processes, and "linkage economies". Despite these geostrategic transformations, the importance of location has not diminished. On the contrary, the importance of location may be even relevant in creative and knowledge-intensive service industries (Mudambi, 2008). Merino and Rubalcaba (2012) asked whether ICT could lead to an increased decentralization of the location of knowledge-intensive services in Europe. Expectedly, their results confirmed the theory that these service industries remain highly concentrated and linked to regions with a high international profile.

The accentuation of agglomeration and the core in knowledge-intensive service industries, like the online service sector, is also aligned with Articles 1 and 2. These articles accentuate that the core in the online service sector is ascribed to internationally well-connected cities (vis-à-vis rural areas) and to privileged social classes, e.g., entrepreneurial networks or ‘argonauts’, (vis-à-vis poor ones), rather than to countries. On a global level, and in regards to online entrepreneurship, the core in the online business should thus be seen as a few, and extremely concentrated, islets in an online and global archipelago. Most of them are locations in central business districts in internationally well-connected cities in the Global North, but a few could also be found in Asia. The online spatial overreach discourse in Article 2 seeks to demonstrate to which point the core is concentrated in a few cities, and even micro locations in the online service sector.

I argue that the digital divide should be seen as continuity of the core-periphery model and to the discourse of economic inequality. Interestingly, and due to its onlineness in the nature of its functionality, the online service sector has spurred impressions that it could eradicate the notion of time and space. By connecting people and places over the Internet, one might believe that the relevance of the offline space could be diminished and replaced by a new cyberspace with its own powers structures, and maybe more equally distributed. This was the hypothesis of Cairncross (1998; 2001), and is still a living myth in media and quasi-scientific press (Manyika, 2013). The Internet even came with hopes of an improved democratization process in nations. The rebellious movements against oppressive regimes through Internet platforms during the Arab Spring become an argument of how the Internet could be a vehicle or a new space enabling change of political power and emancipation from repressing institutions (Faris, 2013). Yet again, as already mentioned, such hypotheses discard the relevance of the “offline” in the online sector, and the invisible stickiness of the core to certain areas within global cities. Or, as Graham (2013a, p. 180) puts it, *‘The Internet is not an abstract space or digital global village, but rather a network that enables selective connections between people and information’*.

The offline stickiness is also demonstrated in a study by Tranos and Nijkamp (2013), who identified a core-periphery pattern at a global level and that regions that are integrated in the global economy enjoy higher levels of connectivity. Their study of geo-coded IP links and spatial interaction models demonstrated the significance of global urban interdependencies, claiming that it *‘highlights the hidden spatiality of the so-called “placeless” Internet. Its complexity decreases the explanatory value of (over-) simplistic approaches such as the cartoonish “shrinking world” metaphor’* (p. 870).

4.3 The digital divide

4.3.1 Brief historical survey

Inequality of information technology was emphasized in Hans Singer’s seminal paper from 1970 on information technology dualism, in which he suggested that the international imbalance in science and technology helps to explain why the growth in the underdeveloped countries has not been as fast as one could theoretically expect. Since 1970, the imbalances of technology adaptation and innovation have evolved and it has developed into its proper sub-discipline under the label of the ‘digital divide’ (Wang et al., 2011). There is a myriad of definitions and interpretations of the digital divide. For example, it has been defined as *‘the unequal material and knowledge distribution of ICT on a global scale, between regions’* (Warf, 2013), or as:

Differences in information and knowledge between nations, regions, businesses, groups, and individuals are often referred to as the digital divide. The digitally advanced segment of the

population is separated from the digitally backward segment by a gap or divide. (Peck and Sakar, 2015, p. 2)

There are different suggestions of the causality of the digital divide. In general, there is consensus among economic geographers that the digital divide is determined by economic strength both on a macro level (between countries or regions) and on an individual level, e.g., income level. This correlation is also manifested in Article 3. From the economic argument, we can deduce that the key reason why countries are digitally excluded is the lack of investments in ICT infrastructure.

But there also other socio-economic factors that need to be considered and that are often suggested as determinants: gender, education level, geographical location, and social status (Hilbert, 2010; Castells, 2002; Zook, 2001, 2002; Montagnier and Wirthmann, 2011; Warf, 2013). The location argument has also been pushed as an explanation for the digital divide, in general such studies suggest that urban areas, which often correlate with higher economic strength are better connected (Malecki, 2003; Zook, 2002; Warf, 2013). When delving into the importance of economic strength and Internet access, we also find studies showing that an uneven income distribution is a determinant for the digital divide and an obstacle to economic growth. Using a data panel of 60 countries, Noh and Yoo (2008, p. 1005) found that *'The implied effect of Internet adoption on growth is negative for countries with high income inequality because the digital divide hinders economic growth incurred by the Internet'*.

Hence, there are multiple digital divides, all of which are more or less related to economic strength. On a global level (between countries in the Global North and the Global South), within countries (between urban (generally rich) and rural (generally more poor) areas, and between social groups within areas (generally between rich and poor), the digital divide is not a simple binary view of "haves" and "have-nots" of Internet access. Instead, it deserves closer analysis. A few key more elaborated conceptualizations of the digital divide exist, notably van Dijk's (2006) ladder of different types of digital divides. According to his view, the digital divide can be categorized in a) motivational access (being aware and wanting to use the Internet; this could also mean technology) refusal attitude; b) material access (having the material resources to use the Internet); 3) Internet skills access (being educated and habile in using the Internet). The last type of divide according to van Dijk is Internet usage access, which could be defined in terms of frequency (hours of Internet usage) and type of Internet usage (applications, websites accessed). This has typically been studied in terms of how different social groups use the Internet within a specific geographical context. For example, van Deursen and van Dijk (2014) found that people with low levels of education and disabled people are using the Internet for more hours a day in their spare time than higher educated and employed populations. In Article 5, I argue that there is an additional digital divide gap, which I call online entrepreneurship, which measures how different people produce online applications. The different types of access divides are illustrated in Article 5, which I further develop in that article to also include the online entrepreneurship gap. Table 6 sums up the different types and divisions of the digital divides, including the three that are presented in this thesis.

Table 6. A matrix of digital divides, an elaboration of van Dijk’s (2006) access ladder presented in Article 5. Source: Author.

Type of online gap	Individual level	Country level	Regional level	Firm level
Online internationalization				x
Online entrepreneurship				x
Online usage		x	x	
Online skills	X			
Online material	X			
Online motivation	X			

4.3.2. Theoretical interpretations of the digital divide

van Dijk and Hacker (2003) discussed four broad interpretations of the digital divide, which I would like to further elaborate. The first is the *denial* of the existence of a digital divide, which is often the case in business press and for some conservative think tanks. They claim that the growth rates and adoption rates are so high, much higher than any medium before, that it is just a question of time before everyone is online. This interpretation assumes that online usage and online participation will be equal once all are connected. This view is slightly related to a second interpretation, which we can call *acceptance*, which can be interpreted as a functionalist view. Functionalist theorists disregard that everyone can access Internet, but focus instead on whether the world benefits in general. Hence, it is less important for functionalists that there are people (mostly poor) not using those Internet services. The “have-nots” are simply a by-product in the current world order in the online economy. Counted and Arawole (2016, p. 19) reasoned that an unequal ‘*internet structure represents the functionalist view of internet inequality, which fundamentally is created to benefit a particular social group in a social system and shows how American OSPs like PayPal, Wordpress, Google check, HostGator, are agents of internet inequality, carrying out this functionalist agenda within the Internet ecosystem*’. van Dijk (1999; p. 153–154) has argued that in the present epoch several societal trends could potentially fuel the digital divide further, such as social and cultural differentiation or individualization, rising income differentials, privatization and cutbacks in social and public services, and, finally, increasingly multifunctional and differently used digital technology. For a functionalist, these could all be acceptable trends as long as the benefit is good for the world.

A third theoretical interpretation, and which is the one I underscore in this thesis, is that the digital divide should be regarded as a contingency of economic inequality. With this view we can assume that new sorts of digital divides will emerge and grow on top of old inequalities of income. We should not regard the digital divide as being isolated. Instead, it should be viewed with an holistic perspective, taking other economic inequalities into account.

