



**Going Global:
Internationalisation strategies of Dutch Game Studios
since 1990**

Master's Thesis

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Chapter 1: Introduction

In 2020, a year marked by a global pandemic, lockdowns and working from home, the estimated value of the video game industry was \$174.9 billion, a significant increase from last years \$146.2 billion and 2018's \$138.8 billion.¹ Video games are a globally popular entertainment medium and a rapidly growing industry that continues to receive attention for its creativity and intensive innovation. For example, the Japanese multinational conglomerate, Sony, has an array of products and services and involved in many industry sectors including music, film and finance. Yet overtime their gaming division became its largest and most popular. The firm has sold over one-hundred million PlayStation 4s and more than one billion games since it was introduced back in 2013.² In 2020 they released their next generation console, the PlayStation 5, which had sold an estimated 4.6 million units since its release in November.³ Sony is not alone in reaping the benefits of video games. American multi-national Microsoft started its own video gaming brand Xbox in 2001, which has also enjoyed great levels of success and is Sony's biggest rival. The success of both companies in video games demonstrates how popular they have become, the benefits of investing into it, and the reason why the estimated value has increased year on year.

As the video game industry has established itself as one of the largest creative and innovative industries its academic relevance has grown too. The United States and Japan have been the industry leaders in terms of distribution of games and consoles, and therefore much scholarly work and discussion about video games have gravitated towards them. European companies have tasted success in video game development and content creation. In 2011 Swedish company, Mojang released the 3D sandbox game Minecraft, which has amassed 126 million active users worldwide and regarded a commercial success.⁴ Yet, European companies are comparatively behind. Most of the top companies by revenue are North American and Asian, with the exception of the French-based company, Ubisoft.⁵ Due to this, there is less scholarly attention towards the European video game industry. To balance the

¹ "2020 Video Game Industry Statistics, Trends & Data", *Wepc*, 2021, <https://www.wepc.com/news/video-game-statistics/>.

² "The Games Are Only Just Beginning", *The Economist*, 2020, <https://www.economist.com/business/2020/11/07/playstation-5-v-xbox-series-x>.

³ Arne Holst, "Global PS5 Unit Sales 2020 | Statista", Statista, 2020, <https://www.statista.com/statistics/1124784/unit-sales-ps5-worldwide/>.

⁴ Christina Gough, "Minecraft Number Of Players Worldwide 2020 | Statista", Statista, 2020, <https://www.statista.com/statistics/680139/minecraft-active-players-worldwide/>.

⁵ Aphra Kerr, *Global Games: Production, Circulation, and Policy in the Networked Era* (New York: Routledge, 2017), 3.

discussion, more work based on European examples is beneficial in our general understanding of video games as a creative and innovative industry.

Of the European examples to choose from, the industry in the Netherlands has been regarded to having plenty of potential. Characterised as a young and dynamic sector, it has been improving quickly with more companies, start-ups, jobs and various successful games being developed every year.⁶ Firms in the Dutch game industry can be understood to fall under two broad sectors: entertainment games and applied games. The latter refers to serious video games that are developed for various sectors such as education, military and medical. Within the scope of entertainment games, studios in the Dutch industry have developed diverse types of games ranging from triple A, independent and mobile and casual.⁷ Therefore, for this paper the Dutch studios of focus are defined as entertainment game studios. A small amount of literature on the emergence and history of the video game industry in the Netherlands has been published, and therefore this paper has the opportunity to complement these works by giving insight on less discussed sectors and aspects of the industry. The largest market segment in the Dutch game industry is the applied games sector and hence research focusing on a less prominent sector like entertainment games contributes to an overall understanding of the industry in the Netherlands.⁸ Of the aspects to choose from, internationalisation strategies has the potential to be of added relevance to the history and development of the gaming industry in the Netherlands.

In order to grow and be successful in a global industry like video games, the way a company internationalises is imperative. Looking at internationalisation strategies of Dutch firms in the game industry can contribute to our understanding of how the approach in reaching out to international markets have changed. Internationalisation as a topic is relevant in finding the success and shortcomings of game companies in the Netherlands when trying to reach international markets. Essentially, this research will want to investigate how Dutch game companies can better connect with global players. More broadly, it can show how

⁶ Christel Van Grinsven and Joost Raessens, “The Netherlands,” in *Video Games Around the World*, ed. Mark J.P. Wolf (Cambridge: MIT Press, 2015), 359.

⁷ Triple A is an informal classification to define games that are produced and published by a mid-sized studio and or major publisher. The classification is used for games that have high development and marketing budgets. Independent games is a classification used to describe games that are created by an individual or a small team of developers without the financial and technical support of a publisher. Mobile refers to mobile games which are video games that are played on a mobile device such as a smartphone but also includes tablets, and handheld consoles. Casual games are video games created for the mass market instead of a specific audience. Examples of casual games can be jigsaw, puzzle and crossword games.

⁸ Christel van Grinsven and Max Otten, “Games Monitor: The Netherlands 2018 Full Report” (Utrecht, 2019), 2.

creative and innovative firms have transformed the way they operate and shift their business strategies.

1.1 Research Question

The research focus of this paper is to compare internationalisation strategies of older Dutch gaming firms, founded between 1990-1999 and newer gaming firms founded between 2000-2015. This choice of time period will be elaborated later in the Methods section. This comparison is expected to show how approaches to internationalisation have changed and to understand how this has affected the position of Dutch game firms within the context of the global video game industry. In order to understand the internationalisation strategies used by entertainment game studios in the Dutch game industry, the thesis's central question is as follows: '*How have internationalisation strategies of Dutch game firms contributed to their position within the global video game industry?*' With limited historical work concerning the Dutch game industry, the research question will be supported by original historical research and the relevant internationalisation theory. To help answer the central question, further sub-questions have also been developed.

- What internationalisation strategies can be identified through multiple case-study analysis of old and new Dutch game firms? Have Dutch game firms internationalised incrementally or were they 'born global'?

A comparison through multiple case study research of ways entertainment game studios have internationalised will help identify the strategies of internationalisation that have been used since 1990. The research will be collected through semi-structured interviews of three Dutch game studios. Interviewing personnel from these studios will hopefully reveal internationalisation strategies of studios from 1990-1999 and 2000-2015, and present an historical evolution of various approaches that have been used and help understand how this has contributed to their position within the global video game industry. In addition to the semi-structured interviews, news articles will also be used to help provide context. The latter question will determine whether the internationalisation theory of Oviatt and McDougall upholds when being applied to the Dutch game industry or if the Stage theory and Uppsala model has greater applicability. 'Born global' implies that the studios would have internationalised upon the release of their first game(s). Comparing these theories in the analysis will be essential in understanding whether the idea of being 'born global' holds for Dutch studios.

- Why do strategies of internationalisation change? Are domestic or international considerations more or less relevant for change in strategy?

In light of the case studies this question hopes to reveal factors and reasons why internationalisation strategies change over time, what are the possible influences (domestic and international) that shape the way an entertainment game studio reaches wider markets. The analysis of the data will take the form of looking at domestic and international factors separately and comparing their influence on the changes of strategies.

Overall, the sub-questions will help guides the research in the hopes of coming to an answer to the central research question and perhaps reveal more than what was anticipated.

1.2 Literature Report

This literature report will focus on positioning the research of this paper to justify its relevance. It delves into the existing work on the video game industry and internationalisation strategies. It will begin with a historical background on the industry to show how the current structure of the video game industry has been created and who influenced this. It will then demonstrate how the historical use of internationalisation theory has been applied in other industries in order to understand how internationalisation strategies have been explained in academic work, particularly demonstrating the popularity of the Uppsala model and stage theory developed by Jan Johanson and Finn Wiedersheim Paul, and INV theory developed by Oviatt and McDougal. It will then look at previous case study work on internationalisation strategies and the video game industry. The objective of all this is to relate these works to the intended research of this paper and where it will fit in the academic discourse.

Izushi and Aoyama article, *Industry Evolution and Cross-Sectoral Skill Transfers: A Competitive Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom* (2006), explores the relationship between technological progress and the formation of the industry specific skills by analysing the evolution of the industry in Japan, the United States and the United Kingdom.⁹ The cross-sectoral transfer of skills is dependent on national contexts; social legitimacy and strength of preexisting industries, the socioeconomic status of entrepreneurs or pioneer firms in an emerging industry, and the sociocultural synergy between the preexisting and emerging industries.¹⁰ All three countries draw from different

⁹ Hiro Isushi and Yuko Aoyama, “Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom,” *Environment and Planning A* 38, no. 10 (2006), 1843.

¹⁰ Isushi and Aoyama, 1843.

creative resources. Japan's industry emerged out of corporate support in arcades, toys and consumer electronics as well as drawing skills from the cartoon and animation sectors. The industry in the United States traces its origins from arcades and personal computers. The United Kingdom had a bottom-up development, where skills were acquired in the youth culture of 'bedroom coders' that cultivated self-taught programmers in their adolescent years.¹¹

Apart from giving historical context as to why the video game industry was so successful in Japan, the United States and the United Kingdom, the significance of this article is that it demonstrates the importance of domestic and international factors influencing on how the industry grew in these countries. The added emphasis on national context shows that along with a globalised economy being a factor in how gaming firms internationalise, domestic factors can also play a role in this process. This must be taken into consideration when discussing the origins of the Dutch video game industry in the context of internationalisation.

In relation to this, Aphra Kerr's book *Global Games* second chapter *Going Global?* discusses the dominance of North America and Japanese companies.¹² Despite that the global game industry had seen restructuring in the last decade, with a small number of new competitors rising from China and Europe, North American and Japanese companies have remained the dominant players.¹³ The top companies from these two regions are active publishers and distributors, acting as gatekeepers in the flow of global games.¹⁴ A reason European-based game companies have struggled to compete at the top level in terms of publishing and distribution is due to acquisition. Despite acquisitioning being a strategic way in becoming internationalised, it does entail that these companies become part of the US and Japanese umbrella rather than standalone as European. This has resulted in European-based companies turning towards the online and mobile segment of the market.¹⁵

The work of Aphra Kerr establishes that while the industry has grown in Europe, it has been stunted by external influences, mainly acquisition and merger, which is commonplace in the video game industry and has a link to the process of internationalisation. Therefore, one must keep in mind the position of national game industry in the Netherlands

¹¹ Ibid, 1843.

¹² Aphra Kerr, *Global Games: Production, Circulation, and Policy in the Networked Era* (New York: Routledge, 2017), 63.

¹³ Kerr, 62.

¹⁴ Ibid, 62.

¹⁵ Ibid, 63.

and its relation to North America and Japan, as their gatekeeping and presence plays influence on internationalisation strategies.

