# How do Finnish companies view and capitalise on opportunities in the evolving platform economy?

Interview study

Heidi Auvinen | Raija Koivisto

VTT TECHNOLOGY 376

beyond the obvious

VTT TECHNOLOGY 376

# How do Finnish companies view and capitalise on opportunities in the evolving platform economy?

## Interview study

Heidi Auvinen & Raija Koivisto

VTT

ISBN 978-951-38-8734-6

VTT Technology 376

ISSN-L 2242-1211
ISSN 2242-122X (Online)
DOI: 10.32040/2242-122X.2020.T376



JULKAISIJA – PUBLISHER

VTT
PL 1000
02044 VTT
Puh. 020 722 111
https://www.vtt.fi

VTT
P.O. Box 1000
FI-02044 VTT, Finland
Tel. +358 20 722 111
https://www.vttresearch.com

# Preface

A phenomenon originating in Silicon Valley known as the “platform economy” has caught on, and we understand it as a way of creating value and organizing layered (business or other) activities enabled by digital platforms, information and data. The platform economy is best known through platform giants such as Google, Apple, Facebook, Uber and Airbnb, all of which operate in the global business-to-consumer market. Emerging business-to-business platforms have similar scale-up and growth opportunities but have received less attention and publicity.

We wanted to have a closer look at how Finnish companies view and capitalise on opportunities in the evolving platform economy, particularly in the business-to-business sphere. We therefore launched an interview study, the results of which are published in this report. Interviews with experts and company representatives from various business sectors in Finland and the USA were conducted throughout 2019, and these fruitful discussions have provided many valuable insights and have also revealed how knowledgeable and ambitious Finnish companies are regarding the platform economy. We would like to sincerely thank all interviewees for their valuable contribution and openness in sharing their views, opinions, ambitions and concerns. We hope to see the many platform innovations and applications described and envisioned during the interviews come to life and succeed.

*Authors*

The research work that led to the results in this report has received funding from the Strategic Research Council at the Academy of Finland under grant agreement no. 293446 – Platform Value Now (PVN): Value capturing in the fast emerging platform ecosystems. http://platformvaluenow.org/

The authors wish to extend special thanks to Katri Valkokari and Phill White for their valuable comments.

# Contents

## Executive summary

Over the last 10–20 years, the business environment has changed dramatically via enablers such as digitalization, the internet and smart mobile devices. A phenomenon originating in Silicon Valley known as the “platform economy” has caught on, and we understand it as a way of creating value and organizing layered (business or other) activities enabled by digital platforms, information and data.

This report presents an interview study that explores how Finnish companies view and capitalise on opportunities in the evolving platform economy. This research problem is addressed through the following four research questions: (1) How do Finnish companies understand the concept of the platform economy in general and in their business sector? (2) What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy? (3) What factors act as drivers or barriers in the process of Finnish companies entering the platform economy? (4) How do the findings from Finnish companies compare to those from the USA? In 2019 a total of 10 interviews were conducted in Finland and 8 interviews in the USA, representing various business sectors such as food, pulp and paper, manufacturing and security.

The results of the study reveal new aspects of Finnish companies’ attitudes and preparedness for the uptake of platform economy opportunities. For example, the companies appeared to be well aware and informed about the platform economy and platform-based business models even if risk-averse attitudes and the legacy of traditional non-platform businesses were described as significantly slowing progress. In comparison, the interviews in the USA focused more on how important it is to make progress fast and learn from the more rapidly changing sectors.

We analyse the strengths and weaknesses of Finnish companies in the emerging platform economy and propose recommendations. Firstly, we formulate key recommendations for the Finnish companies that are willing to capitalise on the opportunities of the platform economy: (1) dream big and adopt a bold mindset, (2) identify and address the bottlenecks, (3) build and join partnerships and ecosystems and (4) listen to the customers’ needs and values. Secondly, we formulate key recommendations for Finnish public sector decision-makers who are willing to support progress in the platform economy: (1) maintain support measures and address gaps in the innovation chain, (2) tap into the positive social and societal aspects and potential of platforms, (3) enable business and safeguard public interest through regulations and improve response time, and (4) deepen public-private collaboration.

# 1. Introduction

Over the last 10–20 years, the business environment has changed dramatically. Digitalization, the internet and smart mobile devices have made inroads and we have seen innovative start-ups utilising these assets grow into global giants in a matter of years. This phenomenon originated in Silicon Valley and is called the "platform economy".

Among the first researchers of the platform economy, Parker and Van Alstyne (2014) penned the following definition: *"Platforms provide building blocks that serve as the foundation for complementary products and services. They also match buyers with suppliers, who transact directly with each other using system resources and are generally subject to network effects. Examples include operating systems, game consoles, payment systems, ride sharing platforms, smart grids, healthcare networks, and social networks."*

Furthermore, Parker et al. (2016) amended this definition as follows: "*A platform is a business based on enabling value-creating interactions between external producers and consumers. The platform provides an open, participative infrastructure for these interactions and sets governance conditions for them. The platform's overarching purpose: to consummate matches among users and facilitate the exchange of goods, services, or social currency, thereby enabling value creation for all participants.*"

Seppälä et al. (2015), in turn, provide the following definition: *"Digital platforms refer to information technology systems upon which different actors — that is, users, service providers and other stakeholders across organizational boundaries — can carry out valued-adding activities in a multi-sided market environment governed by agreed boundary resources. Typically these actors create, offer and maintain products and services that are complementary to one another. Platforms quintessentially lure and lock in various types of actors with their network effects and economic benefits thereof."*

According to these definitions, the crucial feature of a platform is that it creates value for all participants and matches demand and supply. We see that data is the element that enables and fuels these interactions. Producers receive dynamic, real-time information about what consumers want, and vice versa. The latter definition also hints at the direction that we see to be of focal importance: while collecting, processing and storing data from producers and consumers, learning takes place, and more and more value can be created for all parties. This comes to fruition in the form of better and more customised products and services as well as layered business opportunities. The ultimate network effect takes place when "platforms of platforms" are being established, comprising ecosystems of interlinked digital platforms.