A fourth interpretation could be seen as an alternative to the third. van Dijk and Hacker (2003, p. 321) call it *differentiation*. This means that some gaps are decreasing while others grow. We could develop this interpretation further to include the geographic perspective and argue that some places will decrease their gaps whilst other will not. Even places that are geographically close will see very different digital inclusion rates. This was something that we noted in Article 3 when studying Sub-Saharan Internet penetration rates. Two seemingly similar countries in terms of macroeconomic pre-conditions showed very different rates of Internet and Facebook penetration. The explanations could, in these cases, be found in policymaking and in contextual pre-conditions. For example, Kenya and

Rwanda have put a lot of focus in adapting the Internet and developing digital policies, e.g., *Universal Service Funds*, while neighbouring countries have done less so. For example, Wentrup, Xu, Nakamura, and Ström (2016) found that countries that had active *Universal Service Funds* had more likelihood to have high Internet penetration.

In the following section I will present three online gaps that I see as a contingency of economic inequality and a consequence of the nature of the online service sector.

4.4. The online usage gap

The online usage gap is particularly highlighted in Article 3 and Article 4. Wentrup, Ström, and Nakamura (2016, p. 57) stated that:

There are approximately 3 billion Internet users worldwide (ITU, 2014) out of a world population of approximately 7.5 billion, hence an Internet penetration of 40 per cent globally. Between 75–80 per cent of households have access in the developed countries, around 30 per cent in developing countries, and 5 per cent in less-developed countries. There is still a substantial gap between developed and developing countries and more than 90 per cent of the people who are not yet using the Internet are from the developing world (ibid.). In Africa, around 19 per cent of the population was online in 2014, up from 10 per cent in 2010, and from 1.68 per cent in 2003. It is noteworthy that a much larger proportion of the population is online in the Global North than in the Global South, albeit there are nominally more people online in the Global South. China is the country with the largest number of Internet users (641 million), followed by the US (270 million) (ibid.).

As expected, Africa has the lowest Internet penetration rate in the world although it has high growth rates in some countries. The Sub-Saharan continent has become emblematic for online unevenness, even when comparing countries within the African continent. On a country level there is a large gap between the most connected and the least connected country - Morocco has the highest Internet penetration (56%) whereas Burundi has the lowest (1.3%) (ITU, 2016).

If we look at the online usage patterns of some of the most used online services, we find that the heterogeneity comes across significantly. The usage pattern shows a strong tie to proximity and there are flagrant imbalances in terms of usage between regions. Research shows that pre-existing offline ties determine and reinforce online connections. Moreover, the digital representation from the Global North is denser in comparison with the Global South, as shown when analysing at the world's largest online services as proxies for online usage.

4.4.1 Example of online usage gap: Twitter

Twitter has approximately 313 million active monthly users (Twitter, 2016). When geo-locating Twitter as a proxy for measuring global mobility, Hawelka et al. (2014) found that there were distinct cohesive regions reflecting the regional division of the world. Graham et al. (2013) made similar conclusions when outlining a Twitter map and showed flagrant inequalities in online representation through tweets. Leetaru et al. (2014) estimated that approximately half of the tweeted news-related messages were about events close to people, and thus half were from regions within a greater distance. In addition, they claim that emerging markets such as the Middle East and Eastern Europe account for some of Twitter's largest new growth areas, while Indonesia, Western Europe, Africa, and Central America have high proportions of the world's most influential Twitter users. Building on the

proximity argument, Takhteyev et al. (2012) discovered that that a substantial share of Twitter connections lie within the same regions. They argue that distance, national borders, and language differences all predict Twitter connections. Further, they suggest that the frequency of airline flights between the two places is the best predictor of Twitter connections.

The cited research implies that Twitter connections are developed on top of pre-existing socio-cultural and geographical patterns. It is aligned with the argumentation in Article 4, accentuating the online geography as an additional spiky layer built on pre-existing unevenness. The most plausible conclusion must be that Twitter does not necessarily create new geographical paths of different people, but instead connects similar people mostly within, but sometimes from different, geographic regions. The relative representation of tweets is still dominated by the Global North; yet, there are a few countries in the Global South rising in terms of tweets and digital representation. As an attempt to emphasize local user engagements as opposed to supply drive data, and by using dataset of the 1,000 most visited websites at three points in time (2009, 2011, 2013), Wu et al. (2016) showed that the thickness of online regional cultures increased, which *'demonstrates a rise of the Global South along a decentralization or de-Americanization of the World Wide Web'* (p. 321).

This is an additional argument that dense online clusters are created, but not cross-fertilized across regional regions. It seems that distance, culture, and language are still hindering new geographical tweet paths and that pre-existing ties are reinforced.

A similar pattern can be found when looking at online use of Wikipedia, which has been studied by Graham (2013b). He found a divided pattern between the Global North and the Global South when calculating edits. The US and the large European countries (France, UK, and Germany) are dominating the number of edits, and Africa is far behind, although the North African countries have seen notable progress. For example, the people in Hong Kong produce more Wikipedia edits than all Africans combined.

4.4.2 Example of online usage gap: Facebook

With more than 1.7 billion users, Facebook is currently (November, 2016) the world's largest web community. As argued in Article 4, Facebook users are not evenly spread around the world, and are particularly underrepresented in Africa. It is particularly shown in Article 3 that there is a strong positive correlation between wealth (GDP per capita) and Internet and Facebook penetration in Africa, but only a weak positive correlation between Facebook penetration and Internet penetration.

Facebook's online usage is heterogeneous between regions and there is a strong correlation between economic strength and Facebook penetration. It is intriguing to observe that many Sub-Saharan countries, despite being so close geographically, differ so substantially in terms of their online participation. Affordability and literacy are two of the key reasons behind the heterogeneity (Oyelaran-Oyeyinka and Lal, 2005), but as argued throughout this section, economic strength is the most important determinant.

Taken together, the online usage pattern is heterogeneous and regionally divided with a strong correlation between economic strength and Internet penetration. Unfortunately, there are few indications that the pattern is about to change. The implication is that the Internet itself is not a necessarily an equalizing force towards a more economically even geography. On the contrary, extant research and the data presented in this thesis indicate that the online usage gaps actually increase.

4.5.1 The online entrepreneurship gap

It is difficult to assess what comes first between online usage and online entrepreneurship. In order to spur online usage there has to be some kind of online entrepreneurship in the first place. On the other hand, once there is a critical mass of online users, it is likely that this activity will further flourish online entrepreneurship. Drawing from van Dijk's (2006) Internet access ladder, it seems logical to assume that an online user must first become an online user before he or she becomes an online producer/entrepreneur. My suggestion is therefore that online usage is a catalyst for online entrepreneurship. We do not know much about the global inequality of online entrepreneurship, except that the largest OSPs are from the US and China, but we can assume that it follows the same geographical pattern as for online usage. In the discipline of economic geography, the focus in the literature has, until now, been on the online supply side with studies about the diffusion of fiber cables and infrastructure. In Article 5, we suggest that online entrepreneurship should be embedded into the digital divide discourse, and that the consequences of the online entrepreneurship gap must be understood and addressed. We define the online entrepreneurship gap as the difference in entrepreneurial activity within the sector of online services between different geographical spaces.

Although we could theoretically understand the online entrepreneurship gap, an empirical challenge is to measure it quantitatively. One proposed measurement is the geographical origin of the world's largest OSPs. As shown in Figure 7, they are mainly from the Global North. From Figure 7 we conclude that countries with the most OSPs have higher Internet penetration rates. It gives an idea of the large imbalance in terms of OSPs between the Global North and the Global South. The data for Figure 7 comes from the world's largest database of online startups - CrunchBase. Given the US origin of CrunchBase, the data must be analysed with this geographical bias in mind. Individual OSPs must proactively register in the CrunchBase database. Many OSPs with international ambitions register for marketing and financing reasons, but there is no automatic data generation, which implies that only a fraction of the total number of OSPs are registered. This means that we cannot control how many of the total number of OSPs are in the CrunchBase database. Yet, given its authority, spread, and number of data records in the online service sector it must be considered as a key data source to assess online entrepreneurship.