The historical use of internationalisation theory applied in other industries is necessary in understanding how internationalisation strategies have been explained in academic work, and the popularity of the Uppsala model and stage theory. *A silent revolution: The internationalisation of large Spanish family firms* by Nuria Puig and Paloma Fernández Pérez also delves into understanding the internationalisation of firms through internationalisation process theory. Nuria Puig research revolves around transitional business influences, business groups and family firms in twentieth century Spain.¹⁶ Paloma Fernández Pérez's research focus was on the role of business groups and networks in the nineteenth and twentieth Spanish economics.¹⁷ They have shown that the integration of leading Spanish family firms in the global market has been the result of an incremental learning process influenced by the country's human and natural resources, its institutional structure, economic development, and increase business culture.¹⁸ A family firm is defined in this article as those that by the end of 2005 were family owned or managed, had a turnover of at least 40 million euro's, had a minimum of one succession process, and had production or commercial subsidiaries abroad.¹⁹ Family firms played a dominant role in the growth of Spain's economy because their internationalisation strategy consisted of this incremental learning process. These articles have shown that internationalisation strategies explored in past literature demonstrate that traditional firms tend to invest and expand in countries incrementally in order to reduce risk and maximise learning – and determined by the two factors of market size and psychic distance.

Literature regarding video game firms demonstrate different internationalisation strategies. An example of this is Camilo Gomes's and Maria Alejandra Gonzales-Peres's, *Internationalisation of Video-Game Studios from Emerging Markets: A Colombian Case Study Based on an Activity-Based View*. Camilo Gomes is a co-founder of the studied company, C2 Game Studio and Maria Alejandra Gonzales-Peres is a Professor of Management at Universidad EAFIT. She has published numerous articles related to internationalisation, corporate social responsibility and international migration. The purpose

¹⁶ Puig and Pérez, 476.

¹⁷ Ibid, 476.

¹⁸ Nuria Puig and Paloma Fernández Pérez, "A Silent Revolution: The Internationalisation of Large Spanish Family1," *Business History* 51, no. 3 (2009), 462.

¹⁹ Ibid, 467-68.

of their article was to understand the internationalisation process of a ‘born-global’ video game development studio from Colombia.²⁰ By testing theories, the article’s aim was to answer the question: which learning experiences from C2 Game Studio could shed additional light on existing theories to explain the internationalisation practices, processes and strategy followed by a video game development company from an economically emerging country?²¹ It was found that the company had a rapid internationalisation process because of an international market view and also seeing the domestic market as small. Before they officially launched, the company gained access to technologies by outsourcing key personnel, demonstrating their ability to be adaptative and flexible. They tackled their lack of resources by the creating networks to improve the identification of opportunities and forming alliances and hybrid structures to attain knowledge.²² All these factors are supported by Oviatt and McDougall’s INV theory.

Looking at one specific case-study allowed for in-depth research into a company’s internationalisation process yet it does mean that what was found is not reflective of the general internationalisation strategies used by video-game firms in Colombia. Multiple case study approach negates this limitation and has been used in other academic work, for instance, *The Internationalisation of small games development firms: evidence from Poland and Hungary* by Isobel Cunningham, Sharon Loane, and Pat Ibbotson. This was a study that investigated the internationalisation strategies of small game companies from Poland and Hungary. All three authors research has been involved in studying small firms, internationalisation, and entrepreneurship, which is evident in their work on this topic. Through a qualitative approach, the paper provided evidence that small games development firms undertake rapid internationalisation despite being limited by lack of resources.²³ These firms were also founded by teams of entrepreneurs that were unique because they lacked experience as entrepreneurs and found creative ways to acquire and control resources so that they could grow in a short amount of time.²⁴ As a result, these entrepreneurs, who started out as hobbyists, evolved their start-ups into commercial operations. These start-ups often would exist in an incubation state for a couple of years before formal incorporation, and this is when many resources required are sourced. They acquired and controlled their resources from their

²⁰ Camilo Gomes and Maria Alejandra Gonsales-Peres, “Internationalisation of Video-Game Studios from Emerging Markets: A Colombian Case Study Based on an Activity-Based View,” in *International Business in Latin America*, ed. William Newburry (London: Palgrave Macmillan, 2015), 140.

²¹ Gomes and Gonsales-Peres, 158.

²² Ibid, 161.

²³ Cunningham, Loane, and Ibbotson, 246.

²⁴ Ibid, 246.

environment through freelance and on a low commitment basis.²⁵ Their paper adds to the discussion of the international growth strategies of small games studios and provides insight on how they access adaptive means for international growth.

From hobbyists to entrepreneurs: On the formation of the Nordic game industry by Kristine Jørgensen, Ulf Sandqvist and Olli Sotamaa sheds light on how hobbyist's with little experience, transitioned their start-ups into running commercial operations by studying the Nordic game industry between 1990 and 2005.²⁶ Jørgensen has published works related to the video game industry and also specifically the Norwegian games industry. Sandqvist's research background is on the history of digital games and the industry. Sotamaa has published and edited issues for scholarly journals such as *Games and Culture* and *International Journal of Arts and Technology*.²⁷ The paper concerns three companies based in Finland, Norway and Sweden and analyses how these gaming start-ups become formal companies. It is established that the presence of the demoscene in the Nordic region had an influence on the game companies. The demoscene is a term used to describe the hobbyist subculture in the Nordic countries that had its origins in the earlier forms of home computer culture, but developed into an art form of its own.²⁸ Therefore, the aim of the article was to explore the relationship between the demoscene and the emergence of the gaming industry in these Nordic regions. It is shown in the article that the early firms within the Nordic game development scene were 'born global'.²⁹ This happened not only because of their own global vision but also because of the small domestic markets and lack of regional publishers. The reason the firms that were studied grew rapidly was largely due to the demoscene, which acted as a recruitment cradle of hobbyists interested and passionate about video games.³⁰

A noticeable trend in all case studies of these articles is that firms in the gaming industry do not internationalise in the traditional sense as explained by Johanson, Wiedersheim-Paul and Vahlne. The case studies have demonstrated that Oviatt and McDougall's INV theory does provide a better fitting framework for understanding the internationalisation strategies used by firms in the video game industry. Yet, the differences seen in the three case study articles also shows that there is room for further research on the topic. In the Colombia case study, the smaller national market encouraged C2 Game Studio to

²⁵ Ibid, 256.

²⁶ Kristine Jørgensen, Ulf Sandqvist, and Olli Sotamaa, "From Hobbyists to Entrepreneurs," *Convergence* 23, no. 5 (2017), 457.

²⁷ Jørgensen, Sandqvist, and Sotamaa, 476.

²⁸ Ibid, 458.

²⁹ Ibid, 473.

³⁰ Ibid, 473.

focus on the international market. In Poland and Hungary, the entrepreneurs acquired resources in their pre-natal stage before entering the market. For the Nordic game development scene, a similar situation as C2 Game Studio occurred where the small national market influenced firms international reach but their growth is credited to their large demoscene. The planned research for this paper will compliment these works by applying the same framework but also introduce a historical approach and looking at different time periods, which can shed a new light on how changes to game studio strategies over time.

Economic globalisation was the main reason the theoretical framework has leaned towards INV theory because of the effect it has had on internationalisation. The literature report shows that this research has the opportunity to investigate the global and local factors that influence internationalisation strategies, as it seems both play a pivotal role in this. Additionally, it can evaluate the influence of North America and Japan as acting gatekeepers on Dutch game firms, and their position in the global game industry. Through historical research approach, it can test INV theory and whether the trend seen in other case study-based work on national game industries, also applies to the Netherlands. Lastly, by distinguishing the genre of games being produced, it can show that approaches to internationalisation are also dependent on the games themselves.

1.3 Nature of Sources

A variety of different sources is required for a case study-based research. Sources range from, online databases containing information on Dutch game studios, industry level documents, news articles and academic articles.

Original historical research is gathered in the form of semi-structured interviews with entertainment game studios. The Dutch Game Industry Directory is a website that provides a list of Dutch game companies active in the industry. Their database currently contains 203 companies. This directory is the base for finding information on and contacting the relevant studios that were needed to conduct this research. Studios were also asked after the interview if they had contacts or advice on who best to reach out for in relation to the research. This is a form of snowball sampling technique because the existing study subjects are being asked to assist in recruiting possible future subjects, thus allowing the sample group to grow.

The latest facts, figures, trends and developments were sourced from industry level documents and databases. They provided knowledge on the numerous aspects of the national

industry that are of interest such as number of studios, academic programs existing, employment, and also international comparison and overall industry growth in the country. Dutch Game Garden is an organisation that works to promote and improve the video game industry in the Netherlands. Their *Games Monitor* reports are policy and industry level documents providing information on the facts, figures, trends and developments concerning the industry in the Netherlands. The three editions have been published in 2012, 2015 and the latest in 2019. They were put together through desk research and the results of a questionnaire that is sent to all game related companies in the Netherlands. A critique concerning their data is that the survey's sent out to over 500 game companies had 160 responses. It is not clear whether this has had an effect on the information and data presented in their reports. Moreover, they state that there are over 500 game companies in the Netherlands while the Dutch Game Industry Directory registers 203.

News articles were sourced for information regarding the industry and subjects related to internationalisation strategies. The Dutch Games Association is a sector organisation that actively maintains an extended network of different actors related to the industry, including the Dutch government and international organisations. Their close association to the industry entails that they have regularly published news articles concerning the game industry in the Netherlands. Their comprehensive collection of articles provided relevant information about the industry both in terms of national and international matters. However, it must also be considered that news articles have a bias and attempt to project a certain view on a subject. The Dutch Games Association close ties to the Dutch game industry might expose other motives that can effect what their source provides. Apart from the Dutch Games Association, a wide variety of news articles mainly derived from online websites and archives have been utilised for this research as well.

The academic sources collected focus on three aspects of the research; general history of the video game industry, strategies on internationalisation, and literature on the Dutch video game industry. These were gathered predominantly through university libraries. The bibliography of sources found have also been investigated to see whether they had used literature that is relevant for the research.

Conclusively, a diversity of sources will enrich the understanding and information about the video game industry and has contributed to the research of this topic.

1.5 Methods

As stated in the Research Question section, this is a historical case study-based paper comparing internationalisation strategies of older Dutch gaming firms (1990-1999) and newer (2005-2015). The case study methodology used is that of Robert Yin and his book, *Case Study Research: Design and Methods*. The strength of case study methodology is that it utilises various means in gathering information such as through interviews, industry level documents, news articles and academic articles.³¹ Case study methodology has two approaches, single and multiple. A single case study allows the researcher to go into greater depth on the subject (i.e. one game studio) but is dependent on the goal of research that is being conducted. Due to the goal of this research, a multiple case study approach is better suited. A multiple case study approach has its advantage of accumulating data, thus strengthening the legitimacy of the research. Yin emphasises that any multiple case study design must use replication, in the sense that “the cases should serve in a manner similar to multiple experiments, with similar results”.³² Hence, a semi-structured interview will be included, where members of an entertainment game studio are asked the same questions but their open-ended nature stimulates unanticipated responses based on the participants own experiences and knowledge. The chosen older and newer game firms are defined by the context of when they emerged. Studios that are considered older are those that have been established in the 1990s. The 1990s is a decade defined by enormous change, particularly due to the growing power of the internet and its effect on traditional media.³³ It is expected therefore that Dutch firms in this period would have had different internationalisation strategies in comparison to firms founded in the 2000s and 2010s. Newer firms will be categorised as those that have been founded between 2000 and 2015 but further subcategorised between 2000 to 2009 and 2010 to 2015. This is in order to account for a firms maturity but also so that the case studies can be split up into three distinct periods of the video game industry that have seen change due to technological innovation and the process of globalisation. This provides insight as to how internationalisation strategies of Dutch gaming firms have changed and is a reflection of how the global gaming industry has evolved. Three development studios makes up the total number of case studies, one from each respective period. Having three case studies has the advantages of both single and multiple case study

³¹ Robert K. Yin, *Case Study Research: Design and Methods*, 2nd ed. (London: SAGE publications, 2014).