**In summary, we understand the platform economy as a way of creating value and organizing layered (business or other) activities enabled by digital platforms, information and data.**

The importance of platforms to innovations and economic activity has been clearly stated (Zutshi and Grilo (2019): "*Platform based business models have significantly improved user experience, choice, competition and brought in business models that create new jobs, new development ecosystems, and efficient business processes. The fact that the app ecosystems have led to thousands of startups around the world is a testimony to the economic potentials of platforms as engines of economic growth."*

The first powerful platform giants such as Google, Facebook, Apple, Amazon, Airbnb and Uber emerged in the USA. The prevailing attitude in Finland was that the platform economy was "already out there" and could only accommodate these global giants with their respectively dominated markets. However, systematic efforts have changed this discourse and an understanding of the breadth and depth of the platform economy has evolved. The national roadmap for the digital platform economy for Finland (Viitanen et al. 2017) published by the Prime Minister's Office, the Ministry of Economic Affairs and Employment and the Finnish Funding Agency for Innovation, Tekes, played a major role in encouraging this change. The first half of the report painted the prevailing picture of the platform economy as a global phenomenon and Finland's position in it. The second half drilled into national future aspirations for success and growth and introduced a vision and roadmap for Finland. Furthermore, an atlas of ten sector-specific roadmaps was presented, together with an action plan to fulfil the vision.

Whereas the dominance of the platform giants is still generally acknowledged, the platform economy is now seen as a pervasive phenomenon that will gradually spread across all business sectors and applications. According to this understanding, we have only seen the first sectors and industries adopting the very first digital platforms and the potential for new platform innovations is by no means limited. Importantly, thus far, most successful platforms have emerged in B2C applications (business to consumer), whereas the enormous opportunities in the B2B (business to business) domain remain largely untapped (see, for example, Zutshi and Grilo 2019). These B2B opportunities in the manufacturing and service industries, for example, hold great potential for Finnish companies. Another aspect of widening the perspective of how to perceive the platform economy is the notion that not all platforms function in an exclusively global manner. There is room for small-scale local platform applications and even the global giants often contain locally or regionally relevant subdivisions.

This report presents an interview study that explores **how Finnish companies view and capitalise on opportunities in the evolving platform economy**. This research problem is addressed through the following four research questions:

1. How do Finnish companies understand the concept of the platform economy in general and in their business sector?
2. What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy?
3. What factors act as drivers or barriers in the process of Finnish companies entering the platform economy?
4. How do the findings from Finnish companies compare to those from the USA?

These research questions are explored by conducting interviews (face-to-face or voice calls over the internet) with companies in Finland and the USA. In order to capture views across different industries, we chose to approach various business sectors such as food, pulp and paper, manufacturing and security and include companies of different size as well as different levels of experience with platforms.

This report is structured as follows: The present chapter has defined our understanding of the concepts of digital platforms, the platform economy and platform business models, and we have described the study objectives and research questions. Chapter 2 will introduce the methods and materials used and provide insight into the interview setup and study sample. The results will be presented in Chapter 3: firstly from the Finnish interviews and secondly from the interviews in the USA in comparison to those in Finland. Chapter 4 will conclude with a discussion, comprising an analysis of the strengths and weaknesses of Finnish companies in the emerging platform economy and proposed recommendations.

# 2. Methods and materials

## 2.1 Interview setup

The interviews were carried out as face-to-face meetings and voice calls throughout 2019.The Finnish participants were interviewed in Finnish in Finland and the American participants were interviewed in English in the USA. The interviewees were contacted by phone or e-mail and an invitation letter (Appendix A) and an indicative interview questionnaire (Appendix B, excluding text in parentheses) were provided before the interviews. The companies and their invited representatives were selected using criteria in the following order of importance: coverage of companies from different sectors and industries; coverage of small, medium and large companies; coverage of companies with varying experience in the platform economy; coverage of industries and sectors with a varying focus on digitalization; coverage of additional perspectives such as research, entrepreneurship, funding and business incubation; and existing personal contacts. The interviewees were typically people in upper management roles. Participation was on a voluntary basis and most invitations to participate in the interviews were accepted. The few cases of non-participation were due to the following: the person contacted could not be reached or a suitable interview time and suitable company representative could not be found, even when the company had tentatively agreed to the interview.

The interviews were semi-structured, following the questionnaire shown in Appendix B. The aim was to cover all the questions and topics of the questionnaire in each of the interviews, even if this was in a tailored order of importance or focus. The interview approach was relaxed, encouraging an open dialogue and allowing for additional follow-up questions and topics around the platform economy. One or two interviewers were present at each interview, with one interviewee. Two interviews were conducted with two interviewees and one interview was conducted as a group discussion with four interviewees. The interviews lasted around 60 minutes, apart from the group interview with four participants, which was conducted in a half-day meeting in a different setting.

All interviews were voice recorded, as agreed with each interviewee, and written summaries were compiled based on the recordings. The storage and processing of the interview material was described to all interviewees and it was agreed that relevant personal and company data would be treated confidentially and removed from all documents for publication. The interview results were analysed qualitatively using thematic content analysis, seeking answers to the guiding research questions and with a preparedness to identify additional topics of interest that may arise from the interview material.