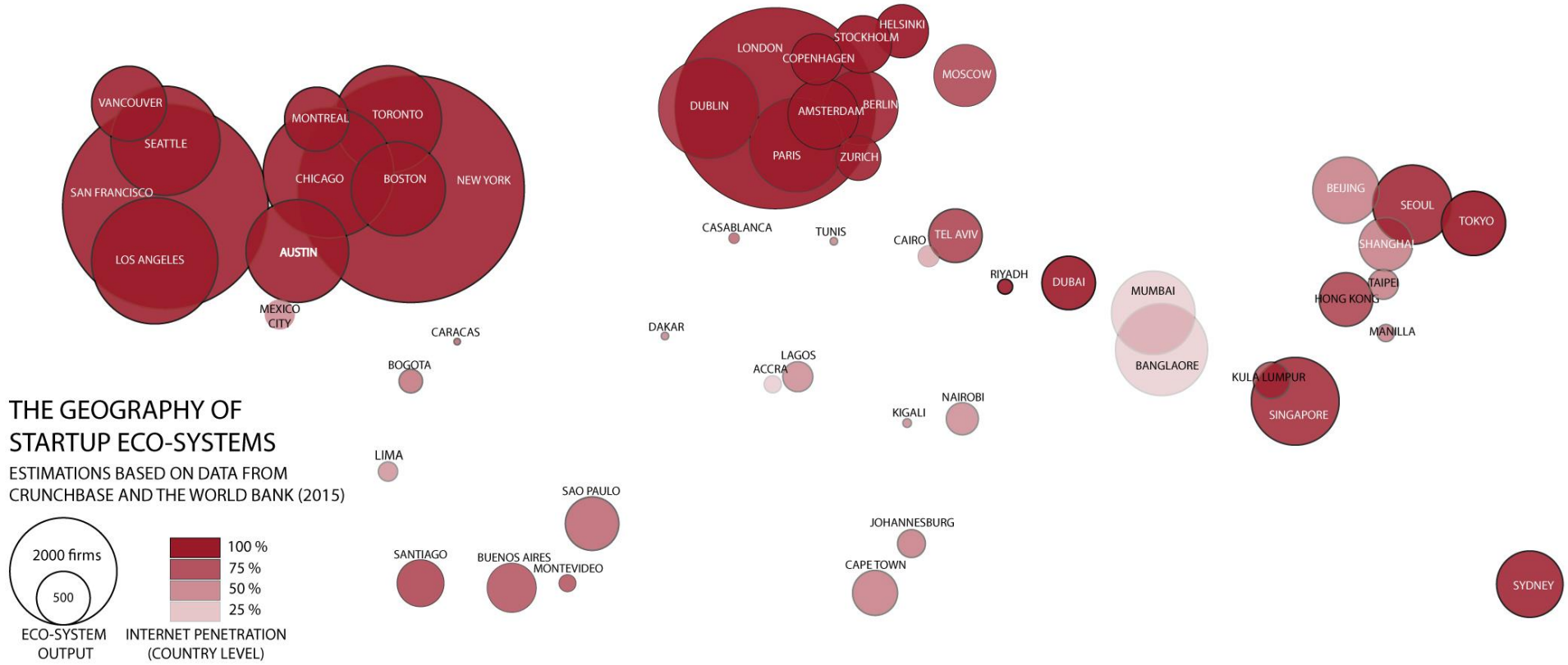


Figure 7. The geography of start-up eco-systems. Data source: CrunchBase and World bank. The figure is also printed in Wentrup and Ström (2016, no page yet assigned) and is also appearing in Article 5.

Obviously, a more accurate proxy for measuring online entrepreneurship would be to measure number of OSPs per capita on a country level and compile this data. Unfortunately, there are no coherent statistics enabling such an analysis.

An alternative measurement for the online entrepreneurship gap is to look at the number of registered top-level domains (TLD) per capita in relation to Internet penetration. One could expect that most OSPs would register a country TLD-name when launching their online service. The problem with this measurement is that it also captures all other firms and organizations launching their web address. Hence, we can assume that the larger proportion in the data contains non-OSP. Another drawback is that many OSPs do not register country-specific TLD-names, but instead opt for the generic “.com” address. Despite these drawbacks, the measurement gives an idea about the online production activity in a country, and therefore about online entrepreneurship. The measurement could be particularly useful when comparing two countries with different contexts. Since Sweden and Morocco are the countries given the most attention in the thesis, Figure 8 focuses on these two countries. It displays a selection of countries with the Internet penetration on the x-axis and the TLD production per 100 online users on the y-axis. The online production does not seem to rise significantly with low levels of Internet penetration. Yet, it is problematic that some countries, despite low levels of Internet penetration, have not reached higher levels of online production. This indicates a lock-in in online consumption mode, and hence an online entrepreneurship gap vis-à-vis Global North countries. For instance, there is a significant gap of TLD-registrations between Sweden and Morocco, which is illustrated by the dashed line between points A and B. Even though this measurement has a few weak points it gives an interesting indication of the online production when comparing two countries.

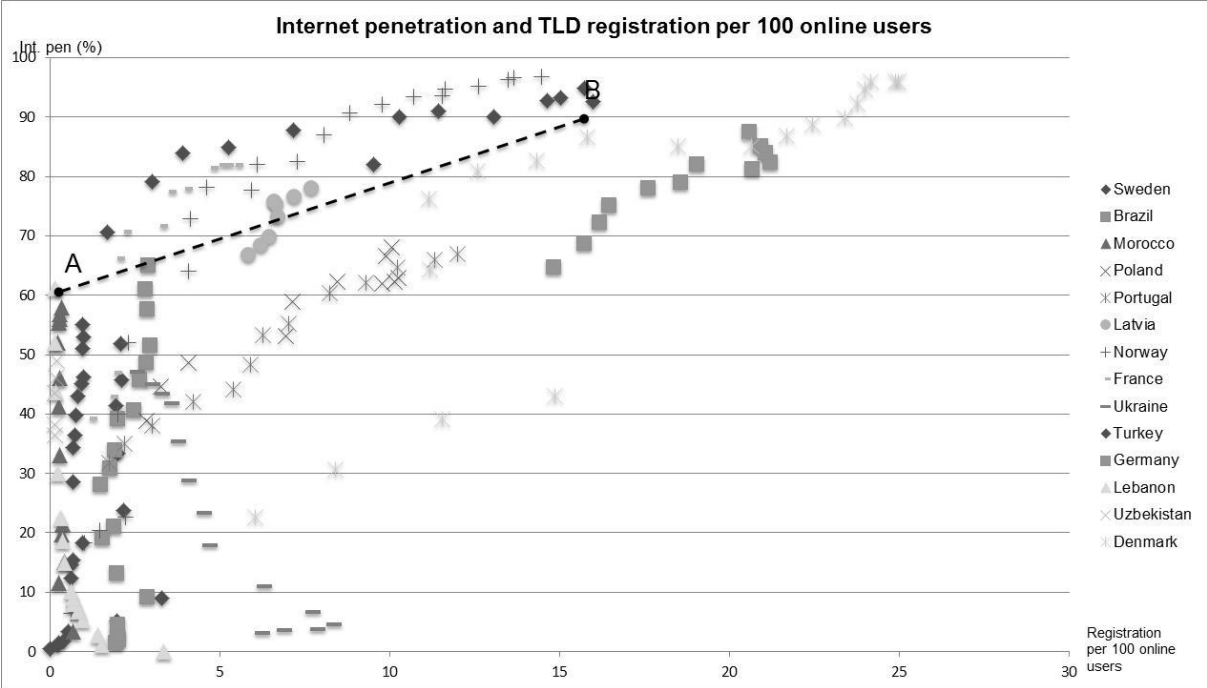


Figure 8. Top-level domain production and Internet penetration in a few selected countries. A is Morocco’s current position and B is Sweden’s current position. Denmark is the leading country in terms of TLD-registrations (more than 25 per 100 online users). *Source:* Data from national registry organization websites, which have been collected by the author.