³² Yin, 51.

³³ Tiffanie Darke, "The 1990S: When Technology Upended Our World", History, 2019, <https://www.history.com/news/90s-technology-changed-culture-internet-cellphones>.

approaches. It gives the opportunity to go into relatively greater detail for each case study but at the same time still able to accumulate data that can be used to make observations and discussions with a more general orientation rather than specific. Moreover and as will be explained, all three case studies fit the conditions for the research: they have successfully produced games on multiple platforms and have proven to be successful in a global industry. Due to them being founded in different time periods, general similarities and differences can be drawn from their approaches to internationalisation. The limitation however is that although their conditions are comparable they do have different trajectories, and having a greater number of case studies to analyse would help strengthen the legitimacy of the observations and analysis. As emphasised before, the type of game studio is necessary to define for this research. Dutch game firms have fallen under entertainment game studios and applied game studios. Annie Heslinga's *Networking Innovation: The Emergence of the Dutch Digital Game Industry (1980s – 2000s)* showed that entertainment studios were found to be far more involved in international networks, and applied studios mainly operated on a localised scale.³⁴ This justifies the decision to focus on the entertainment game studios for this research due to their association with the international market, networks and actors.

Below are the development studios that have been chosen for this research.

1990-1999:

Triumph Studios was founded in 1997 and have developed several games for console and PC such as the *Age of Wonders* and *Overlord* series.³⁵

2000-2009:

Paladin Studios was founded in 2005 and has developed a variety of entertainment games both for mobile, PC and console independently and for different publishers such as, *Momonga Pinball Adventures* and *My Tamogotchi Forever*.

2010-2015:

Team Reptile is an independent game developer founded in 2011 and have released four games in their ten-year existence. Their games were first published on PC and due to their success, were also released on consoles like the Nintendo Switch.³⁶

³⁴ Annie Heslinga, "Networking Innovation: The Emergence of the Dutch Digital Game Industry (1980s - 2000s)" (Erasmus University, 2019), 80.

³⁵ "Dutch Game Industry Directory".

³⁶ "Team Reptile", Team Reptile, 2011, <https://team-reptile.com/>.

1.6 Conclusion

In the introduction section it was stated that within the academic discourse surrounding the gaming industry, there lacks scholarly work on the European sector. A unique feature of this research is that it will help balance this disparity in the general discussion about the gaming industry. More specifically, the research for this paper has the opportunity to demonstrate how approaches to internationalisation have changed over time and to understand how this has affected the position of Dutch game firms within the context of the global video game industry. It will also evaluate how global and local factors both have responsibility in internationalisation. Selecting case studies from different time periods allows for a historical research approach that will help benefit an understanding of how Dutch game studios can better connect with global players.

Chapter 2: Theoretical Framework

2.1 Introduction

This chapter will introduce the theoretical background on internationalisation theory, defining what internationalisation is, and what different theories exist. Following this, a discussion of the historical and present structure of the video game industry, the evolution of the value chain and economic globalisation's effect on internationalisation and localisation for gaming firms. To understand the settings of the case studies discussed in the fourth chapter it is required to elaborate on the structure of the video game industry throughout the 1990s, 2000s and 2010s. In all three periods, the industry has gone through various changes that effect the way video game companies approach their internationalisation strategies. Mediums as to which games have played on have diversified along with new genre of games as accelerated innovations require development studios to adapt and take into consideration when developing their own games. The mobile and online sectors have disrupted the value chain and have influenced decisions made by development studios in reaching global markets and their customers effectively. A short overview on economic globalisation and how it improved the position of gaming firms in terms of reaching international markets and localisation will also further elaborate on the role of rapid technological innovations. All elements will provide context for the case studies and the analysis that follows subsequently after.

2.2 Theoretical Background

There is no agreed definition of what internationalisation theory is. It can be described as the gradual participation of a firm in an international market- a strategy in increasing a firms reach to a wider audience. In 1975, Jan Johanson and Finn Wiedersheim Paul published their article which introduced their stage theory of internationalisation and the Uppsala model. This model of internationalisation was developed in light of the idea that most theories at the time neglected the issue of cultural differences, and ignored the establishment needed for companies to handle international activities. As a model it has been often used in scholarly works and has been revisited over time. Moreover, the model was conceptualised around the internationalisation process of large Multinational Enterprises (MNE's) who since the 1970s were becoming globalised firms. The stage theory proposes that the internationalisation process of firms is done incrementally to reduce risk and maximise learning.³⁷ Two factors

³⁷ Jan Johanson and Jan-Erik Vahlne, "The Uppsala Internationalisation Process Model Revisited: From Liability of Foreignness to Liability of Outsidership," *Journal of International Business Studies* 40, no. 9 (2009), 1412.

define this process: psychic distance and market size. These two factors mean that companies usually start their expansion in nearby markets, where they gather market knowledge, and control of resources.³⁸ Thereafter, companies expand to more distant and unfamiliar markets. What constitutes a unfamiliar and distant market is cultural as well as language barrier, politics, geography and access to knowledge about the market.³⁹ Hence, establishing business relationships are important in terms of learning and building of trust and commitment and essential for the internationalisation process.⁴⁰ The Uppsala Model has been a popular and contributive model in understanding the process of internationalisation of companies, however, the changes in the business environment since its introduction limits its applicability. When the Uppsala model was introduced, economic globalisation was not as evolved as it is now, and hence why psychic distance was so central to the theory. The advancements made in telecommunication, transportation and production technology have been influential in the process of globalisation and has changed the business environment by allowing firms to respond to changes and new markets faster and more effective than before.⁴¹ Moreover, the international trading environment has lowered barriers to trade and brought international markets closer together.⁴² This has caused an increase in cultural de-territorialisation as each culture is infiltrated by the influences of other cultures, which will in turn influence consumer behavior and the domestic market.⁴³ Psychic distance has therefore become less relevant to the internationalisation process due to these developments in the process of globalisation over the last forty years.

Oviatt and McDougall offer a more recent internationalisation theory that was first introduced in 1994. Their internationalisation process theory is known as, “international new ventures” (INV) and was first introduced in their paper, *Toward a Theory of International New Ventures*. This theory centers around the emerging influence of technology on international business and the fact that small and medium sized firms seek to gain competitive gain from using resources and the sale of output in various countries from the moment they are established.⁴⁴ The international new ventures framework contains four elements: 1) organisational formation through internationalisation of some transactions, 2)

³⁸ Johanson and Vahlne, 1412.

³⁹ Tony Zohari, “The Uppsala Internationalization Model and Its Limitation in the New Era,” *International Management Strategy*, no. October (2008), 2.

⁴⁰ Ibid, 1413.

⁴¹ Zohari, “The Uppsala Internationalization Model and Its Limitation in the New Era.”, 4.

⁴² Gao Shangquan, “Economic Globalization: Trends, Risks and Risk Prevention Contents,” *United Nations* 1, no. 1 (2000), 1.

⁴³ Zohari, “The Uppsala Internationalization Model and Its Limitation in the New Era.”, 4.

⁴⁴ Ibid, 46.

strong reliance on alternative governance structures to access resources, 3) establishment of foreign location advantages, and 4) control over unique resources.⁴⁵ This is in contrast with Stage theory because it suggests that companies do not internationalise incrementally but try doing so immediately. An instrumental part of how INV's exist is through their acquirement of industry and market knowledge, allowing them to try internationalise straightaway.

A theory of internationalisation will help framework and identify the strategies that have been used by gaming firms in the Netherlands, however what theory fits best in describing the internationalisation process used is dependent on the context. It is hypothesised that INV theory will have greater relevance to the internationalisation of the studied Dutch game studios. This has to also do with the fact that the process of globalisation has rendered the Uppsala model less applicable to internationalisation approaches and it is expected that this can be illustrated through the analysis of the case studies. INV theory does not prioritise the domestic market size as much as the Uppsala model. This is not to say it does not take into consideration the domestic factors that influence internationalisation, but it does emphasise that the international market has become easier to access, and therefore it is predicted that it gives firms in the gaming industry the necessary industry and market knowledge needed for them to reach a wider audience in a short period of time, or even immediately. For this research it will be necessary to compare both INV and the Uppsala model to determine which fits best in describing the internationalisation process of Dutch game studios. A comparison of both in light of the case studies will add to a global versus local debate that exists. Specifically, that international and domestic factors have a role in internationalisation but given the influence of economic globalisation it is now a question of weighing which of these two factors have become more relevant.

Video games are part of a larger digital media industry that has grown within a globalised economic environment but are also influenced by domestic factors. This makes it a useful industry to study because it will contribute to our understanding of how creative, innovative and technology centric companies have adapted and attempted to succeed in this environment, and what pitfalls they have faced. A historical research approach in understanding internationalisation strategies of Dutch game studios will bring a perspective of how these strategies have changed over time and give insight on how studios in the Netherlands can better connect to a global market. Historical research takes into consideration a firm's maturity in an industry and therefore looking at studios founded from

⁴⁵ Ibid, 46.

different periods will give an overall picture of how internationalisation strategies have evolved in the video game sector of the Netherlands.

2.3 Structure of the Video Game Industry

The global structure of the game industry emerges as an essential aspect of this research. As mentioned in the introductory chapter, the video game industry is intensely creative and technologically innovative, and this implies that the relationship between video games and the electronic industry is strong. A technological innovation in the electronic industry will influence changes within the video games industry.⁴⁶ One of the first keystone innovations that changed the industry was the introduction of the home console in the middle of the 1970s and beginning of the 1980s. This gave birth to the software industry which allowed companies and manufactures to sell games separately from the hardware that they were playable on.⁴⁷ This meant that firms could enter the industry from a specific angle, game developing and or publishing. Therefore, it can be understood that the production of video games is defined by two related parts, the hardware and software production. Following this, the 1980s is regarded as an important period in the history of the game industry. The likes of Nintendo and Sega emerged as global companies that provided their own title games and hardware. The success and influence the console would continue through to the 1990s and until the late 2000s, with Sony and Microsoft entering the industry with their own hardware and games.⁴⁸ In these periods (1990s and 2000s), a pattern had started to emerge in the structure of the game industry with consoles being released in generational cycles. Whenever a console would launch it would give a significant boost to industry revenues and during its lifespan it would play an important role in the structure of the video game industry and production. Consoles defined the generation of games created and released. Game developers and publishers would create games within the technological specifications of the consoles and furthermore, the console manufactures could gatekeep the number of games released each year on their devices.⁴⁹ This also created competition between hardware manufactures, which had an impact on the industry in a number of ways. Sony, Microsoft and Nintendo competed in launching the most technologically advanced hardware and this resulted in accelerated

⁴⁶ Jennifer Johns, “Video Games Production Networks: Value Capture, Power Relations and Embeddedness,” *Journal of Economic Geography* 6, no. 2 (2006), 155.