## 2.2 Study sample

A total of 10 in-depth interviews were conducted in Finland between March and November 2019. Full coverage of topics in the interview questionnaire (Appendix B) was achieved in each interview. The companies interviewed were from the following sectors: cybersecurity, food, manufacturing industry, metal industry, pulp and paper, retail, safety and security and telecommunications. Additional perspectives covered were business incubators, entrepreneurship and venture capital. A balanced sample of small, medium and large companies as well as companies with little, some and wide experience in the platform economy was gathered. At the beginning of the interviews, several of the interviewees stated they had recent experience from more than one company, sector or role. In these cases, the interviews aimed to cover all these experiences, respectively.

In the USA, a total of eight interviews were conducted in April 2019. Full coverage of topics in the interview questionnaire (Appendix B) was not achieved in all of the interviews because most of the interviews were carried out in group settings due to the practical constraints of a short overseas visit. The companies interviewed were from the following sectors: buildings, software, transportation and safety and security. Additional perspectives covered comprised business incubators, entrepreneurship, academic research and investment management.

The rationale for complementing the Finnish interviews with a handful of American interviews was to gain a rough overview of the similarities and differences between the two, even if meticulous comparisons could not be made based on these limited samples. However, it was interesting to see how the opinions expressed by the companies from the USA, the frontrunner country in the platform economy, differed from those of the Finnish companies. Also, the American academics interviewed were very familiar with the situation in Finland and were therefore able to offer valuable insights and contrasts between the regions.

# 3. Results

## 3.1 Finland

**RQ 1. How do Finnish companies understand the concept of the platform economy in general and in their business sector? (Interview questions 1–3)**

The interviewed companies were well aware of and informed about the platform economy and platform-based business models. Many interviewees described themselves as non-experts on the topic of platforms, but then provided sophisticated descriptions of the phenomenon and its potential in their business sector.

The interviewees understood the platform economy as a way of organising businesses that makes use of data and the online world, that is scalable and enables layers of value creation around a digital platform. The networked ecosystem of entities that create and capture value was mentioned by many interviewees indicating that the companies have properly absorbed the concept of multi-sided markets. Several interviewees also explained their understanding of the platform economy as an extension of traditional business models and modes of operation in business ecosystems and value chains. These respondents simply viewed digital platforms as a novel enabler for scaling such activities to the next level in terms of business volume, market size or across business sectors. The importance of the platforms as a vehicle for Finnish companies to grow globally was greatly appreciated.

When discussing the current state of the platform economy, the interviewees typically referred to the platform giants (such as Airbnb, Uber, Google, Facebook and Amazon). They were keen to give examples of how they used these platforms as private persons or how their company potentially used social media or marketplace platforms. However, the respondents did not stop there but, at their own initiative, proceeded to explain how they saw the platform economy as a wider phenomenon beyond a handful of giants. They saw the connection with their own sector and provided examples of how platforms are used, developed or envisioned to enrich business activities. Even though the interviewed companies ranged from companies acting fully in a platform-based mode to companies with no experience with platforms thus far, they all shared the view that what we are seeing now is not a mature situation or a passing phenomenon but a beginning. With a few exceptions, the interviewees stated that the platform-related progress in their company was rather slow, even if it was steady. The reasons given included traditions of old business models and operational modes, risk-averse decision-making, lack of knowledge on how to make use of their data, for example.

The respondents' visions of the future potential of platforms were ambitious. The platform economy is expected to grow within and across all sectors through ecosystems that interlink users, producers and platforms in an unprecedented and dynamic way. Business-to-business opportunities and the potential of the industrial internet or the internet of things were recurring topics that the respondents regarded as important growth areas, complementing the currently dominating platform narratives of business-to-customer platforms and value created by personal data. Platforms raise hopes of rapid growth, scalability and global market access, although concerns were also voiced about risks, inevitable failures and monopolies. However, there was a great deal of optimism about how the current barriers to the progress of the platform economy could be resolved in the near future. For example, the interviewees listed a lack of workable and fair conventions and standards as being the main bottleneck in two different contexts: data sharing and roles between the platform owner and its subordinates (platform producers and users). However, they were hopeful about identifying solutions to these issues, potential remedies emerging from regulation, consumer demands and pressure, self-organisation by platform ecosystems or through market and competition-based incentives. The optimistic expectations and aspirations of the respondents also extended to visions of the greater good. Many interviewees trusted that the platforms would play a focal role in empowering human creativity, improving wellbeing and equality, contributing to sustainability and enabling fairness and transparency.

**RQ 2. What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy? (Interview questions 4–7)**

When it comes to technologies, the interviewed companies largely shared the view that current technologies, such as the internet, mobile devices, digitalisation in general, cloud services, automation, data technologies and apps, are sufficient to enable the uptake and progress of the platform economy in the short and medium term. Thus, technologies were not considered to be the primary bottleneck in the present or near future. Instead, the bottlenecks describe included, for example, the legacy of old business models and operational modes, risk-aversion decision-making and a lack of understanding and cooperation models in data use and sharing. However, improvements to current technologies and the introduction of emerging technologies such as artificial intelligence, 5G, blockchain, big data, the internet of things and virtual reality were considered to contribute to the further development of the platform economy. The respondents shared advanced visions of how these technologies could open up even further opportunities for platform business in the future, although they also appeared to trust that technological developments would mature in time when the actual non-technological bottlenecks for platform development were also resolved.