4.5.1 Examples of OSPs from the Global South

Although emerging markets as a group are still lagging behind in terms of online entrepreneurship, there are examples of how some countries in the Global South have advanced rapidly in the online service sector. China is one of them. The Chinese Internet community is the largest single online users community in the world. On the one hand, China's rise as an OSP-producer demonstrates how emerging markets could swiftly rise and take market position in online service geography (Zhang, 2008). On the other hand, as Yeo (2016) notes, the perceived view that *Chinese* OSPs are on the rise must be taken with caution. When analysing the progress of Chinese OSPs it is important to look at the financial flows taking place underneath. For example, the Chinese search engine firm Baidu, which holds almost 80% of China's search engine market by revenue, is primarily financed by Silicon Valley capital. This means that the perceived view of inter-state comparison between the US and China is too simplistic and hides entrepreneurial and financial flows between from the Global North. Yeo (2016) suggests that a nation-perspective is not appropriate in relation to the rise of the Chinese OSP. Instead, it should be viewed in the context an increasing financial integration of transnational capital, primarily US capital in the Chinese online sector.

Additional examples of Global South OSPs are highlighted in Article 4. For example, the Kenyan OSP m-pesa, which enables money transfer online, is one of the most-cited OSPs from the African continent (The Guardian, 2014). Yet, m-pesa is owned and financed by Vodaphone, which shows the flagrant implication of Global North capital in Global South OSPs.

Most of the Global South OSPs are small and only focus on their domestic markets. They are often local versions of US originals. It is argued in Article 5 that the OSPs from the Global South hold the characteristics of Kirznerian entrepreneurship, that is, they are seeking business opportunities in an unsaturated market place, not necessarily by innovating, but instead by copying an existing solution from a more mature market and adapting it to the local market. This pattern is exemplified in Article 5 with Moroccan versions of the US originals Zipcar.com, Craigslist.com, and Groupon.com. Although this entrepreneurial pattern could work for a while, the overhanging risk is that there will be an embedded internationalization obstacle built in the business model. OSPs, which will create their competitive advantage on a more or less copied version of an existing original, will be vulnerable when the original OSP, often from the Global North, and most likely generously capital-injected, enters the Global South market. Article 5 shows that this was the exact scenario for Soukaffaires.ma, which was outcompeted by a Global North OSP with a similar business model but with stronger financial muscles than the Moroccan OSP.

One could therefore argue that the online entrepreneurship gap is also associated with a less developed innovation capacity, which in turn can be explained by agglomeration and regional development theory. The savvy and innovation-driven elite is still concentrated to Global North cities. A possible path to bridge this gap is for countries in the Global South to attract and make this elite diaspora return to their home countries and become returnee entrepreneurs (Naudé et al., 2008; Bai et al., 2016). People who have thrived and gathered knowledge in online entrepreneurship clusters in the Global North, the so-called argonauts, are important assets for the Global North countries (Saxenian and Sabel, 2008). These entrepreneurs could return back their home countries and contribute with knowledge and networks. They could be pivotal in forming the markets, building up policy frameworks around them that strengthen local OSPs in the competition vis-à-vis Global North OSP giants. An example of this path is shown in Article 5 in how the Moroccan OSP Hmizate.ma has gradually outcompeted Groupon on the Moroccan market. A key element in this process to sustain competitive advantage is to consider the internationalization perspective early on in the OSP's life

cycle, and thereby limit the risk of being caught in an online internationalization gap, which I regard as the next online gap in the hierarchy.

4.6 The online internationalization gap

Finally I want to put forward what I call the online internationalization gap, which I briefly mention in Article 5. The online sector has been highly associated with internationalization as OSP giants like Facebook and Twitter spread internationally just a few years after inception. Given the international nature of the online services economy, I regard this gap particularly interesting to assess for future development. Research has shown that first-mover advantages and network effects are particularly important in the online sector (Rochet and Tirole, 2003; Caillaud and Julien, 2001; Li et al. 2010). The international race in the OSP was evoked in the first part of the thesis. The dark side of this pattern is that there are few winners but many losers in the OSP industry. OSPs in the Global South risk being vulnerable to fierce international competition, as shown in Article 5. Just as there are differences in terms of online usage and online entrepreneurship between places, there are also differences in the internationalization capacity of OSPs. For policy reasons, these are important to highlight and address.

I define the online internationalization gap as the difference in export, or the difference in amount of international users of the OSPs from different countries. A suggested way to measure this gap globally is to look at the compiled amount of international sales or the stock of international online users for all OSPs within one country. As already stated, the lack of coherent statistics makes accurate assessment cumbersome to effectuate today. The best measure available is to study the world's leading OSPs and track their origin and their claimed number of users, which I have done through qualitative methods to assess the internationalization patterns of OSPs between in Sweden and Morocco.

One difference noted by the author when studying the OSPs from different geographical contexts is that the OSPs from the Global North seem more prone to expand internationally. This tendency is explained in Wentrup, Ström, and Nakamura (2016a, p. 65):

Whereas the Global North firms have followed a regional geographical pattern (Kim, 2003) and expanded internationally early after inception, the Chinese firms have internationalised via the Chinese diaspora, and more restrictively relative to the geography (Anwar, 2013). Unfortunately, the Indian OSPs do not seem to come far with their internationalisation. Although Bangalore in India has become a centre of code programming, and has succeeded in producing traditional software – and consultancy firms (for example, Little Eye Labs, which was sold to Facebook, and Infosys) – the city has not yet produced international online service ventures reaching an international audience.

The widespread belief that the online service industry is so international must therefore be put into a geographical- and country-specific trade context. As evoked in the first part of the thesis, the offlineness plays an important role in the online service sector. Whereas there are plenty of OSPs in most markets, few of them succeed internationally. Most remain local ventures and few have the international success as Facebook or Twitter. The importance of local adaptation, and hence offlineness, is evoked in the book chapter of the nature of OSPs (Wentrup and Ström, 2016; no page number assigned). Countries outside the dominating OSP market, the US, are:

not lagging behind in being reactive in producing OSPs although they often have a less disruptive character and are more of a Kirznerian innovation type (Sundqvist et al. 2012), i.e.,

a local version of a Silicon Valley original. For example, there are local versions of Facebook in many countries, e.g., VKontakte in Russia. France has a local version of Youtube called Daily Motion, its own LinkedIn (Viadeo), its own Spotify (Deezer) and soon its own Netflix (Le Monde 2015). China has via its protectionist trade policy enabled the growth of local alternatives to the US originals (Anwar 2013). In Africa, OSPs working with specific local needs have emerged, e.g., m-pesa (Mbogo 2010). Although these local OSPs may not have the potential to scale on an international level, because they often address specific local needs not applicable on foreign markets, their existence demonstrates the emerging local competition in the OSPs market. Large international OSPs are forced to face local competition, and need to offer differentiated and localized online services, and adapt to local market prerequisites in order to overcome the liability of outsidership (Johanson and Vahlne 2009). In this respect, born globals theory (Rennie 1993, Knight and Cavusgil 1996, Madsen and Servais 1997, Gabrielsson et al. 2008, Gabrielsson and Pelkonen 2008) could explain how OSPs reach a global audience swiftly, but with time the online service market is to an increasing extent influenced by local prerequisites, and requires local physical presence. An important feature in the OSPs market is geo-compatible services, which require sales staff on the ground to capture the local “buzz” and adapt the market offer accordingly. Hence, we can expect that the internationalization behaviour of OSPs will with time adhere to the global norm of conventional multinational enterprises, i.e. a gradual and increasing presence locally aligned, which is supported by the Uppsala school internationalization theory. (Johanson and Vahlne 1977, 2009)

In Chapter 3, it is explained how the onlineness enables OSPs to expand across geographical borders more easily than manufacturing firms. At the same time, there are more intangible market obstacles associated with offlineness, such as access to networks and compliance with local regulatory frameworks that need to be considered. The main conclusion when looking at the internationalization behaviour of the analysed OSP is that they expand regionally and more or less follow existing trade paths. However, for the leading OSPs in the Global North this means that existing trade paths are reinforced. Due to the relative onlineness in the OSP sector, new markets farther away, both geographically and socio-culturally, will probably be reached faster than in traditional sectors. For the OSPs in the Global South the situation is different. There is, as evoked in Article 5, often a lack of innovation in the business offers of the Global South OSPs. They are local versions of existing Global North originals, which means that the demand for them on Global North markets is limited. Hence, they could turn to neighboring markets, which they often do, as shown in Article 5. This will reinforce underdeveloped regional trade patterns, for example in Africa, which is good news. But there is an impending risk that the Global South OSPs will quickly become outcompeted on international markets, and hence that the online internationalization gap will persist, or even grow.