⁴⁷ Johns, 155.

⁴⁸ Kerr, *Global Games: Production, Circulation, and Policy in the Networked Era*, 34.

⁴⁹ Kerr, 40.

research and development efforts by all firms.⁵⁰ This required large financial backing, human capital and strong relationships with suppliers in the development process, these being, the hardware component suppliers and software developers, and in the launch of the console with the distributors and retailers.⁵¹ This made the entrance barrier in the market significantly more difficult. A price war also emerged as all three console manufacturers would cut prices of the hardware to increase sales. For instance, in September 2001, Sony dropped the price of the PlayStation 2 to 199 British pounds, which forced Microsoft to drop the price of their Xbox to the same price due to poor sales.⁵² Now that prices were the same this pushed the console manufacturers to diversify their selling strategy and marketing of their products. Sony marketed their console as a home entertainment system, attracting an older audience, while Nintendo would market their GameCube as a ‘gamers machine’. On top of that, software development had choices in format of selling the games, cartridge and CD. CD gradually became the preferred method of game data storage and was eventually used by all three competitors.⁵³

The generational cycles of console still matter for the global structure of the game industry presently. The year 2020 saw the industry estimated value increase significantly from the previous two years and one of the factors for this was the release of Sony and Microsoft’s new generation consoles. With that being said, another shift has occurred in the video game industry in the 2000s that has bearing on its structure and contributed to its growth. The emergence of smartphones and tablets in the late 2000s opened avenues for games to be sold on mobile devices. In 2007, when Apple released the first Apple iPhone, it dramatically changed the circumstances of mobile gaming as tablets and smartphones were being adopted as gaming platforms for mobile users.⁵⁴ The mobile sector grew exponentially with more people worldwide having access to smartphone devices and this altered the structure of the industry. New types of distributors and platforms entered, such as Apple with their App store and Facebook, and this diversified the market and channels. Game studios had the option to sell their games on PC, console and mobile. The mobile sectors influence can be seen in the decision making of Swedish based studio Mojang who originally released their

⁵⁰ Johns, “Video Games Production Networks: Value Capture, Power Relations and Embeddedness.”, 159.

⁵¹ Johns, 159.

⁵² Ibid, 159.

⁵³ Ibid, 159.

⁵⁴ Giuditta De Prato, Claudio Feijóo, and Jean-paul Simon, “Innovations in the Video Game Industry: Changing Global Markets,” *Communications and Strategies* 1, no. 94 (2014), 20.

game Minecraft on PC, and after its full release in 2011, prioritised the creation of a mobile edition of the game before a console edition, which came later in the following year.

Second to mobile games is the development of online video games, or better understood as multiplayer games. The online and wireless market for games has been growing since 2004. This was due to the increasing numbers of broadband subscribers and the innovations made in gaming: the transition to handheld devices such as the smartphone, and the newest generation of consoles at the time, such as the Nintendo DS. In this time, Microsoft and Sony also launched their online services for gaming consoles (2003-2004).⁵⁵ Both online and mobile games are characterised by two popular business models: subscription based gaming and freemium. Subscription based gaming is typically used by MMO's (Massively Multiplayer Online) games, where players have access to a full online game through a paid subscription model. Freemium is a free-to-play model where a limited version is made for free and a full version is then available for a fee.⁵⁶

2.4 Value Chain and the Video Game Production Network

Both mobile and online games have transformed the value chain of the video game industry.⁵⁷ Before delving into how this occurred, it is necessary to understand what a value chain is in the context of the video game industry. The value chain is a tool developed by Michael Porter and can be described as a systematic way of examining all the activities a firm performs and interacts.⁵⁸ It disaggregates a firm into its strategically relevant activities and therefore creates an overview of the behavior of costs and the existing and potential sources of differentiation.⁵⁹ According to Porter, firms gain a competitive advantage when performing these strategic activities cheaply and/or better than their competitors. A firm's value chain is part of a larger interconnected group of activities called the value system.⁶⁰ Here there are various different value chains, such as the suppliers value chain that creates and delivers the purchased inputs used in a firm's chain. Furthermore, there is the channel value chain, where products pass through additional activities, which are understood as channels, on their way to the buyer. The channel value chain affects the buyer and influences the firm's activities. Ultimately, the firm's product eventually becomes part of its buyer's

⁵⁵ De Prato, Feijóo, and Simon, 28.

⁵⁶ Ibid, 27.

⁵⁷ Ibid, 30.

⁵⁸ Michael Porter, "The Value Chain and Competitive Advantage," in *Understanding Business: Processes*, ed. David Barnes (London and New York: Routledge, 2001), 50.

⁵⁹ Porter, 50.

⁶⁰ Ibid, 50.

value chain. To gain a competitive advantage over your competitor depends on understanding not only the firm's value but also how it fits within this value system. The value chains for firms will differ between industries and is dependent on their history, strategies and success at implementation.⁶¹

Chart 1 is an adaptation from Manel González-Piñero's paper, “*Redefining The Value Chain Of The Video Game Industry*” (2017) and illustrates the retail, mobile and online value chain of the video game industry. Hardware manufacturers can be understood as the console and gaming platform manufacturing companies such as, Nintendo, Sony and Microsoft. Developers are the group developing the software that allow players to play games on the hardware platforms. Software developers can work within a video game publisher firm but also independently as a software developer studio where they sell software licenses and or develop software for certain publishing firms. Publishers are the software marketing companies who pay the commissions for the rights to publish video games or contract and hire developers to produce video games on their behalf. They contribute to the innovation process in the value chain since they are responsible for the product manufacturing, distribution, advertising and marketing.⁶² This entails that distributors are an intermediate between publisher and retailer yet most publishing firms have their own distribution network to move their games to retailers where consumers can buy video games.⁶³ According to González-Piñero, a critical element in the retail value chain of video games is the funding and investment. The production of a video game for console and PC requires high initial development costs.⁶⁴ Publishers generally assume the need for pricy initial development costs, and if the publisher is a separate identity from the developer, are then solely responsible for the financing the development of the game. This entails that they obtain the commercialisation rights and a high percentage of sales.⁶⁵ However, when publisher and developer are integrated as being part of the same company, then it is the company that handles all the finances.⁶⁶

⁶¹ Ibid, 50.

⁶² Jeff Readman and Andrew Grantham, “Shopping for Buyers of Product Development Expertise:.. How Video Games Developers Stay Ahead,” *European Management Journal* 24, no. 4 (2006), 263.

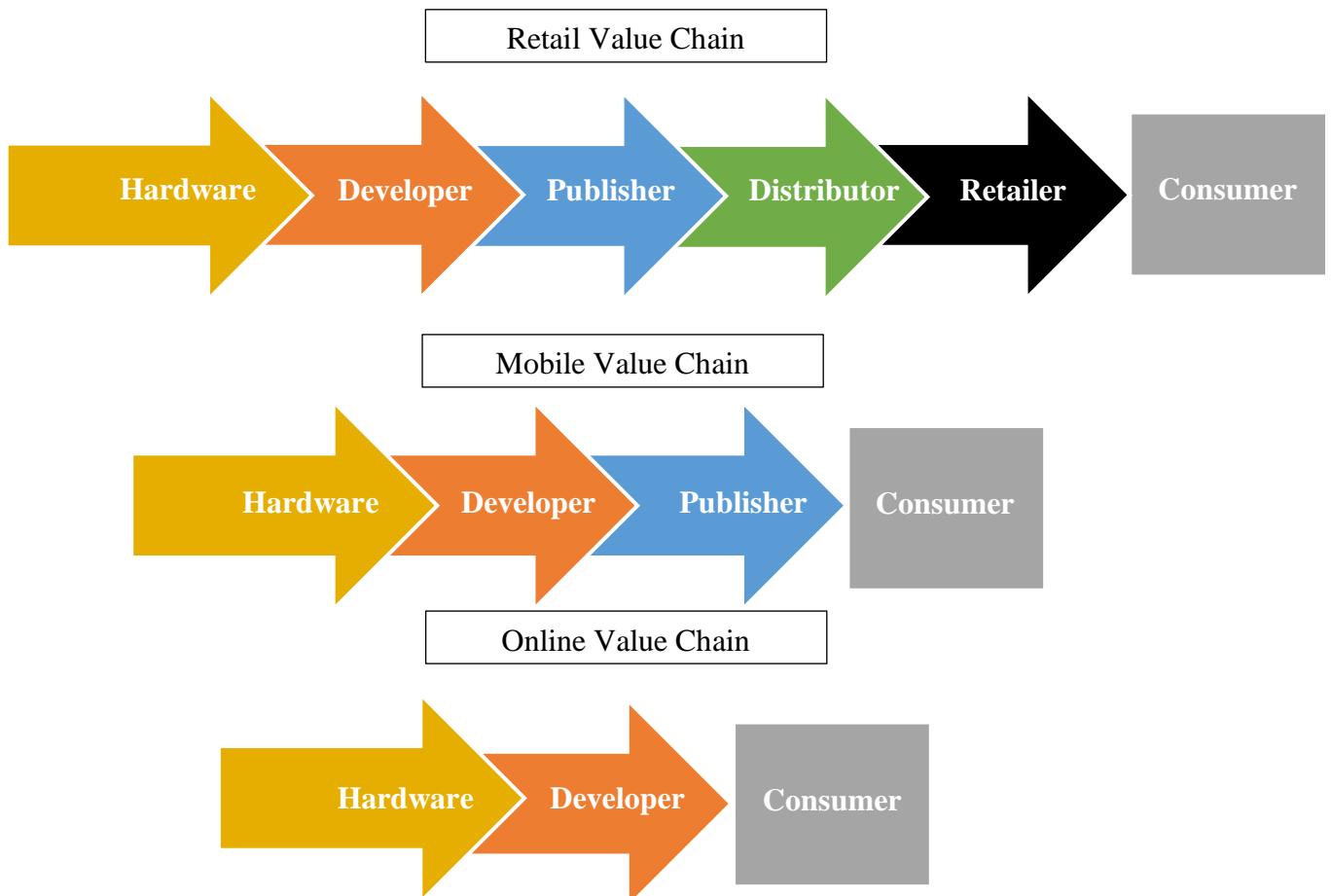
⁶³ Manel González-Piñero, *Redefining the Value Chain of the Video Games Industry*, 2017, 22.

⁶⁴ González-Piñero, 22.

⁶⁵ Ibid, 22.

⁶⁶ Ibid, 22.