Societal aspects were discussed from two perspectives in the interviews, as well as the cycle of the two combined: how social and societal factors shape the platform economy and how the platform economy impacts society. The respondents all shared concerns about the fragility of trust in the digital world. Aspects of safety, security, privacy and data protection were discussed in detail and the interviewees appeared to be quite unanimous that these were currently extremely pressing issues, over which individuals and organisations are obliged to take many risks if they want to play a part and be involved in the platform economy. Indeed, the alternative of staying away was not regarded as being a viable and sustainable option. Social pressure, societal expectations, working life prerequisites, the business environment and economic and societal structures are increasingly compelling companies to move into the digital age and have a presence on platforms.

Consequently, addressing such issues of trust and ethics in platforms was considered a priority by the interviewees and many of them stated that platform owners, users and producers would all become more aware of the problems and would also demand and develop solutions. However, the level of optimism varied. Some respondents were more trustful that ways of organising platform activities would develop to become responsible and sustainable, whether by consumer demand, market self-organisation or enforcement measures. Others were more sceptical and were concerned that things could still deteriorate somewhat, before corrective measures were put in place.

Generally, the platform economy was considered to be a positive influence in many societal developments such as ecological thinking, enhanced value, usability and tailored products and services, equal opportunities, improved transparency and resource efficiency through sharing services. The identified negative impact of a similar scale included information bubbles and propaganda, damage to democracy, as well as unethical tracking and data collection.

The question of the role of policies and regulations divided the respondents. Most of them thought that quite strong regulatory measures were required in order to protect consumers, set boundary rules for data use, ensure fair competition, combat unfair monopolies, protect the national economy and tax revenues, etc. The interviewees appeared to agree that the rapid development and unpredictability of the platform economy make ex ante regulation extremely difficult or impossible, and they appeared to feel a great deal of empathy for legislators facing these challenges. Thus, many interviewees suggested that the way to deal with emerging issues in the public sector was to develop rapid response mechanisms in order to address the issues in a timely manner. Those favouring strong regulation proposed accelerated law drafting, instant corrective measures, etc. Some interviewees were more in favour of a collaborative approach, in which public authorities should closely collaborate with businesses and other actors involved in the platform economy in order to jointly identify and resolve problems as they arise. These respondents saw that this would be a way for regulators to actually keep pace with technological and market developments and also be able to proactively develop viable solutions that support business growth while safeguarding the public interest. A third minority view among the interviewees was that regulatory measures would have no impact. These respondents saw that Finnish measures in particular, and even European-level measures, have little impact on the global platform economy and markets, where the giants dictate the rules of the game. This view highlighted the belief that the US-based giants or the government-backed initiatives from China will thrive, and that, in practice, the choice for Finland or Europe is to conform to these realities or completely isolate and withdraw (the latter being neither a viable nor a sustainable option).

When contemplating the current situation in Finland, and the platform economy-related actions of the public sector, the respondents shared a very appreciative opinion. Despite the above-mentioned challenges in controlling, managing and addressing – in a timely manner – the negative impact primarily caused by the platform giants, the Finnish approach was considered to be supportive and proactive. The interviewees acknowledged Finnish support, funding and investments in education, training, information, research, innovation, ecosystem building, etc. National level vision building and roadmapping efforts have raised awareness and encouraged businesses to explore opportunities with the platform economy. Financial and other support during the different phases from research to entrepreneurial support, service launch and international growth have enabled many innovations to grow. The enabling and supporting regulations also received some positive feedback as several sectors have benefitted from regulatory updates aimed at improving protection while also helping new platform-based businesses grow. The willingness of the public sector to adopt and support a culture of experimentation has proved successful in exploring new opportunities rather than shutting down initiatives under uncertain outcomes.

**RQ 3. What factors act as drivers or barriers in the process of Finnish companies entering the platform economy? (Interview questions 8–13)**

As the companies ranged from companies with little or no experience with platforms to companies whose entire business was platform-based, their reasons for considering and joining the platform economy also varied. For example, for the former, platforms may enable better customer relations, enhance collaboration across the value chain or open up new markets. For the latter, the platforms were typically a necessity and prerequisite for the entire business proposition. The common benefits of platforms for all companies were the outreach to wider markets and wider collaboration ecosystems.

Global networks and ecosystems, as well as the interfacing of the physical and digital world, were seen by the interviewees to be opportunities as well as threats. The respondents' companies had different experiences of and ideas about their different roles as actors in the platform economy. Some companies were, or aspired to be, platform owners and orchestrators, whereas other companies positioned themselves as collaborators or contributors in one or more platform ecosystems. However, it was notable that not all of these companies had elaborated their strategy in detail, but rather assumed their role as given. For example, some companies felt that they had no choice but to be involved as a contributor on a given platform. Others stated that they had no other option but to create their own platform while being careful not to compete with (and be destroyed) by the giants. When discussing and theorizing about ecosystems and roles, the interviewees generally acknowledged the benefits of strategic partnerships and the power of combining forces. Yet many companies had thus far failed to act on this, and, for example, were developing their own closed platform independently or joining an existing platform but not extending collaboration to further data sharing or development activities. Nevertheless, their future aspirations were ambitious and the tradition of a strong collaborative spirit in Finnish industries was considered a good starting point.

When questioned about skills, technologies, business strategy, mindset, etc. as prerequisites to a company's success in the platform economy, a major challenge identified by many interviewees was the understanding and knowhow related to platforms. This type of knowledge combines innovativeness with an understanding of business models, value creation, technological opportunities, as well as customer understanding, and is very difficult to develop and maintain when a situation quickly evolves. It is also largely "informal" and can only be partially achieved through education or training. Most companies stated that they had recruited new talent in these areas, with complementary backgrounds and skillsets. Constant updating and renewal of such expertise was also regarded as being important. Those companies with long experience and a legacy of traditional non-platform business also reported that it takes time to change the general mindset and gain support from decision-makers so that sufficiently bold moves can be made when entering platform-based activities.