Some of the reasons behind how an online internationalization gap may grow are presented in Article 4 and summarizes the above discussion. The first argument to explain this lack of internationalization for Global South OSPs is due to path dependency, and a legacy in trade patterns also come across in the online service economy. The Global South has up till today developed little export experience of knowledge-intensive services. A second argument is the absence of efficient eco-systems with access to entrepreneurs, capital, and international networks, including connections with global cities. Here, the brain drain of Internet talent to the Global North and insufficient number of returnee entrepreneurs are contributing factors. The third argument is what I call a “domestic lock-in”. This is particularly relevant for countries in the Global South with large domestic populations, for example in China and India. Having a too large domestic population could actually hinder an early international expansion. Many Global South OSPs thus focus too much on their home markets and end up in a domestic lock-

in, which lowers their potential for international expansion. As also highlighted with the case of m-pesa above, the application areas of the online services produced in the Global South are sometimes less relevant and not applicable for the Global North. For example, micro-financing payment systems developed for Africa's needs are probably not scalable in the Global North.

4.7 Summary

In this chapter I have presented how the internationalization of online services has spread across the geography at a rapid pace, and how it has created new online gaps between primarily the Global North and the Global South. My theoretical contribution is the introduction of these emerging online gaps - online usage gap, online entrepreneurship gap, and online internationalization gap. The online usage gap, which could be exemplified as differences between geographies in terms of Internet penetration, as well as use of online services, has not been closing in as expected between regions in the last decade. On the contrary, it has even increased between certain regions, notably between low-income countries in Africa and the rest of the world.

The online entrepreneurship gap, which I define as the difference in entrepreneurial activity within the sector of online services, is complicated to measure. But by looking at the world's eco-system of OSPs in combination with TLD-production, it becomes clear that this geography is spiky and strongly concentrated to Global South cities, and to what could be described as entrepreneur elite networks within those cities.

The last online gap introduced was the online internationalization gap, i.e., difference in internationalization, or online service export, or the difference in amount of international users of the OSPs from different countries. Here, I pointed to the trade path dependence into which still many Global South countries are locked, weak innovation capabilities due to lack of expertise, and domestic lock-in as causes for this existing and potentially growing gap between the Global South and the Global North.

The online service gaps should be seen as theoretical extensions of the discourse of the core-periphery and the digital divide and as a contingency of economic inequality. It is the economic strength and the access to offline resources that best can explain the gaps between different regions. In sum, the Internet geography of today is heterogeneous. Research has so far mainly concentrated on supply side parameters and proclaimed the digital divide. But the heterogeneity appears to be even more flagrant higher up in the value chain.

Fortunately, the online gaps are not static, and could be bridged by implementing policy measures. Ideally, a policy framework should be designed in a way that it stimulates a development towards more inclusivity and diversity, both on the usage side and the production side. One conventional policy measure would be to impose tax incentives both to stimulate online usage and to stimulate local online service production. As shown in Wentrup, Xu, Nakamura, and Ström (2016), lowered tax on import of computer equipment is positively related to Internet penetration in Sub-Saharan Africa; hence, by lowering such tax one could expect to spur more online usage and, eventually, online production on emerging markets. Furthermore, a fair tax regime for international OSPs in local markets is an urgent policy to put in place (OECD, 2015). Currently, OSPs such as Facebook and Google are generating large revenues in Global South markets without paying any tax. One could imagine that such "lost" tax revenues could instead be invested to develop local Internet infrastructure and online entrepreneurship incentives. Local governments should therefore put pressure on

international OSPs to let them balance their online usage presence with local investments in the either the Internet infrastructure or entrepreneurship initiatives, such as incubators. This is not only good for the local market but also for the OSP itself since it will increase their engagement in the local market. Online presence of large OSPs in international markets should be balanced with either financial compensation or offline presence in order to foster a more regionally diversified OSP economy. Wentrup, Xu, Nakamura, and Ström (2016) found that the *universal service* policy and its fund are efficient measures to stimulate online usage in Sub-Saharan Africa. Such measures directly address the inequalities of online usage between regions or social groups and are a good example of how to drive towards a more inclusive online economy.

CHAPTER 5 - RESEARCH DESIGN

5.1 Choice of research approach

The aim of social science research is to unfold complex social phenomena by collecting empirical material and to develop theory thereof. A key step in this process is to come up with intriguing research questions and to decide upon the most optimal method for reaching an answer to the question. The developed theory should then ideally represent the “truth” and contribute to the collective knowledge base of the society. Nonetheless, as subjective theorists argue (Sayer, 2000), “truth” and “knowledge” are often interpreted in different ways depending on the individual researcher, on the context surrounding them, and on the epoch in which they live.

In the discussion of research design, scholars often distinguish between *ontology*, *epistemology*, *method*, and *methodology*. Ontology concerns the theory of existence or reality as well as the states of being and the relations of objects. Epistemology is the philosophy study of knowledge. Ontology studies concentrate on nature of things, while epistemology is about the social knowledge of them. Methodology is the science of methods, which could be explained as technical collection and interpretation of data.

There are different perspectives of epistemology and ontology in social science. Positivists argue that science is able to generate *objective* knowledge, whereas relativists claim that all knowledge is constructed and based on the individual’s interpretation of it, which in turn depends on the social and cultural context. In between these two perspectives we find the critical realism approach (Bhaskar, 2016), which posits that, on the one hand, there is a world existing without knowledge and that all knowledge about things is theory-based and to some extent imperfect. A similar strand of epistemology is what some social researchers refer to as the reflexive qualitative approach. Within the field of qualitative methodology, the approach of critical and reflexive methodology is receiving increasing attention.

A critical and reflexive approach encompasses the art of questioning and challenging general wisdoms within a field, the “taken-for-granted-ness”, and to problematize and go against a positivistic approach (Alvesson and Sköldböck, 2009). A reflexive approach is about interacting with data, to ensure a close interplay between theory and empirical material, and leave room for interpretation. Additionally, it is about being cautious with the common vocabulary (Alvesson and Kärreman, 2011) to avoid being locked into past research avenues. One might argue that research says more about the researcher themselves than the findings (2011). It is therefore important to question one’s own bias, one’s social context, history, and ideology.

In my research I have been inspired by critical realism and the reflexive approach. Progressively, I have looked more critically at my own research topic and also at myself as a researcher. During the whole research period I have been employed as Trade Commissioner and Country Manager in France for *Business Sweden – The Swedish Trade and Invest Council*. At the early phase of my research journey I was convinced that the Internet and its effects on internationalization were something “groundbreaking” and “new” that would completely change the logic of internationalization. I believed it would generate infinite opportunities for the Global South. For example, I thought that internationalization, thanks to the Internet, would open up completely new trade patterns and contribute to the greater good in society. My own vision of my research topic, when commencing the thesis, was therefore rather biased, and indeed characterized by optimism. Coming from the business community, I was influenced by the often exaggerated jargon of “business opportunities”, which often

lacks a critical regard. Sweepingly, and too generously, communicated clichés of ‘innovation’, ‘digitization’, and ‘the ICT revolution’ in informal and formal forums within the business world have certainly affected me. Fortunately though, this view has gradually been neutralized by others and my own research results, which in turn has changed my perspective. Here, the reflexive research approach to continuously question established truth, in my case particularly the truths established by the business community, has thus been instrumental to nuance my own perspective and interpretation of my research. As examples of the reflexivity are applied, Article 1 shows that in contrast to what many believe, the entrepreneurs themselves, the OSPs from Sweden, are not particularly born-global, and their geographical path is rather traditional if compared to other type of export firms. The established truth in the online business in Sweden is that OSPs are born global (Privata Affärer, 2012). Article 3 shows another reflexive and critical standpoint in challenging the myth of Africa being on the road to catching up with the rest of the world in terms of Internet penetration. Article 5 critically analyses the innovation and internationalization capacity of the OSPs in Morocco.