Chart 1



Both online and mobile gaming sectors affected the value chain by lowering the entry barrier for developers to distribute their games. Online digital distribution has allowed for the convergence of the distributor and retailer under the range of activities of the publisher. The physical production of video games became minor as they could now be delivered through an online network. In the online gaming segment, the retailer is no longer relevant due to that product being a ‘digital good’, produced and distributed on the online network at marginal costs close to zero.⁶⁷ The publisher could now directly distribute the game and skip the need for all the intermediaries of the chain and sell directly to the customer. This gave rise to smaller and independent studios and the indie game genre because developers had easier access to reaching their customers. The mobile and online value chain are also fluid when it concerns publishing and distribution. Developers may still use a publisher even if they are

⁶⁷ Ibid, 22.

distributing online only, and for mobile, developers may also directly distribute the games themselves on the mobile stores without a publisher. A main reason for this has to do with the financing of projects, start-up and independent studio's often need a publisher to have their games fully developed and released. Through online distribution, the developer and publisher can choose to distribute the game through Internet service providers (ISPs) or device manufactures. As the online and mobile sectors have grown so too the need for online portals and platforms that allow distribution of games.⁶⁸ ISP's and device manufactures act as game markets for the distribution of games but also help in the promotion and localisation of newly released games.⁶⁹ ISP's and device manufactures such as Steam, Nintendo eShop and the App Store give developers access to an unlimited global market for distribution of video games. Even though the existence of ISP's and device manufactures created a new direct relationship between developers and their users, a publisher might still be required due to their financing, marketing and promotion expertise.

With regards to internationalisation, online gaming has enhanced the role of localisation professionals. Due to the Internet, localisation professionals play a larger role by not only being translators but also adapting a product to the needs and demands of a potential market and culture 25.⁷⁰ They work with the skilled professionals of a studio to successfully localise their product for a market (programmers, graphic designers, editors, etc.,).⁷¹ Localisation in this instance plays a huge role in the internationalisation of games because the internet has given them a more profound role as it grants them information and knowledge of markets and cooperation with the skilled professionals of a studio. This point shall be elaborated later in this chapter.

The changes made to the value chain by the online and mobile sectors were disruptive, but this does not imply that the retail value chain has ceased to exist. The more complex and expensive games do require more intermediaries and therefore resort more to the retail value chain in reaching their customers.⁷² Related to this, the platform the game is playable on influences the complexity of the value chain and how many intermediaries are involved as well. This is known as the video game production network. The video game production network is defined by its hardware and software production, who both have their

⁶⁸ De Prato, Feijóo, and Simon, 30.

⁶⁹ González-Piñero, *Redefining the Value Chain of the Video Games Industry*, 2017, 23.

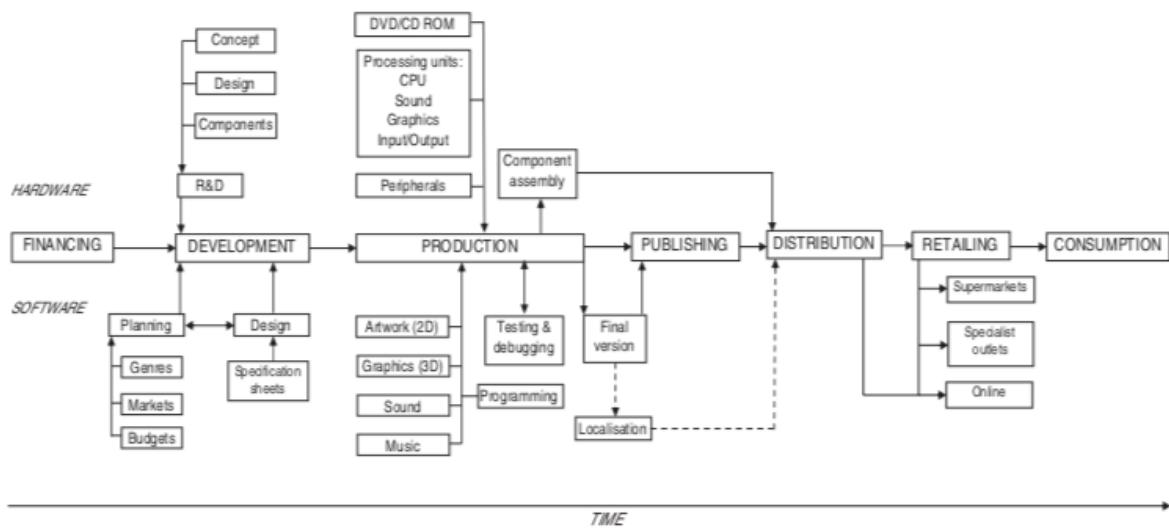
⁷⁰ Ibid, 25.

⁷¹ Ibid, 25.

⁷² De Prato, Feijóo, and Simon, "Innovations in the Video Game Industry: Changing Global Markets.", 31.

own organisational structures and geographies.⁷³ Hardware production is conducted by console manufacturers, who organise the research and development, production of the console and the distribution to the customer.⁷⁴ Figure 1 below is a chart from Jennifer John's "Video Games Production Networks: Value Capture, Power Relations and Embeddedness" (2005) to help illustrate the complexity of the video game production network and the relation this has to the retail value chain.

Figure 1: The video game production network of the console game sector



Source: Jennifer Johns. "Video Games Production Networks: Value Capture, Power Relations and Embeddedness." *Journal of Economic Geography* 6, no. 2 (2005): 151-80

2.5 Internationalisation and Economic Globalisation

Related to the evolution of the structure of the video game industry and the value chain is economic globalisation. Economic globalisation is a term that has various different interpretations and definitions. The definition chosen for this section comes from a CDP background paper published by the United Nations department of Economic and Social Affairs titled *Economic Globalisation: Trends, Risks and Risk Prevention*. The paper's relevance with the topic and the author's background is the justification for choosing this definition. The author, Gao Shangquan, refers to economic globalisation as:

⁷³ Johns, "Video Games Production Networks: Value Capture, Power Relations and Embeddedness.", 159.

⁷⁴ Johns, 159.

*The increasing interdependence of world economies as a result of the growing scale of cross-border trade of commodities and services, flow of international capital and wide and rapid spread of technologies.*⁷⁵

Shangquan emphasises that the fast globalisation of the world economies is mainly based on the swift development of science and technologies and a result from an environment where the market economic system has been spreading throughout the world and developed an increasing cross-border division of labor that has infiltrated down to the level of production chains within businesses of different countries.⁷⁶ Economic globalists understand economic globalisation as a phenomena of the growing integration of national economies in most countries around the world.⁷⁷ The drivers of this integration are lower trade barriers, increased financial flows, improvement in communication, technological advancements and increased labor mobility. The result of this is the flows and networks of economic interaction have been intensified as national economies become infiltrated and a new global infrastructure emerges.⁷⁸

The effects of economic globalisation on the video game industry are apparent. For one, hardware components started being assembled and brought over from an abundant of different parties around the world. For instance, Microsoft's first console, the Xbox, had components that were built in Singapore, the Netherlands, the United Kingdom, Korea and Japan.⁷⁹ This illustrates the growing integration of countries and cross-border division of labor. In terms of internationalisation, economic globalisation has greatly improved video game firm's ability to localise and reach international market due to improvements in technology and communication. Gaming companies have been aware that what works in one specific market might not sell in another, however access to that information has not always been easy. Before the internet, games were built for specific niche markets, tailored and designed separately for each country a developer and publisher would want to sell them in.⁸⁰ For instance, Japanese developer and publisher Capcom released *Rockman* in 1987 for the Nintendo Entertainment System (NES). As seen in figure 2 and 3 below, for the American market Capcom decided to change the look and name of the game, rebranding it *Mega Man*.

⁷⁵ Shangquan, "Economic Globalization: Trends, Risks and Risk Prevention Contents.", 1.

⁷⁶ Shangquan, 1.

⁷⁷ Bob Kelly and Raia Prokhovnik, "Economic Globalization?", in *A Globalized World? Culture, Economics, Politics*, ed. David Held, 2nd ed. (Routledge, 2004), 86.

⁷⁸ Kelly and Prokhovnik, 101.

⁷⁹ Johns, "Video Games Production Networks: Value Capture, Power Relations and Embeddedness."

⁸⁰ Brent Heslop, "From Pong To Call Of Duty: The Globalization And Localization Of Video Games", Contentstack.Com, 2020, <https://www.contentstack.com/blog/all-about-headless/globalization-online-gaming/>.

Essentially, video games were being localised one at a time, which was an arduous, costly and time-consuming approach to internationalisation. In addition, it was harder to know whether such changes to a game would improve its chances of selling in another market. The rise of the internet has changed such approaches, making it possible for developers and publishers to launch games globally, where games have already been localised in their development. Digital distribution has made access to the global market and information far greater.

Figure 2: Game menu screen for *Rockman* when sold in Japan (1987)



Source:
<https://legends of localization.com/research-rockman-megaman/>, accessed May 19th, 2020

Figure 3: Game menu screen for the *Mega Man* when sold in the United States (1987)



Source:
<https://legends of localization.com/research-rockman-megaman/>, accessed May 19th, 2020

2.6 Conclusion

A discussion on internationalisation and the related theories has established that both Stage theory and the Uppsala model and INV theory will need to be applied to the case studies to determine which is more relevant to the Dutch video game industry and in doing so it will contribute to the discussion on whether international or domestic factors are more influential to internationalisation strategies in light of economic globalisation.

Looking into the historical structure of the video game industry through time, the value chain and video game production network and economic globalisation has revealed major features that have influence on the internationalisation strategies of Dutch studios. These features are in some ways specific to the game industry and are important to mention

since internationalisation theory does not often take into account the specificities of the industry in question. For example, digital technology impacts the ‘global’ structure of the industry and simultaneously lowers barriers to distribute games internationally.

The console and its generational cycle have played a major role in the structure of the industry. Consoles would define the generation of games created and released on the system and so developers and publishers would work on games tailored to the technological specification of any given console. Ultimately, the console manufacturers could also gatekeep the number of games released on their systems. Consoles reigned supreme particularly throughout the 1990s and 2000s, however, the introduction of the online and mobile gaming sector did bring restructuring to the industry. The smartphone and tablets in the late 2000s opened new avenues for games to be developed and distributed on mobile devices. This also resulted in the emergence of new online platforms. Game studios had the choice to sell their games on PC, console and now mobile. The online and wireless market introduced two popular business models: subscription based gaming and freemium, which opened up the industry to many new startups and independent studios as the mobile sector continued to grow in popularity as mobile technology improved.