Other bottlenecks mentioned, whether existing or overcome, included: a lack of understanding of how to make use of data, language barriers, lack of knowledge of laws and tax procedures in potential international markets, the Finnish mentality of perfecting the product or service before even conducting a trial launch, risk-aversion decision-making and a lack of funding opportunities during the international growth and scale-up phase. Positive examples of resources to support platform-based activities included a "pay-it-forward" culture, particularly among entrepreneurs and start-ups, public sector support in capacity and ecosystem building and successful mergers of technology, business and funders.

## 3.2 The USA compared to Finland

**RQ 1. How do (Finnish) companies understand the concept of the platform economy in general and in their business sector? (Interview questions 1–3)**

The American respondents' views on the concept of the platform economy aligned well with those of the Finnish respondents. In particular, they highlighted the focus on software and services instead of hardware and the opportunities allowed by vertical as well as horizontal layers of activities on top of platforms and across platforms. The importance of data, for example, how data often acts as a currency on platforms, was also widely discussed. A similar discourse and future outlook were shared by the American interviewees regarding the fact that as the platform economy has been largely kick started with business-to-customer applications, in the coming waves, more and more business-to-business initiatives will emerge.

Whereas Finns and Americans both shared the view that in many business sectors and industries, long traditions, legacy and risk-averse thinking dominate, the urgency of cultural change appeared to manifest itself somewhat differently. The Finnish companies were more content with taking cautious, slow, yet stable steps towards the new, whereas the American companies stated that it was important to make rapid progress and learn from the faster changing sectors. One interviewee described this through their understanding of the wider perspective, in which a platform business that requires openness and allows scalability necessitates an acceptance of the loss of control in the short term. However, in the long term, it will be the winning strategy that fosters trust and collaboration.

**RQ 2. What opportunities and threats do (Finnish) companies perceive in terms of the technological, social and political aspects of the platform economy? (Interview questions 4–7)**

Interviews in both countries supported the view that digitalisation, the internet and mobile devices, among other existing technologies, were important enablers for the platform economy. Views were also generally aligned on emerging technologies such as AI, 5G, IoT, etc. These were seen as being important in opening new opportunities in the short-term future, but not as bottlenecks or prerequisites. The American respondents were more likely to voice their concerns about where technological development takes place and who will dominate the market of the future, for example, regarding 5G.

An interesting difference between the two groups of interviewees was that in the USA, necessary progress with data business was perceived as being driven by customers, users and public debate rather than because of actions by regulators or companies. For example, the American respondents foresaw that data sharing between companies and with users would improve and grow because customers would force them to do this. By demanding more and by choosing the platforms that operated in the way that customers want, it was seen that data, services and platforms would be increasingly integrated. Similarly, the power of users and customers, as well as public opinion, raised in societal discussions was seen to drive issues such as data privacy and ownership, ethics, trust, safety and security forwards. Several examples were also given by various interviewees on how we can already see individuals collectively "fighting back" and coercing platforms into adopting more responsibilities in a fair and sustainable mode of operation regarding working conditions, privacy issues, etc.

In general, the American respondents very much acknowledged the power of platform companies, especially the giants. This not only relates to economic success and market dominance but the accumulated knowledge of data, technologies and many other aspects of the platform economy. Against this background, the authority of regulators and the public sector at large is less than in the traditional economy. Nevertheless, the interviewees were not unanimous that the "hands off" policy was the best, even though some of them saw it that way. Other interviewees were in favour of an approach in which the regulators stay away and let progress take place as the markets evolve, although measures to ensure safety and security would be implemented if needed. A third view represented the brand of thinking in which regulators, even if they were several steps behind the platform companies, should actively seek to define and steer developments, and, for example, the GDPR was raised as a success that has not only improved the integrity of the enforced markets of the EU but also globally.

**RQ 3. What factors act as drivers or barriers in the process of (Finnish) companies entering the platform economy? (Interview questions 8–13)**

Similarly to Finland, the US respondents also had experience with traditions, legacy and lock-in making the transition from a traditional business to the platform economy slow and laborious. However, the companies articulated more clearly their understanding of the wider opportunities and the added value of platform-based business and profit models. This applied to the overall business proposition as well as to new ways of pricing or designing their products and services.

An optimistic, innovative and trusting mindset was described by many of the interviewees as being the success factor in their own business and sector, as well as in general. They shared their views on how the culture encourages bold innovation yet does not punish companies for failures, which are instead regarded as a learning opportunity. Even though this type of thinking has been increasingly fostered in Finland in recent years, the US interviews confirmed this to be the practice in the USA, not just an aim. The San Francisco Bay Area in particular is known for its "pay-it-forward" culture, where success stories are shared, and the trustful and open environment and sparring by the more experienced companies cultivates and paves the way for more success. Also, the abundance of vital resources in the area, including skilled people, investment funds and connections, was highlighted. Those companies that had knowledge of Finland also contrasted the more relaxed American attitude towards innovations. For example, not everything needs to be perfect and ready in order to get started; copying others is ok to some extent and developing something with the goal of selling it to a giant is a good idea.

A distinct characteristic of the US interviews was also the attitude towards sharing. This extended to the sharing of data and other assets as well as sharing business strategies with partners or even potential partners in the absence of formal alliances. The rationale behind this appeared to stem from the profound understanding of platform-based opportunities, in which the platform ecosystem is assumed to benefit all parties.

# 4. Discussion

## 4.1 Analysis of strengths and weaknesses

One of the main *strengths* of Finland is the strong technological know-how that has enabled the growth of world-class companies operating in traditional as well as novel businesses such as the digital platform economy. Examples of these can be found in the forest industry, manufacturing and ICT, as well as in the gaming industry and new service businesses. Many traditional Finnish companies have become international, operate globally, have established international supply chains and also offer remote services. This has helped them to understand how collaboration in ecosystems works, thus paving the way for the platform economy's operating mode.