With time, my own working environment has become progressively influenced by the critical minds of the research community in comparison to the one of the business community. I would therefore argue that my epistemological approach has gradually become more like the one of a critical realist theorist - I do acknowledge my own bias, which was highly influenced by the business community in the early phase of the research project, and how with time it has become more affected by the critical spirits of the research community. Yet, by understanding my own role in letting this transition take place (from a business community interpretation to a more critical scientific view), I would argue that my research results have become more objective and closer to the truth.

In social science there are two main approaches to conduct research – deduction and induction. Whereas deduction works from the general to the more specific, by posing a question or thinking of a theory, induction works the other way around – by observing a specific phenomenon and making generalizations about it. The inductive approach is often associated with grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1994) and is closely linked with case-based studies.

In my job as Trade Commissioner, I observed the phenomenon of how OSPs, in my interpretation, were internationalizing differently. Primarily I had the impression that they were moving more swiftly across international markets in comparison with traditional firms. They seemed to be reluctant to commit with offline resources in international markets. This phenomenon intrigued me and made me pose the question of if their internationalization behavior was indeed different, and if so what was the particular difference. Thus, my starting point of the thesis has been a phenomenon observed in the real world, around which I have tried to develop my theory.

My research approach has been a persistent interplay between data and theory. I have tried to develop hypotheses from the internationalization patterns I have observed through the work of the case studies. I would therefore position my research as an inductive theoretical approach. As a researcher, I have not been a complete outsider from the interviewees. Given my professional background, I was fortunate to have been equipped with a practical pre-understanding of the internationalization process prior to starting my research, and I would argue that this has enabled me to conduct in-depth analysis and to be in close dialogue with the OSPs.

Another critical reflection concerns me as a researcher, and my biasness as observer. Due to my job, one could question my bias, in particular vis-à-vis the Swedish OSPs in Articles 1 and 2. Is the analysis of the Swedish OSPs too soft? Would I have made the same analysis if the case firm were Dutch or Russian? This is difficult for me to respond to, but must be taken into consideration for the reader. As counterarguments, it should be highlighted that all have been processed through a blind

review process, and that no commercial and close personal relationship exists between myself and the interviewed managers and founders of the OSPs.

In the rest of this section I motivate my choices of literature, methods, geographical setting, and the case studies. The fact that research about the impact of the Internet and digitization in relation to internationalization is a rather new and fast moving field has had an important impact on these choices. For example, it means that there has been little research available, and that I have been forced to lean towards the qualitative approach and case studies. Naturally, it has also meant that this research is not complete and there are many ideas and space for future research.

5.2 Choice of theoretical framework

As mentioned above, the research field of internationalization of OSPs is novel, which obviously means that it lacks statistics and data based on longer time series. A methodological challenge has been to find a condensed literature platform to build upon. Therefore, the literature reviews in the articles have been collected from a wide range of scientific fields, including economic geography, international business, information technology, and development studies. Given the research questions, a cross-disciplinary “literature mining” seemed to be logical choice. Cross-fertilization of literature is common for research in economic geography. A part from being a discipline that assesses spatial matters, e.g. location, distribution and organisation of economic activities, e.g. geographic-, social- and cultural distances, economic geography been useful in theoretical interpreting ‘global shifts’ (Bryson, 2007; Dicken, 2015;) and other external events, or paradigm changes in the world economy (Alvstam, Ström and Wentrup, 2016). International business studies, on the other hand, have primarily focused on the internal changes of firms. Traditionally, the international business field concentrated on understanding multinational corporations - why they exist and how they grow, and the determinants for internationalization, as well as the organisational change needed to drive this process. By combining these two literature streams, I argue that I have leverage in regards to my research quest and that I could give a more holistic perspective of how OSPs internationalize, and its effect on the economic geography.

The first research question and the first two articles are based on mainly international business literature, whereas the last two are broader and include more economic geography and development literature references. Due to the lack of statistics, all articles contain a certain proportion of grey literature, e.g., industry-specific web-based press.

5.3 Choice of methods

As mentioned above, there is still little previous research available regarding internationalization of OSPs and its impact on the economic geography. The problem of finding coherent statistics for OSPs has been highlighted. For example, there is still no coherent statistical code for “online services”. OSPs are often categorized as ‘media’ or ‘software’ firms in national statistical databases. The lack of data makes quantitative studies with larger datasets almost tricky to execute. Therefore an unavoidable decision in the research was made to collect empirical data by using the case study approach. The argument for case study in three out of the five articles was due the lack of data, the nature of the research questions, and the overall research problem to understand *how* OSPs internationalize. Taken together this often leads to research questions with exploratory nature, and as a consequence steers to the choice of method to qualitative approaches.

One could only speculate, but if statistics and data were available on OSPs, an alternative method, which probably would have yielded more generalizability, would have been to analyse internationalization patterns using quantitative methods. One could have imagined a correlation analysis between geographical proximity and choice of target market for a larger set of OSPs, and speed between consecutive market entries as a potential method. Yet, such a quantitative analysis would not have answered the question of how the decision makers came to their conclusion in their internationalization choices, and therefore case studies were more adequate for the purpose of such studies. The case study approach is an efficient method since it ensures a close dialogue with firm and industry representatives. It has proven to be an efficient qualitative method to depict real-world phenomena and put them into theory (Yin, 2011). Within economic geography and management-oriented studies, the case study approach has been recognized as a fruitful way to construct theory (Clark, 1998). The case study approach, which was undertaken in Articles 1, 2, and 5, follows Eisenhardt's (1989) methodology for theory development, which starts with a tentative formulation of the research question, which is followed by the case firm selection process. Thereafter, an iterative process followed, consisting of literature review and the execution and analysis of the case interviews. Finally, the closure was constructed by juxtaposing and analysing the collected data.

Article 3, which analyses the usage side, applies a quantitative approach and uses Internet penetration data in combination with Facebook data. It is argued that when studying the usage side of internationalization, i.e., the users of services from a particular OSP, the quantitative approach is more appropriate. Again, it was the research question posed in the article (*"Is there any evidence showing that the gap in online service usage in countries in Sub-Saharan Africa is narrowing vis-a-vis the rest of the world?"*) that implied the choice of quantitative method for this article. Facebook was contacted but did not respond to the proposition to participate in the research project. Interviews with managers from Facebook would have given the article an additional qualitative angle, but would not have changed the conclusions in the article. One part of the dataset that was finally manually collected from the Facebook website, and the analysis that followed, gives a complementary contribution to the internationalization process of OSPs from the usage side.

It could be questioned whether the correlation analysis in Article 3 is adequate for its purpose, or if it would have been preferable to use alternative methods, e.g., regression analysis. Yet, given the research question stated in the article, which accentuates the relation between the variables and not the causality, in addition to the unbalanced time series dataset we had at hand, we found a bivariate correlation analysis to be a suitable choice of method. In order to test the hypotheses, the correlation analysis was robust enough to assess the relationship between online usage and economic strength for the years 2012, 2013, and 2014 for the three tested variables, respectively.

The articles in the dissertation have all been developed in iterative and intertwined steps: formulating research questions; conducting literature review; collecting data; interpreting data; writing first draft of analysis; reviewing research questions; reviewing literature; re-collecting data, rewriting analysis, etc.

All articles were developed over a time period of 2–3 years and have undergone double (sometimes triple) blind peer review processes in scientific journals. In addition to being reviewed by journals, the articles have been presented at workshops and academic conferences and have thus received reflective and constructive feedback from established scholars, which in turn has been integrated into the work. In each article, a specific motivation for the choice of method is presented.

5.4 Choice of geographical setting

Given that the thesis concerns the dichotomy of the Global North and the Global South, the geographical setting has been chosen accordingly. Articles 1 and 2 are based on Swedish OSPs representing the Global North, whereas Articles 3 and 4 focus on the Sub-Saharan African context. Article 5 uses Morocco as the geographical setting.

I argue that it is relevant to contrast OSPs from difficult geographical regions since it will give a richer picture of OSPs' internationalization processes. Sweden is internationally recognized for being able to produce Internet startup unicorns (Ahmed, 2015) and is among the countries with the highest Internet penetration in the world (95%). In contrast, Africa stands out for having the lowest Internet penetration in the world and has produced few internationally recognized OSPs. Noteworthy is that Morocco has the highest Internet penetration on the African continent and is considered a well-performing online economy on the African continent, just as Sweden is considered a well-performing online economy in comparison with its European peers.