The value chain of the video game industry is multifaceted and in simple terms, comes down to the type of game being built by developer and the platform they are produced for. In the console era, the retail value chain was common until the emergence of the mobile and online sectors. The online and mobile game sector have given developers diversified options in their internationalisation strategies. It became no longer required to work with various different intermediaries in order to reach their consumers. If they wish to increase their global reach, they can have their game distributed through an online platform, who then provide the access, localisation and promotion of their game to a global user base. That being said, for more complex and expensive games, a greater number of intermediaries will be involved regardless and that applies both to the mobile and online sector as well. For internationalisation, understanding the value chain means to know how the developer can successfully and at low cost as possible, reach their consumers in the global market. As said earlier, the disruption made by the mobile and online sectors resulted in the rise to smaller and independent studios. This can be particularly seen in the Netherlands where the number of companies of firm size between two and five people has increased from 98 to 171 between

2012 and 2018.⁸¹ Although case studies will be needed to assess the effect of the online and mobile sector on the internationalisation strategies of studios, it can already be stated here that studios founded in the developed digitalised era of video games are likely to have a more digitalised and online orientated internationalisation strategy compared to studios founded in the console dominated era. This is also due to the increased impact of economic globalisation on the video game industry. On top of the growing integration of countries and cross-border division of labor for the development and production of hardware, developers and publishers have the ability to release games globally and already localised instead of incrementally releasing versions of their games for different markets.

⁸¹ Christel van Grinsven and Max Otten, “Games Monitor: The Netherlands 2018 Full Report” (Utrecht, 2019), 13.

Chapter 3: History of the Video Game Industry (1972-1999)

3.1 Introduction

The history on the video game industry and moreover of the Dutch video game industry, provides a foundational background on how the industry has evolved and how the Dutch industry was constructed within it. A general understanding of the historical build of the video game industry compensates the lack of scholarly work on specific national industries such as the Netherlands. This chapter begins with an introduction to the origins of video games and what factors played a role into its emergence as an industry in the 1970s. This section specifically focuses on developments that happened in the United States. Following this is a look into how the industry grew in the 1970s up until the crisis in 1978. Related to the crisis is how the industry took shape in Japan, who play a vital role in the industry's survival going into the 1980s and the second crisis that hits the industry in 1983. In the emergence of the second crisis, Nintendo's dominance will be discussed due to its influential position that it took going into the second half the decade and into the beginning of the 1990s. The period of the 1990s will highlight some of the significant technological innovations that impacted the structure of the industry going forward. A look into the historical position of the Dutch industry from the 1970s and through to the end of the 1990s will be the final section of this chapter.

3.2 Where do video games come from?

Video games did not just appear out of the blue from one day to the next and there was not one person that can be identified as their sole inventor. The industry is built upon a number of cultural and scientific traditions that would lead to its existence.⁸² The popularity of pinball machines and board games coupled with the rapid technological and innovative developments in computer technology were significant influences to the creation of the first video games.⁸³

It's with board games that we see an element of our reality taken and simplified for a game where the players are motivated to use their imagination to play in the setting and world that the game would take place. Think of board games like *Risk*, where players are to immerse themselves in a world of conquest and strategy, and must inevitably fight each other for supremacy of the board by completing objectives. *Dungeons and Dragons*, a fantasy role

⁸² Steven Malliet and Gust de Meyer, "The History of the Video Game," in *Handbook of Computer Game Studies*, ed. Joost Raessens and Jeffrey Goldstein (MIT Press, 2005), 23.

⁸³ Malliet and Meyer, 23.

playing board game created in the early seventies, took the idea of immersing players in an imaginary environment to another level. The creation of a fantasy world with its own social and economic rules and a complex object system were two essential features of *Dungeons and Dragons* that a standard video game has as well.⁸⁴

Video games can also be seen as computer programs, and therefore rely heavily on the development of computer technology. The early 1960s is where the early forerunners of the modern computer first appeared with its potential in storage and processing. Although these two features were limited by today's standards, it laid crucial foundations that future computers have been built upon and ultimately gave way to programs like video games.⁸⁵ Despite there not being a sole inventor of video games, there are a select few names to which one could consider: Steve Russel, Ralph Baer and Nolan Bushnell. The creation of the first interactive computer game is credited to Steve Russel (an MIT student) and his game *Spacewar* made in 1962. The game was able to perform a diagnostic function and demonstrated the ability and accessibility of computers.⁸⁶ Baer is considered to be the founder of the at-home video game, where a computer game could be used in the boundaries of one's home. Bushnell was firstly known for his game *Computer Space*. While not innovative, it was built within a machine strikingly similar to that of pinball and was marketed as the first arcade videogame.⁸⁷ Although it was not a commercial success, as the eventual co-founder of Atari, he took the idea and experience with *Computer Space* and created *Pong*. Although *Pong* was not the first of its kind, its success and popularity when it was released in 1972 gave it the distinction of being the first serious hit in video games. Karen Collins in her book *Game Sound* argues that an unprecedented feature that made *Pong* unique was that it was the first game to feature sound.⁸⁸ Unlike his predecessors, Bushnell managed to take video games out of the scientific research bubble and bring them to the public.⁸⁹ An unmentioned but notable figure, Willy Higinbotham was an engineer working at the Brookhaven National Laboratory in 1958. He combined the influence of pinball and computer technology and this is where we see the separate entities of *Computer* and *Game* come together. His creation, which he coined *Tennis for Two* as he believed it represented an abstraction simulation of tennis, was a small light dot that moved across the computer screen

⁸⁴ Ibid, 24.

⁸⁵ Ibid, 24.

⁸⁶ Johns, "Video Games Production Networks: Value Capture, Power Relations and Embeddedness.", 154.

⁸⁷ Malliet and Meyer, "The History of the Video Game.", 25.

⁸⁸ Karen Collins, *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design* (Cambridge (Mass.): MIT Press, 2008), 8.

⁸⁹ Malliet and Meyer, "The History of the Video Game.", 25.

with the help of two boxes and was controlled with push buttons so that a person could control the curve of the light dot.⁹⁰ As seen, there a select few influences and people that have all played a role in the emergence of the video game industry. With that being said the birth of the video game *industry* as we know it can be defined to have started in the early 1970s.

3.3 The Birth of the Industry

The United States was the cradle for the industry in the beginning of the 1970s. Ralph Baer's ideas for the console market and Nolan Bushnell's ideas for the arcade market were catalyst's for the industry in the US with respective markets having remarkable sales figures.⁹¹ The arcade was the dominant platform initially, with Bushnell and Ted Dabney's company Atari, dominating the market with *Pong*. Yet, Magnavox had bought the license from Baer to manufacture a home console. Subsequently, the *Odyssey* was introduced in 1972, bringing video games to households.⁹² Console's like the *Odyssey* gave the industry major growing success in the middle of the 1970s- even Atari got onboard with consoles in 1974 with their *Home Pong* system. Added to this, the console experienced major steps in technological innovations within the decade. The *Channel F* (1976) and the *Studio II* (1977) systems made it possible to play games that were stored on an external data carrier (cartridge) instead of being hard-wired into the console itself.⁹³ The latter was a limitation for systems such as the *Odyssey*, which on top of this, had no sound and the games were in black and white. Despite its limitations the *Odyssey* was nonetheless quite popular and well marketed, essentially being the arcade's largest competitor.⁹⁴ However, it was the *Atari 2600* (1977) that found major popularity, replacing systems such as the *Odyssey* and beating both *Channel F* and *Studio II* systems respectively in the market due to its improved sound and graphics.⁹⁵ The *Atari 2600* was built simplistically in order to make games easier to play. It was equipped with a simple joystick and a few turning buttons tailored for ball and paddle games such as *Pong*. Atari had also a range of original games that brought many breakthroughs such as *Got'cha* (1973) and *Tank* (1974). They also produced sports games like *World Cup Football* (1974), and racing and simulator games, notably *Death Race* (1976), which was the first

⁹⁰ Ibid, 23.

⁹¹ Ibid, 25

⁹² Ibid, 26.

⁹³ Melanie Fritsch, "History of Video Game Music," in *Music and Game: Perspectives on a Popular Alliance*, ed. Peter Moormann (Springer VS, Wiesbaden, 2013), 12.

⁹⁴ Malliet and Meyer, "The History of the Video Game.", 26.

⁹⁵ Fritsch, "History of Video Game Music.", 12.

game that experienced controversy due to its violent nature.⁹⁶ Expanding from *Pong* and games alike was an element of Atari's success in the 1970s that would prove to be critical to its and the industry's survival in the United States.

3.4 Two Crises and the Rise of Japan

The period between 1973 and 1977 saw the game industry develop considerably, however, between 1977 and 1978 the industry suffered from an unexpected drop in sales with the console market hit particularly hard.⁹⁷ The Channel F, Studio II and Odyssey would disappear, leaving Atari as the sole surviving console in the West. Simply, the market had been flooded with an abundant of different consoles and hardware. Atari survived not because of the Atari 2600 but because of their catalogue of innovative games which they continued to develop and release.

A changing of the guard ensued during this collapse as American companies lost their dominant position to Japanese companies who were now establishing their own foothold in the western market.⁹⁸ Japanese developers such as Tomohiro Nishikado (Taito) and his game *Space Invaders* kept the video game industry alive. The Japanese video game industry did not emerge in the same way as it did in the United States with foundational developments in just the computer industry and university level research institutions. It was an industry imported from the United States that took a shape of its own.⁹⁹ A brief overview of how the industry emerged in Japan is necessary to understand the historical build and in particularly how it saved the industry from crisis in 1978. The emergence of the industry in Japan is strongly related to the socioeconomic situation of the country after the Second World War.

Amusement and consumer electronic industries and toy and television manufactures were the main driving force behind the development of video games in the country.¹⁰⁰ It was the entertainment corporations and the import and export businesses that were well established in Japan after the war that made the industry domestically and internationally take off successfully. The idea that the industry was imported from the United States is a crucial aspect to its rise in Japan. There was a belief in the country that after having lost the war it was the inferior economy and lack of technological capabilities that was their biggest

⁹⁶ Malliet and Meyer, "The History of the Video Game.", 27.

⁹⁷ Fritsch, "History of Video Game Music.", 12.

⁹⁸ Ibid, 12.

⁹⁹ Picard, "The Foundation of Geemu", no page, under "The socioeconomic context of post-war Japan".

¹⁰⁰ Ibid., no page, under "The socioeconomic context of post-war Japan".

weakness.¹⁰¹ It was this belief that led to the determination in developing their economic and technological capabilities. It spurred the country to learn from the United States and adapt their economy and technology in their own way with the goal of being an improvement on what was existing in America.¹⁰² The household electrical appliances industry and the computer industry were two cornerstone industries that contributed to the economic development of Japan after the war.¹⁰³ This led to the introduction of television and home entertainment that created a leisure boom and mass consumption. Moreover, the government campaigned massively for products made in Japan, allowing technology to grow rapidly.¹⁰⁴ All these factors helped create a Japanese economic structure that by the 1970s a video game industry could emerge from.