Companies that have already expanded into international markets have the motivation to keep up and become forerunners in the development, which offers a great opportunity for the entire society to learn, although regulating such rapid development is challenging. However, the Finnish government has adopted a culture of experimentation and has provided support: awareness of the platform economy has been increased through various government initiatives and programmes such as the national roadmap for digital platform economy for Finland (Viitanen et al. 2017) or the government report on information policy and artificial intelligence (Ministry of Finance 2018). New supporting actions have been implemented, including regulation on openness of certain data and special research, development and innovation funding directed to the platform economy. Finland has also been active on the EU level in developing regulatory frameworks as a frontrunner to creating a fair and safe platform economy business environment (incl. the GDPR and Trustworthy AI)

Among young, educated people there is now a more positive attitude towards entrepreneurship and the Silicon Valley model is being adopted in Finland as well. Finns now have visionary ambitions and are also picking up on the "pay-it-forward" culture. One example is the start-up and tech event Slush that has grown from a student event to a globally renowned organization promoting innovation.

Companies, entrepreneurs, authorities, citizens and other stakeholders in Finland have a good understanding of what the platform economy means. Thus, the platform economy is the natural next mode of collaboration for many businesses. It offers wider global markets and rapid scalability. It also offers opportunities to build on existing Finnish knowhow and industries (e.g. pulp and paper) and create new platform-based businesses on top of traditional ones. Platforms may have a positive social and societal impact in terms of environmental protection or equal opportunities, for example. It is customers who are driving technological and social progress; public debates have the power to change things.

Thus far, the giants have been the B2C platforms. Business collaboration is usually based on sharing and alliances, thereby forming ecosystems, which may be a step towards creating B2B platforms in the future. New technologies may support this development, although current technology is already sufficient for the platform economy.

With all the capabilities for the platform economy, there are some *weaknesses* in Finnish industry and society. A risk-averse and overly humble culture prevails, which slows down platform progress. The legacy of old traditions and culture creates a lock-in to the current business logic and the fear of risk stops progress from taking place.

The platform economy requires the sharing of data. However, there is a lack of rules, practices and standards on data sharing. Consequently, finding a business model that would not endanger the value of own data – and potentially the entire business – is challenging. There is a struggle in deciding whether or not to join a giant's platform, build your own, create interfaces from one platform to another or just stay away from platforms altogether. Companies also struggle with issues such as how to avoid socially negative impacts, including privacy and safety, and how to trust and gain trust and also avoid losing existing business and customers. It is unclear what kind of threat the giants pose to a newcomer, i.e. would they destroy the business or perhaps buy it out? Companies are also doubtful about whether the new business ecosystem would keep the roles in balance or whether it would be unfair – perhaps a monopoly.

Besides cultural and strategic issues, there are additional practical challenges. It may be difficult to attract the right kind of complementary talent, for example, teams that understand how to make use of data, or combinations of business, technology, data and branding talent. The domestic market is small. Thus, scaling up domestically has its limitations. The EU market is supposed to be a single market. However, various national practices exist, for example, regarding taxation. There is also a potential gap in certain growth phases of a new platform between start-ups and going abroad. Achieving the benefits of a properly functioning platform requires risk taking and bold progress at the start.

The regulation of platforms is a work in progress. Privacy and other ethical issues appear every now and then in the context of the giant platforms and there are difficulties in controlling their non-conformance and regulating them, even though the GDPR has been successful. If the public sector cannot deal with negative externalities or manage the giants regarding taxation or fair working conditions, for example, what might be the fate of a new platform?

## 4.2 Recommendations

Key recommendations for Finnish companies willing to capitalise on opportunities offered by the platform economy:

1. **Dream big and adopt a bold mindset**. Finnish companies are already knowledgeable about the platform economy, but their actions towards it are cautious. Ideate boldly and explore the opportunities, benefits and options of platforms for your business. A successful platform business is more likely to evolve from actionable plans, rapid experimentation and iterative learning than from static business plans that have been perfected and brooded over for years.

2. **Identify and address the bottlenecks**. Rather than technological obstacles, platform business uptake is more often slowed down by bottlenecks such as the legacy of old business models and operating modes, risk-aversion decision-making and a lack of understanding and collaboration models in data use and sharing. Identify the challenges in your company, assess the perceived and real risk and design strategies to overcome them.

3. **Build and join partnerships and ecosystems**. The platform economy is all about strategic partnerships and the power of combining forces, and a company should think carefully about its preferred role in different partnerships and ecosystems. Openness, trust and sharing among partners are a necessity. Developing your own platform on your own from scratch will only take you so far.

4. **Listen to the customer's needs and values**. Whether said out loud or implied by customers' actions, listening to customers is the key to success in the platform economy. Regardless of whether the customer is a business or a consumer, future demand for services and products, as well as opinions on the platform's operating conditions (incl. ethics, trust, safety, security, data transferability, etc.), can be procured from customers. Platforms enable both the acquisition of such information as well as the delivery of value according to these customers' needs.

Key recommendations for public sector decision-makers who are willing to support progress within the platform economy:

1. **Maintain support measures and address gaps in the innovation chain**. The interview study supports the view that the Finnish approach is supportive and proactive. Public funding, investments and other kinds of support for education, training, research, development, innovation, ecosystem building, information sharing (including national vision, strategy and roadmap), etc. were acknowledged as having resulted in new business. The various support measures along the innovation chain should be examined, and the gaps addressed, such as those identified by the interviewees in the launch and growth phases, for example.