By using these different poles of geographical regions, it is argued that the internationalization of OSPs could be better comprehended than if a single region was studied. However, it is admitted that Sweden and Morocco are only two samples, and the limited geographical base must be considered when evaluating the generalizability of the thesis. Primary data thus mainly come from Sweden and Morocco, but throughout the thesis secondary data, e.g., Internet penetration data, represents the whole world.

5.5 Choice of case studies for Articles 1, 2, and 5

Much consideration was taken to select the case firms. For Article 1 and Article 5, it was important to have a representative group of OSPs from both Sweden and Morocco. For Article 1 and Article 2, several databases and industry press were analysed and Business Sweden's database of OSPs was a useful tool for the final selection. In Article 2, it was important to find OSPs being extremely unbound to the geographical place in their business model to explore the phenomenon of online internationalization. Truecaller, which is the main case company in Article 2, has, since the article was written, expanded and has now more than 100 million users worldwide. Truecaller also recently opened an office in Silicon Valley.

Accessibility to the founders and managers of the case firms has evidently had an importance. As explained in Article 1, Article 2, and Article 5 only a limited number of the OSPs matched the criteria and were willing to accept being case studies in the articles. The choice of case studies for Article 5 was explained in detail in the article, but was in sum identified through triangulation between different data sources.

5.6 Data collection

An additional challenge was to conduct research on the empirical targets that are constantly moving. This has made the work of collecting and analysing data a bit complex. For example, the international markets the OSPs entered changed swiftly from round to round of interviews. A challenge was also to get access to the interviewees since they are extremely busy business executives.

The primary data in Article 1, Article 2, and Article 5 were collected through interviews with executives and founders of the OSPs. A semi-structured interview approach was applied. The questions were sent beforehand, and the interview was then executed following those questions. The interviews were subsequently transcribed and analysed. Most interviews lasted between 60 and 90 minutes. The interviews were, in most cases, complemented with follow-up emails and short informal interviews. Some of the respondents were also interviewed at several occasions over time. In addition to the primary data, secondary data was collected from ITU, The World Bank, and other recognized institutions. For each article the exact number of interviews and data collection processes were outlined.

For Article 3 and Article 4, the data was mainly collected from The World Bank (GDP per capita Literacy level, Rural population), ITU (Internet penetration), and manually from Facebook's website (Facebook penetration).

CHAPTER 6: CONCLUSION AND IDEAS FOR FURTHER RESEARCH

6.1 Summary of the articles

Article 1, Article 2, and to a certain extent Article 5, focus on the production and international diffusion of online services. Article 3 and Article 4 concentrate on the user side, assessing if Sub-Saharan Africa is catching up with the Global North in terms of Internet penetration and online usage.

The aim of Article 1 was to understand the OSPs' internationalization pattern. The article takes a broader approach to OSPs and analysis of their mode of entry, speed, and geographical patterns. The results show a regional geographical spread, which is aligned with the geographical pattern proposed in the Uppsala model, but with significant differences in terms of mode of entry and speed in the internationalization process. The article accentuates the balance between the online and the offline presence suggesting that OSPs with high onlineness (often B2C-oriented) rely more on the online presence than OSPs with a lower degree of onlineness (often B2B-oriented ones). From a geographical point of view, Article 1 indicates that OSPs are not creating new trade patterns but are rather reinforcing existing ones.

Article 2 follows up on the findings in Article 1, but narrows the scope and assesses the most extreme form of OSPs in terms of onlineness. The findings are a bit contradictory in comparison to Article 1. Whereas Article 1 argues that the geographical pattern is more or less the same for OSPs as it is for traditional firms, Article 2 shows a very different geographical pattern for the case firm Truecaller. This difference can be explained via its onlineness in the business model and its "viral" mode of entry and its B2C business model, which is elaborated on in the paper. Therefore, when combining the two articles it must be concluded that OSP is not a homogenous group of firms, but rather a species with different degrees of onlineness.

Article 3 investigates the digital divide in the online usage side in Sub-Saharan Africa, and shows a persisting digital divide in terms of Internet and Facebook penetration between Africa and most other regions. Article 4 discusses the online usage pattern in broader terms and reflects on whether the Internet enables countries in the Global South and Global North to be more equal. The main conclusion of the article is that urban districts in the Global North dominate both in terms of production and usage. This indicates that the online economy is a reflection of the global economy and its underpinning power structures, which leads to online gaps on both the demand and supply side.

Finally, Article 5 analyses the online production side, or online entrepreneurship, and the internationalization process for OSPs in Morocco. Surprisingly, it was concluded that the OSP industry is dominated by returnee entrepreneurs with professional backgrounds in the Global North. On a general level, Moroccan OSPs struggle with the fierce competition from the Global North OSPs, which often benefit from an underdeveloped policy framework. The internationalization attempts of the Moroccan OSPs remain modest and are primarily regional. One explanation for this is that the Moroccan OSPs are often local versions of existing Global North OSP originals, which hampers their international competitiveness.

6.2 Main theoretical contributions

Article 1 introduces two main theoretical concepts: the online–offline balance and the time-based component of the market entry stages, the online-to-offline interval. These concepts offer a new way of thinking about the internationalization process. Article 1 shows that, contradictory to the born globals theory, the Swedish OSPs are rather “born at home” and expand regionally to similar markets as traditional Swedish export firms. The OSPs in Article 1 are overall place-dependent, and thus offline-dependent due to their business models, which are a mix of B2C and B2B. They are thus dependent on their relative onlineness. The modes of entry used to enter markets are controlled networks, and not gradually developed as the Uppsala model suggests. Hence, neither the born globals theory nor the Uppsala model really fit the internationalization pattern of the case firms in Article 1.

In Article 2, which analyses a B2C-oriented OSP, and hence an OSP with a larger degree of onlineness, the geographical path is ad hoc and much less place-dependent. Findings show that the internationalization process is characterized by *online spatial overreach*, meaning low offline representation in proportion to its online representation, but that the importance of local offline presence becomes increasingly important with time. Here, the *onlineness–offlineness* dichotomy could help explaining the internationalization pattern. Due to the relative onlineness in the business model, an initial vast expansion is possible, but with time the OSPs offlineness becomes more and more geographically rooted. The paper contributes with an online internationalization flow model, which manifests the entanglement and blurriness of the offline and the online spaces, and the collaborative space between the firm and the users along the internationalization process. Viral marketing and co-development are new modes of entry to consider in online internationalization.

Article 3 indirectly also shows the online spatial overreach phenomenon, since the focal OSP in the Article, Facebook, is present with more than 50 million users in Africa without having a single offline office. Article 3 reveals a heterogeneous pattern of Internet and Facebook usage and is, to our knowledge, the first study to show the relationship between economic strength and online usage in Sub-Saharan Africa. A few African countries are portrayed as digital oases and close to European levels in terms of online usage, whereas the majority of the countries are still digital deserts, hence with low or extremely low levels of online usage. A strong correlation is found between economic strength and Internet penetration. Internet penetration and online service usage is strongly correlated with economic strength. This article is a key element in support for the discourse that the online economy is a reflection of the economy’s offline resources and economic inequalities.

Article 5 introduces the concept of an *online entrepreneurship gap*, which can be seen as an extension of the digital divide, and hence accentuates the geographical differences in terms of intensity in online entrepreneurial activity. The online entrepreneurship gap is defined as the difference in entrepreneurial activity within the sector of online business between different geographical spaces. The article therefore suggests that online entrepreneurship should be encompassed in the digital divide discourse, and that the consequences of inequality in online entrepreneurship must not be neglected. It also shows that the entrepreneurial landscape of individuals could differ significantly between countries in the Global North and the Global South. In Morocco, the majority of the successful online entrepreneurs are returnees, i.e., returned immigrants from a social elite. Article 5 shows the dominance of the returnees from the Global North and thus the indirect dominance of Global North innovation leadership in periphery areas. The online sector has not yet become an easily accessible business sector in Morocco. Young and talented Moroccans thus seek careers within banking and real estate

instead of becoming online entrepreneurs. Those sectors are safer bets, of course even more so in low-income countries where a career failure immediately means that you find yourself in poverty. On a positive note, the article highlights the emerging intra-regional trade pattern in which the Moroccan OSPs engage. The article suggests that policymaking must be steered to stimulate this tendency with the aim to create something such as a Digital Single market in Africa.