Another foundational element of the video game industry in Japan was the cartoon and animated film culture. The cartoon and animated film industries provided the skills and expertise for character production and graphic design which are two software production elements important for scenario writing and drawing.¹⁰⁵ The video game industry was also offering higher incomes than the cartoon and film industry, making it increasingly more attractive for designers and illustrators. For instance, entering into the 1990s where the industry was enjoying rapid market growth, Japanese companies were still employing designers and illustrators at higher wages and this caused a shortage of labour in the animated industry.¹⁰⁶

Leading up to 1978 many Japanese companies were progressively getting interested in computer games and started to focus on development. Japan had already a tradition of game machines, they had pachinko's which was their version of a pinball machine and were vastly popular. The arcade machine brought from the United States had received some interest, however, the pachinko's popularity meant that *Pong* and many of its variations did not threaten their market and therefore if video games were to take off in Japan, Japanese companies had to beat out the pachinko's in popularity.¹⁰⁷ Hence why Taito and specifically, Tomohiro Nishikado's, *Space Invaders* became a huge success domestically and abroad as

¹⁰¹ Shunya Yoshimi, “‘Made in Japan’: The Cultural Politics of ‘home Electrification’ in Postwar Japan,” *Media Culture & Society* 21, no. 2 (1999), 150.

¹⁰² Yoshimi, 150.

¹⁰³ Ibid, 160. Picard, “The Foundation of Geemu”, no page, under “The socioeconomic context of post-war Japan”.

¹⁰⁴ Yoshimi., 161.

¹⁰⁵ Izushi and Aoyama, “Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom.”, 1848.

¹⁰⁶ Ibid, 1848.

¹⁰⁷ Malliet and Meyer, “The History of the Video Game.”, 28.

there was incentive to create a new innovative game that had a greater appeal than pachinko's. In Japan it was the first computer game to receive true mania.¹⁰⁸ *Space Invaders* was the beginning of a trend where Japanese companies in the video game industry were introducing numerous technical and content related innovations that had a long-lasting impact. Following *Space Invaders* came Namco's *Pac-Man* in 1981 and soon after that Nintendo brought out *Donkey Kong* in the same year.

Nintendo would become the leading figurehead of the console and handheld market by the 1980s. In 1983, the video game industry would again face a crisis. This time the industry suffered from an overproduction of software, there were simply too many games flooded into the market that were average at best or of very poor quality- a complete opposite to the previous crisis that suffered from an overproduction of hardware.¹⁰⁹ It would stabilise after 1986, with Nintendo being the clear leader in the second half of the 1980s. Nintendo was founded in 1889 and formerly a producer of toys and playing cards. Post Second World War, the company started to take interest in acquiring knowledge of electronics. In 1964, Nintendo wanted to develop in-house technical skills and started hiring experienced electronics hardware engineers and started joint research and development with Sharp and Mitsubishi Electric.¹¹⁰ Forwarding to 1975, with one of their experiments they got a license in Japan to produce Magnavox's *Odyssey* that offered a variation of *Pong*.¹¹¹ It is with such experiences that Nintendo built towards making their first own home console, the Famicom in 1983. It was a latecomer to the console market, behind notable Japanese companies like Bandai but its success was in its price competitiveness in comparison to its competitors and its ability to deliver quality original hit games such as the aforesaid *Donkey Kong* for the arcade and *Super Mario Brothers* in 1985.¹¹² Games such as *Super Mario Brothers* were popular due to the creation of recognisable characters that soon became iconic, which can be credited to the animated and film culture of Japan.¹¹³ Nintendo was also ahead of its competitors because it understood the importance of software and nurtured in-house talent as well as through third party publishers. It was also on the handheld market where Nintendo dominated. In 1989 they would release the GameBoy, a handheld console that used the

¹⁰⁸ Ibid, 28.

¹⁰⁹ Ibid, 34.

¹¹⁰ Izushi and Aoyama, "Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom.", 1847.

¹¹¹ Ibid, 1847.

¹¹² Ibid, 1847.

¹¹³ Picard, "The Foundation of Geemu", no page, under "The Famicom Boom (1983 – 1990)"

cartridge system, which allowed for better graphics.¹¹⁴ The GameBoy is considered to be the first handheld game console of its kind, and the concept, although has continued to be improved and modernised, still exists in today's latest handheld consoles.¹¹⁵ So, heading into the second half the 1980s and by 1990, Nintendo was in a dominant position in the Japanese, American and European markets.¹¹⁶

3.5 1990s: Innovation Boom

Technological developments in the 1990s changed the face of the video game industry rapidly. The many events that happened in this decade are arduous to breakdown concisely and therefore only selected fundamental highlights will be discussed. The bit capacities of the PC and Consoles improved graphics and new methods of visual processing allowed computer generated images to achieve a greater level of precision that had not been seen before.¹¹⁷ The decade began with Nintendo and Sega in a console duel, both focusing on developing top of the line hardware. Before 1991, Nintendo was dominating the console market with their NES, however, Sega introduced its own console, the Mega Drive in 1989, that was technically superior to the NES and would finally overtake it as the best-selling console in 1991.¹¹⁸ Nintendo reacted with releasing the Super NES in the same year with the hopes of retaking its leading position. While Sega and Nintendo were in their console war, they would be met by increasing competition from the likes of Sony and their PlayStation in 1994, which was one of the first CD ROM-based consoles on the market. The CD-ROM allowed a greater increase in storage capacity, which led to the incorporation of more detailed graphics and full motion video clips.¹¹⁹ This opened a new array of game genres that were more complex and engaging, resulting in the average playing time of users to increase.¹²⁰ Furthermore, in the beginning of the 1990s, two American specialist graphic-chip manufactures Nvidia and ATI technologies came into the industry with a breakthrough software technology, the 3D engine. Soon after, the first 3D engine games were released such as *Catacombs 3D* by the Texas based developer company id Software in 1991. As said, such technological innovation

¹¹⁴ Malliet and Meyer, "The History of the Video Game.", 36.

¹¹⁵ Ibid. 36.

¹¹⁶ Izushi and Aoyama, "Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom.", 1847.

¹¹⁷ Malliet and Meyer, "The History of the Video Game.", 38.

¹¹⁸ Ibid. 38.

¹¹⁹ Izushi and Aoyama, "Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom.", 1857.

¹²⁰ Ibid, 1857.

introduced new genre of games such as first-person-shooters and blockbuster titles like *Doom* (1993), *Tomb Raider* (1996), and *Quake* (1997) which were all developed in the United States or the United Kingdom.¹²¹ Graphic detail and game complexity became two factors of quality that games were being judged upon and therefore costs of development started to increase. The heavy investment by studios and publishers into realistic graphics became a staple component of the US and UK industry. These new technologies undermined and ate at the domination of the Japanese companies in that period.¹²²

3.6 The Dutch Industry (1975 – 1999)

A small amount of literature on the emergence and history of the video game industry in the Netherlands exists. One of these being, *A Patchwork of Potential: A Survey of the European Game Industry* (2016) by David B. Nieborg and Jeroen de Kloet. They use the Netherlands as a case study to demonstrate how European countries have individual set of challenges when it comes to their national gaming industries. By mapping these challenges, the paper addresses the issues of creative policies and labor in the framework of globalisation and localisation.¹²³ Their chronological mapping of the history of the video game industry in the Netherlands revealed numerous political economic issues particularly prevalent in the 1990s, the growth of the industry in the 2000s and what challenges the Netherlands continued to face. Veraart's *Losing Meanings: Computer Games in Dutch Domestic Use, 1975-2000* (2011) has also provided significant historical background to the video game scene in the Netherlands since the 1970s beginning with the computer game programmers and hobbyists and mapping the changes seen in perspectives and behaviors towards video games in the Netherlands throughout the 1980s and 1990s.

The origins of the Dutch game industry begin with the development of the computer hobbyist scene that started in the United States. The world's first computer club was the Amateur Computer Society which was established in 1966 and their members consisted of people who were ambitious to build their own computers.¹²⁴ From this, the number of computer hobbyists began to grow quickly in the mid-to-late 1970s with the microcomputer gaining considerable popularity due to its use of a single microprocessor chip for its CPU that

¹²¹ Ibid, 1857.

¹²² Ibid, 1858.

¹²³ David B Nieborg and Jeroen De Kloet, "A Patchwork of Potential: A Survey of the European Game Industry," in *Global Game Industries and Cultural Policy*, ed. Anthony Fung (London: Palgrave Macmillan, 2016), 220.

¹²⁴ Frank Veraart, "Losing Meanings: Computer Games in Dutch Domestic Use, 1975-2000," *IEEE Annals of the History of Computing* 33, no. 1 (2011), 55.

could perform logic and arithmetic programs.¹²⁵ Hobbyists' electronics magazines started offering building plans and computer kits, such as the *Popular Electronics Magazine* who were promoting the American Altair 8800 microcomputer and allowed the computer to be sold through the advertisement of their January issue in 1975. The Altair 8800 was picked up by many grassroot movements and brought computer hobby-ism to a broader audience both in the United States and abroad.¹²⁶

The computer hobbyist scene begun in the Netherlands in 1975 where the first shops were opened that imported computer kits from the United States. Electronic magazines also contributed to the availability of computer parts by offering them through their magazines. This gave computer hobbyists access to a wider range of different parts and components. The first computer clubs were established in 1977, among them being the Hobby Computer Club (HCC). The HCC grew rapidly in its early years. In 1978 it had 767 members and by September the following year that number grew to 2,500 members.¹²⁷ The shops, magazines and clubs contributed to the growth in the Dutch personal computer environment in the mid-to-late 1970s.

In the early 1980s the trend in number of computer hobbyists continued to grow due to the introduction of new computers on the market such as the Commodore 64 and the Dutch Phillips P2000. This caused a shift in attention for hobbyists who went from building and programming computers to focusing on software and using them. The 'home computer' became the center of attention for many club members. Clubs started receiving teenagers and male students who were less interested about the electronics and building of computers and more interested in video games and the exchanging of them.¹²⁸ In many of these hobby clubs, software replaced programming as the major interest, with games becoming the most popular application especially with younger hobbyists.¹²⁹ In the 1980 and 1990s, the Dutch video game scene consisted of young males known as "bedroom coders" who worked on home computers like the Commodore 64 and belonged to what has been defined as the demoscene. The demoscene is often described to having its roots beginning in the mid-1980s with software piracy scene, where hobbyist and enthusiast would 'crack' games, which refers to the removal of the copyright protection schemes to prevent the duplication of games on tapes

¹²⁵ The Editors of Encyclopedia Britannica, "Microcomputer", Encyclopedia Britannica, 2016, <https://www.britannica.com/technology/microcomputer>.

¹²⁶ Veraart, "Losing Meanings: Computer Games in Dutch Domestic Use, 1975-2000.", 56.

¹²⁷ Ibid, 56.

¹²⁸ Ibid, 57.