2. **Tap into the positive social and societal aspects and potential of platforms**. While they are revenue-seeking businesses, platforms have an enormous potential to positively contribute to a number of social and societal aspects, such as ecological thinking and consumption, better value, usability and tailored products and services, equal opportunities, improved transparency and resource efficiency through sharing services. (While the negative aspects of safety, security, privacy, data protection, etc. are widely discussed, the positive aspects receive less attention). This positive potential should be researched in detail and tapped by encouraging such aspects in support measures (see recommendation 1), for example, as well as through public sector presence and partnerships with platform businesses.

3. **Enable business and safeguard public interest through regulation and improve response time**. Based on the study, the key regulatory aspects of interest were enabling regulations that support platform business (e.g. data sharing and use, experimentation, fair competition, combating unfair monopolies, protecting the national economy and securing tax revenues) and safeguarding the regulation of consumer protection (e.g. safety, security, privacy and personal data protection). Great value was noted, not only in national but also in European level frontrunner initiatives such as the GDPR. However, the rate of growth and unpredictable nature of the platform economy necessitates the rapid absorption of information and quick-response mechanisms from the regulators.

4. **Deepen the public-private collaboration**. The interviews revealed further potential in collaboration between the public and private sectors, extending beyond collaboration and mutual support in the uptake of the platform economy. Further collaboration structures could be created to tackle problems and emerging issues in a collaborative way. For example, knowledge sharing, expertise building, problem identification and solution seeking (e.g. creating practices and standards for “fair” value distribution or data sharing) would benefit from such a collaboration. Forums to facilitate the dialogue could be created by the public sector.

# References

Ministry of Finance (2018). Government report on information policy and artificial intelligence. Ethical information policy in the age of artificial intelligence.

Parker, Geoffrey G., Van Alstyne, Marshall W., Choudary, Sangeet Paul. 2016. Platform Revolution: How networked markets are transforming the economy and how to make them work for you.

Parker, G., & Van Alstyne, M. W. (2014). Platform Strategy. SSRN Electronic Journal. Retrieved from http://papers.ssrn.com/abstract=2439323

Seppälä, Timo, Halén, Marco, Juhanko, Jari, Korhonen, Heidi, Mattila, Juri, Parviainen, Päivi, Talvitie, Jaakko, Ailisto, Heikki, Hyytinen, Kirsi-Maria, Kääriäinen, Jukka, Mäntylä, Martti & Ruutu, Sampsa. 2015. The Platform – History, Characteristics, and the Definition. ETLA Report No. 47. http://pub.etla.fi/ETLA-Raportit-Reports-47.pdf

Viitanen Jukka, Paajanen Reijo, Loikkanen Valto, Koivistoinen Aki (2017). Digitaalisen alustatalouden tiekartasto. Valtioneuvoston kanslia, Työ- ja elinkeinoministeriö, Innovaatiorahoituskeskus Business Finland.

Zutshi, A., & Grilo, A. (2019). The Emergence of Digital Platforms: A Conceptual Platform Architecture and impact on Industrial Engineering. Computers & Industrial Engineering, 136, 546–555. https://doi.org/10.1016/J.CIE.2019.07.027

# Appendices

## Appendix A: Invitation to interview

We invite you to participate in an interview study that maps how companies in Finland and the USA view and capitalise on opportunities in the evolving platform economy. Our aim is to help companies identify the business potential of platforms, as well as the threats involved. In the context of the study, we define the platform economy as a way of creating value and organising business activities enabled by digital platforms, information and data.

The interviews in Finland and the USA will be arranged as face-to-face meetings or voice calls over the internet in spring 2019. A total of 15 to 20 interviews have been planned, using a semi-structured questionnaire. The interviews will take approximately 60 minutes and will be recorded and summarised in writing. The study sample will include different sized companies and companies both with and without experience with platforms. Interviewees should ideally represent upper management and strategy development. Participation in the interviews is voluntary and is based on invitation.

All personal data and company information will be treated confidentially and removed from the interview documentation. All documentation will be stored at VTT and access will only be granted to participating researchers. The final results of the interview study will be reported in a scientific publication, such as a research report or journal article.

## Appendix B: Interview questionnaire

(RQ 1. How do Finnish companies understand the concept of the platform economy in general and in their business sector?)

1. What do you think of when you hear the term “platform economy”? How would you define your understanding of the “platform economy”?

2. How do you see the current state of the platform economy (give a PVN-approved definition) in society/in your business sector and industry/in your company? For example, the gradual progress of interlinked technological development vs. a major transition with major impacts.

3. How do you see the future potential of the platform economy in society/in your business sector and industry/in your company? For example, the gradual progress of interlinked technological development vs. a major transition with major impacts.

(RQ 2. What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy?)

4. What technologies/technological innovations do you expect to advance and contribute to the platform economy – and how? For example, software robots, AI, blockchain, voice recognition, smartphones, 5G, cryptocurrencies, 3D printing.

5. What societal/social factors/innovations or needs do you expect will shape the platform economy?

6. How do you see the platform economy impacting society – both locally and globally? (e.g. health, welfare, equality, fairness, ethics, trust, environmental issues).

7. What do you expect from the political and regulatory side – locally, EU level, globally? In your opinion, what should the political and regulatory response be? For example, support, funding, participation, regulation, safeguarding, level playing field, minimum interference, opt out.

(RQ 3. What factors act as drivers or barriers in the process of Finnish companies entering the platform economy?)

8. How is your company involved in platforms? Why/why not? For example, own closed platform/platform owner/platform participant?