6.3 Main conclusions

Reflecting back on RQ1, I conclude that the OSPs studied internationalize in different ways depending on their onlineness. For OSPs with a high degree of onlineness, they tend to enjoy a fast pace in terms of speed, and they rely on viral marketing and online communities to spread geographically. For OSPs with a low degree of onlineness, the speed is slower. In general OSPs choose controlled modes of entry, often via their own subsidiaries due to the relative complex nature of their online services. In terms of geographical expansion, it is incremental and therefore primarily regional, particularly for OSPs with a low degree of onlineness. The regional expansion could be explained by geographical and cultural proximity, but evidently also to market-driven factors like purchasing power and technological advancement. To generalize, the most successful OSPs of today originate from small urban areas in Global North cities, and their prioritized users are located in the same geographical space. Yet, with time, OSPs seek markets from the Global South, as seen with the case of Truecaller in Article 2 or Facebook in Article 3, although they do not gain the same market attention, such as offline presence, in comparison with Global North markets.

Regarding RQ2, I have shown that the geographic online usage and online production pattern is heterogeneous, which is demonstrated on several geographical levels: between countries and cities and within cities. A few Global North countries, with the US being way ahead, are dominating on the production side. One exception is China. China's relative strong performance can be explained by a giant home market, a rich diaspora, and relative strong technological advancement in the Internet sector, which has been underpinned by protectionist online policy (the Great Firewall) that hinders market entry for international OSPs (Warf, 2011). On the usage side, Internet penetration rates are clearly higher in the Global North, and the gap to some regions, e.g., Africa, has even increased during the last decade.

In sum, the thesis claims that there is no evidence the Internet or the internationalization of OSPs are levelling out the economic playing field between the Global North and the Global South. On the contrary, there is a strong indication that regional patterns are reinforced, and that what I expressed as the global online gap is increasing. The online service geography is bound to the offline space, or *offlineness*. Even though OSPs theoretically, given their onlineness, could develop from anywhere, they remain in sticky central business districts in global cities in the Global North. The most online-oriented type of firm seems to be one that is extremely dependent on the offline context. One reason for this could be that technology is still not sufficiently sophisticated to substitute spatial proximity of "being there", and that the online economy after all is dependent on the geographical mobility of the online entrepreneurs, which tend to remain located in economically rich places in the Global North.

Given that trade today is dominated by the Global North, there is an overhanging risk that the current online gaps will persist for a long time and even fuel the unevenness on both the production and usage sides. All articles give indications in this direction. An online economy constructed on a platform of a heterogeneous world economy is likely to remain spiky and dimpled, as accentuated in the thesis through discussions regarding the different online gaps.

Despite this gloomy outlook, at least from a Global South perspective, there are optimistic indications that OSPs from the Global South are growing and becoming regionally relevant. As Article 5 shows, the Moroccan OSPs are internationalizing regionally. Such a pattern should encourage policymakers to prepare the terrain for intraregional trade in the OSP sector. In order to do so, they must empower the online entrepreneurs with a stronger voice in policymaking and acknowledge the online sector as an important growth sector for the future.

6.4 Outlook

One could ask if the findings of the thesis support the idea of a ‘new’ online economy, or is it so that nothing has really changed, and this idea should be written off as simple boosterism? What is really *new* about the new online economy? From a social perspective, it is evident that the quantity of online activity, i.e., the time people spend online, has been constantly increasing since the invention of the World Wide Web. The Internet has developed into a second action place for humans in addition to the ‘real’ world (Kellerman, 2014). This is shown by the growing Internet penetration figures presented in the thesis. In absolute terms, more and more people from most geographic regions are getting online. As with any other new technological invention, some people benefit more than others. This *online inequality* is mainly rooted in economic imbalances between geographic spaces.

From a firm-level perspective, I have suggested that OSPs have few, if any, unique features in comparison with traditional firms (Wentrup and Ström, 2016). Although OSPs produce and deliver their services online, the online domain could be seen as just an additional market space with specific boundaries that could be of both geographical and technical character. To some extent, the online market space could be compared with conventional geographic market space. Just as a geographic space comes with restrained accessibility, the online space could, and most often does, as well. In comparison with traditional firms, OSPs have the potential to internationalize faster via entry modes on viral marketing and co-development in the online space. The internationalization speed registered by some OSPs is yet unseen in other business sectors. Additionally, the fact that OSPs work concurrently in online and offline spaces, the so-called online–offline balance is also an argument for the “newness” ascribed to the online economy.

Has the economic power balance seen any newness in relation to the geography as a consequence of an increasing online activity and the growing influence of OSPs in the world economy? This question is tricky to answer. Nevertheless, most empirical evidence in the field of Internet geography points to strengthened economic power assigned to the Global North. The findings in this thesis lean towards supporting this suggestion. The articles show the geographic spikiness of both online production and online usage, which are driven by geographical concentration of the online production centers in the global cities in the Global North, agglomeration effects, and by online network effects (Rochet and Tirole, 2003; Li et al., 2010).

The regional internationalization pattern of the OSPs is an additional argument that existent trade paths are reinforced as opposed to new ones being created. As shown in Article 5, OSPs from the Global South are not yet capable of competing with OSPs from the Global North. Until the next Facebook will be born and internationalize from a place in the Global South, it is difficult to find convincing arguments that the “new” online economy has been an engine for geographic shift in the economic power balance.

6.5 Ideas for further research

All five articles in the thesis suggest ideas for further research. For example, a study of OSPs from various geographical settings has been proposed to see if the results and conclusions deviate from the previous results and conclusions. In this regard, it would be an asset if scholars could join forces and collect a large database of internationalization patterns for OSPs in order to compare and project future developments.

It is clear that the online service geography research is underdeveloped in the Global South, partly on the usage side, but particularly on the production side. Further research should engage in analysing the realities of Global South OSPs to contribute to a fair policy framework. Article 5 raised multiple policy issues, such as Moroccan OSPs' dependence on Facebook and Google, which needs to be studied, at least from a competition policy perspective.

The case of China's OSP sector was raised in the articles and deserves more research attention. China has been successful in developing large OSPs, albeit not so internationally spread. An important contribution to research would be to investigate how this entrepreneurial drive has sustained despite the restrictive Internet policy in the country, which has limited the international competition and the freedom of online users. Yeo (2016) has made the point that the Chinese OSPs are, to a large extent, intertwined into the capital flows of the Global North, but these findings need to be challenged by other researchers.

As indicated in the delimitations section, most OSPs never make to the point where they engage in internationalization. It would yield more knowledge and realistic expectations of online entrepreneurship to know how many OSPs as a percentage of the total OSP population do actually engage in international commerce. Is this partition larger than for traditional firms? One message that is often diffused in business media is that the online business sector is a 'born globals' sector. But is this merely a myth?

Furthermore, it would be useful to dig into the granularities of the OSP elite (serial) entrepreneurs in order to assess their geographical mobility and international paths over time. In what places do they contribute to knowledge sharing? Do they remain restricted to global cities in the Global North or is there evidence that these individuals contribute to a geographically diverse spread of knowledge?

Finally, it would be helpful for the disciplines of international business, economic geography, and economics to have more quantitative studies about the OSP trade patterns. Are the regional trade patterns, which have been indicated in both Article 1 and Article 5, a general tendency with the online economy? If so, how will this affect further trade agreements? In times of rising protectionism in combination with a growing online economy, such studies deserve serious attention.

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This thesis explores the process of internationalization of Internet-dependent firms, so-called Online Services Providers (OSPs), and it assesses its effect on the economic geography, i.e. the places where online services are produced and used.

The main conclusion of the thesis is that the internationalization process of OSPs contributes to the heterogeneity of the online economy. Unless radical changes in Internet policy are implemented, further online gaps may emerge between the Global North and the Global South.

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