9. How do you see your company’s future opportunities benefitting from platforms?

10. How has/would platform economy participation changed/change your business? Pros and cons.

11. How do you perceive yourself as an actor in the platform (business) ecosystem?
12. What was/is needed in terms of skills, technologies, business strategy, mindset, B2B trust, etc. to be able to get involved in a platform? For example, issues to overcome or problems to be solved.
13. What's next? What could be the next phase of the platform economy/the next hype?

(Experts: Questions 8–12 omitted.)

Series title and number

VTT Technology 376

| | |
|---|---|
| Title | **How do Finnish companies view and capitalise on opportunities in the evolving platform economy?**<br>Interview study |
| Author(s) | Heidi Auvinen & Raija Koivisto |
| Abstract | Over the last 10–20 years, the business environment has changed dramatically via enablers such as digitalization, the internet and smart mobile devices. A phenomenon originating in Silicon Valley known as the "platform economy" has caught on, and we understand it as a way of creating value and organizing layered (business or other) activities enabled by digital platforms, information and data.<br><br>This report presents an interview study that explores how Finnish companies view and capitalise on opportunities in the evolving platform economy. This research problem is addressed through the following four research questions: (1) How do Finnish companies understand the concept of the platform economy in general and in their business sector? (2) What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy? (3) What factors act as drivers or barriers in the process of Finnish companies entering the platform economy? (4) How do the findings from Finnish companies compare to those from the USA? |
| ISBN, ISSN, URN | ISBN 978-951-38-8734-6<br>ISSN-L 2242-1211<br>ISSN 2242-122X (Online)<br>DOI: 10.32040/2242-122X.2020.T376 |
| Date | June 2020 |
| Language | English, Finnish abstract |
| Pages | 22 p. + app. 3 p. |
| Name of the project | Platform Value Now (PVN): Value capturing in the fast emerging platform ecosystems |
| Commissioned by | |
| Keywords | platform economy, digital platforms, digitalisation, platform business |
| Publisher | VTT Technical Research Centre of Finland Ltd<br>P.O. Box 1000, FI-02044 VTT, Finland, Tel. 020 722 111,<br>https://www.vttresearch.com |

Julkaisun sarja ja numero

VTT Technology 376

| | |
|---|---|
| Nimeke | **Miten suomalaiset yritykset näkevät kehittyvän alustatalouden ja hyödyntävät sen mahdollisuuksia?**<br>Haastattelututkimus |
| Tekijä(t) | Heidi Auvinen & Raija Koivisto |
| Tiivistelmä | Viimeisten 10–20 vuoden aikana liiketoimintaympäristö on muuttunut radikaalisti digitalisaation, internetin, älylaitteiden ym. mahdollistamana. Piilaaksosta lähtöisin oleva ilmiö "alustatalous" on keskeinen osa tätä kehityskulkua, ja tutkimuksemme kontekstissa määrittelemme alustatalouden arvon luonnin ja kerrosmaisen (liike)toiminnan organisointimallina, jonka digitaaliset alustat, tieto ja data mahdollistavat.<br><br>Tässä raportissa esittelemme haastattelututkimuksen, jossa selvitettiin miten suomalaiset yritykset näkevät kehittyvän alustatalouden ja hyödyntävät sen avaamia mahdollisuuksia. Tätä tutkimusongelmaa lähestyttiin seuraavien neljän tutkimuskysymyksen kautta: (1) Miten suomalaiset yritykset ymmärtävät alustatalouden käsitteen yleisesti ja omalla liiketoimintasektorillaan? (2) Mitä uhkia ja mahdollisuuksia suomalaiset yritykset kokevat alustatalouden teknologisiin, sosiaalisiin ja poliittisiin tekijöihin liittyen? (3) Mitkä tekijät toimivat ajureina ja esteinä suomalaisten yritysten pyrkiessä mukaan alustatalouteen? (4) Miten tulokset eroavat suomalaisten ja amerikkalaisten yritysten välillä? |
| ISBN, ISSN, URN | ISBN 978-951-38-8734-6<br>ISSN-L 2242-1211<br>ISSN 2242-122X (Verkkojulkaisu)<br>DOI: 10.32040/2242-122X.2020.T376 |
| Julkaisuaika | Kesäkuu 2020 |
| Kieli | Englanti, suomenkielinen tiivistelmä |
| Sivumäärä | 22 s. + liitt. 3 s. |
| Projektin nimi | Platform Value Now (PVN): Value capturing in the fast emerging platform ecosystems |
| Rahoittajat | |
| Avainsanat | alustatalous, digitaalinen alusta, digitalisaatio, alustaliiketoiminta |
| Julkaisija | Teknologian tutkimuskeskus VTT Oy<br>PL 1000, 02044 VTT, puh. 020 722 111, https://www.vtt.fi/ |

## How do Finnish companies view and capitalise on opportunities in the evolving platform economy?

Interview study

Over the last 10–20 years, the business environment has changed dramatically via enablers such as digitalization, the internet and smart mobile devices. A phenomenon originating in Silicon Valley known as the "platform economy" has caught on, and we understand it as a way of creating value and organizing layered (business or other) activities enabled by digital platforms, information and data.

This report presents an interview study that explores how Finnish companies view and capitalise on opportunities in the evolving platform economy. This research problem is addressed through the following four research questions: (1) How do Finnish companies understand the concept of the platform economy in general and in their business sector? (2) What opportunities and threats do Finnish companies perceive in terms of the technological, social and political aspects of the platform economy? (3) What factors act as drivers or barriers in the process of Finnish companies entering the platform economy? (4) How do the findings from Finnish companies compare to those from the USA?

ISBN 978-951-38-8734-6
ISSN-L 2242-1211
ISSN 2242-122X (Online)
DOI: 10.32040/2242-122X.2020.T376

VTT beyond the obvious