¹²⁹ Ibid, 57.

and floppies.¹³⁰ The history of demoscene is closely related to that of computer and video games but going into the 1990s, the demoscene started to distance itself from the computer game players and software piracy of the mid-1980s and shifted its focus to other creative endeavors.¹³¹ Yet, it did produce talented programmers and graphic artists and some would eventually pursue their passion for video games and hence the emergence of the video game hobbyist scene in the Netherlands.¹³² In the late 1990s, a few of those Dutch bedroom coders took the entrepreneurial route and started their own software developer studios, such as Arjan Brussee who would become one of the co-founders of Guerrilla Games, and worked on blockbuster projects like *Killzone* in 2004.¹³³ Other notable Dutch programmers such as Lennart Sas and Arno van Wingerden also came from the group of bedroom coders, and founded Triumph Studios, which went on to create and publish *Age of Wonders* in 1999. Although there were minor successes here and there, the industry in the Netherlands struggled during this decade. Game development was not lucrative enough in the Netherlands and many companies looked for other opportunities in the commercial computer industry instead.¹³⁴ There are a number of reasons the Dutch game industry had struggled in this period. As discussed by Annie Heslinga in her thesis *Network Innovation: The emergence of the Dutch digital game industry (1980s – 2000s)*, the industry had little support. There lacked formal educational programs in the country, developers were mostly self-taught either learning and picking up techniques from other enthusiasts and or in gaming communities such as the demoscene.¹³⁵ With this in mind, one of the main reasons the Dutch game industry hit difficult times in the 1990s could be related to Philips withdrawal from the industry in this period.

Philips was an active company in the video game industry since the 1970s up until the end of the 1990s. In 1978, Philips introduced their game console the Videopac G7000, also known as the Magnavox Odyssey 2 in the United States. Similar to the Atari 2600, it had a game console, joysticks and separate cartridges.¹³⁶ The unique feature of the Videopac was that it was the only console of its time to use a keyboard, which Philips explained that the

¹³⁰ Markku Reunanen, “How Those Crackers Became Us Demosceners,” *WiderScreen*, 2014, 1.

¹³¹ Markku Reunanen, “Computer Demos — What Makes Them Tick ?” (Aalto University School of Science and Technology, 2010), 29.

¹³² Reunanen, “How Those Crackers Became Us Demosceners.”, 16.

¹³³ Nieborg and Kloet, “A Patchwork of Potential: A Survey of the European Game Industry.”, 214.

¹³⁴ Nieborg and Kloet, 213.

¹³⁵ Heslinga, “Networking Innovation: The Emergence of the Dutch Digital Game Industry (1980s - 2000s).”, 37.

¹³⁶ “De Philips G7000 Videopac Uit 1978, Een Spelcomputer Met Cartridges.”, Computerhistorisch Museum, 2020.

feature was necessary because they considered it the most advanced game console of its time.¹³⁷ In Europe, the Videopac G7000 did considerably well and worldwide it was able to sell millions of consoles.¹³⁸ That being said, its success should not be overstated as it was still inferior to the Atari 2600 who would continue to rule the market until the crisis in 1983. In the 1980s, Philips also teamed up with Sony to release CD's publicly in 1982, which firstly revolutionised the way people listened to music as it became the most efficient medium to store songs.¹³⁹ In 1986, Philips and Sony would join forces again based on the success of the CD and develop CD-I discs. These discs allowed for a new interactive experience for users, which could provide music, text and programmable data to produce graphics and videos.¹⁴⁰ Such a format could be used to create video games and because Philips technically owned the technology, a game company would need their licensing privileges to use it. Nintendo in 1990 approached Philips and Sony to create a CD-I based add-on for the next Nintendo console, the SNES. Philips would provide the CD-I technology while Sony worked on the hardware.¹⁴¹ Unfortunately for Philips and Sony, Nintendo broke off the deal. Yet, because they had already invested heavily into the development of a CD-I based console, they decided to continue working together to release the first Philips CD-I console in 1991. The ambition with the CD-I was to create the first multi-purpose home entertainment console. It was not just about video games, it could also be used as an interactive learning platform, to play music on standard CD's, to display photos, and with a digital video cartridge add-on it could be used to play films.¹⁴² Many of these elements are found in the modern-day console. Instead of becoming the trendsetter in CD-based gaming, the CD-I console turned out to be a failure in the industry and costed Philips near a billion dollars by the time it was discontinued in 1996.¹⁴³ Firstly, it was the games themselves that were of poor quality with difficult controls and gameplay that was unpolished, which did not help its reputation as a video game console. On top of this, it was an expensive system that would cost its customers \$1000 if they bought it in 1992.¹⁴⁴ Perhaps most crucially, CD-I technology was five-years-old by the time the console was released and in that period of accelerated innovation, CD technology

¹³⁷ Ibid.

¹³⁸ Dark Watcher, "Magnavox Odyssey2 \ Philips Videopac", Video Game Console Library, 2012.

¹³⁹ "History Of The CD: 40 Years Of The Compact Disc - CBBC Newsround", BBC, 2019.

¹⁴⁰ Eric Grundhauser, "The History Of The Philips CD-I, Failed Playstation Ancestor", Atlas Obscura, 2016, <https://www.atlasobscura.com/articles/the-history-of-the-philips-cdi-failed-playstation-ancestor>.

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ Reuters, "Company News; New Philips CD", *The New York Times*, 1992.

had already evolved and was far superior.¹⁴⁵ To its credit, without such a project Sony would have not gone on to release its PlayStation console in 1994 which, as said previously, was the first CD-ROM based console on the market and was the beginning of Sony's journey in the video game industry. What impact Philips would have had on the Dutch game industry in the 1990s with the CD-I going on to sell well is a topic of speculation, however the failure of the console and their subsequent withdrawal from the industry in the 1990s had influence on the appeal of game development in the period. When the company had released the CD-I, it also established the Dutch Interactive Media Association (Dima), an independent software development studio who would create a number of games for the system.¹⁴⁶ Had the console experienced success the studio might have not gone bankrupt and been an integral part of a well-established European based company, whose console might have been competing with Japanese and American companies. As we have seen with the case of Japan and Nintendo, the success of one company in the industry can have a considerable influence on the maturity and growth of an industry both domestically and abroad. Naturally, the circumstances both economic and cultural to the rise of Nintendo in Japan and abroad is vastly different from the Netherlands but had Nintendo not been successful with their console and games in the 1980s (more specifically after 1983), Japans position in the video game industry might have been different and the same can be said for the Netherlands. A positive aspect about Philips establishing Dima was that it did help start a few individual's career's in the Dutch industry such as Maurice Sibrandi and Peter de Jong who would go on to be the founders of Codeglue in 2000 one of the oldest and successful development and porting studios from the Netherlands.¹⁴⁷ So although Philips and it's CD-I console did not live up to its expectations it did contribute to the creation of Dutch development studios at the dawn of the 21st century.

The 2000s marked an era that was particularly encouraging for the European video game industry as several European studios brought new video games and franchises to the market and European publishers like Ubisoft became among the top ten publishers in the world.¹⁴⁸ It also saw the return of the United States in the hardware sector with Microsoft's Xbox who would now compete in what became a three-horse race between Sony, Microsoft and Nintendo. New technological opportunities like online gaming, social networking and

¹⁴⁵ Eric Grundhauser, "The History Of The Philips CD-I, Failed Playstation Ancestor".

¹⁴⁶ Niels 't Hooft, "Orange Oldies: Christmas Country, A Belated CD-I Pioneer - Dutch Games Association", Internet Archive Wayback Machine, 2015.

¹⁴⁷ Ibid. "Codeglue", Dutch Game Industry Directory, 2021, <https://dutchgameindustry.directory/?company=codeglue>.

¹⁴⁸ Óliver Pérez Latorre, "The European Videogame: An Introduction to Its History and Creative Traits," *European Journal of Communication* 28, no. 2 (2013), 144.

smartphones brought enthusiasm for the future of video games in Europe.¹⁴⁹ Nieborg and de Kloet highlight that after the struggles of the 1990s a number of Dutch game studios broke through into the global market in the beginning of the 2000s.¹⁵⁰ A number of individuals that had come from the hobbyist scene started to work together to help establish a more self-sustaining sector. Two developments contributed to the industry to jumpstart in the 2000s: a Dutch-owned and operated game publisher and the first Dutch game-focused curricula that was introduced by the Utrecht School of Arts. Such developments brought together investors, developers, academics, journalists and state actors who would contribute in building a finer economic, cultural and supporting infrastructure.¹⁵¹

3.7 Conclusion

Looking at the origins of the video game industry in the United States and Japan gives insight on the technological developments of computers and its contribution to the emergence of the industry, the development of its infrastructure and the influence of culture which allowed it to grow into a global industry in both the United States and Japan. Recognition must be given to key figures such as Atari and Nintendo whose ability to innovate both in terms of technology and content made a critical contribution to its growth in the 1970s and 1980s despite early crises.

During this time, the computer hobbyist scene in the Netherlands beginning 1975 and through into the 1980s gave way to bedroom coders who some would become entrepreneurs in an industry that was struggling to take-off in the 1990s. Philips's contribution to the Dutch game industry is clear with their involvement in building computers, consoles and technological innovations such as the CD and the CD-I. Although Philips withdrawal from the video game industry in the 1990s effected the potential for industry growth in the Netherlands at the time, it did help start a few careers in the industry who would go on to establish Dutch development studios that broke through into the global video game industry in the 2000s.

¹⁴⁹ Pérez Latorre, 144.

¹⁵⁰ Nieborg and Kloet, "A Patchwork of Potential: A Survey of the European Game Industry.", 214.

¹⁵¹ Nieborg and Kloet, 214.

Chapter 4: Case Studies

4.1 Introduction

Case studies on studios in the Dutch game industry that were founded between 1990 and 2015 are a means to explore how internationalisation strategies have developed over time and the impact this had on the position of the Netherlands within the global game industry. The innovation and development in technology throughout the years indicates that studios in different periods will have evolved their internationalisation strategies differently. The case studies are separated in three distinct periods: 1990-1999, 2000-2009 and 2010-2015. Each case study will contain a historical background on the founding of the studio and the state of the industry in the Netherlands and globally in their respective periods. Next, a discussion on distribution and publishing of their first games and how this has evolved through time. The following section focuses on internationalisation and the strategies of the studios in reaching the international market. The final section looks at the support the studios have received both nationally and internationally. Each case study will conclude with general remarks and impressions about the state of internationalisation strategies in each period.

4.2 1990-1999: Triumph Studios

Founding the studio and the state of the industry

Triumph Studios was founded by Lennart Sas and Arno van Wingerden in 1997 in the town of Delft. Studying at the time, Lennart and Arno were passionate about making video games and due to their shared interest in strategy-based games, started prioritising developing games over their studies. The game they were working on was *Age of Wonders*, a turn-based fantasy strategy game influenced by games like *Sid Meier's Civilization* series (1991) and *Masters of Magic* (1994). Released worldwide on PC in 1999, *Age of Wonders* became a hit in the fantasy and strategy genre thanks to its depth and innovative components that it brought to both genres and the well-developed story which was praised upon its release by one journalist for not being a “half-assed pastiche of Tolkien” like many that have come before it.¹⁵²

While the studio and the game were founded in the latter half of the 1990s, work on the game began around the middle of a decade that, as described in the third chapter, was a stagnant period for the video game industry in the Netherlands. However, there were a number of like-minded people from the hobbyist scene who were starting their own studio's

¹⁵²Jason Bates, "Age Of Wonders: Finally, A Worthy Successor To Master Of Magic.", IGN, 1999.

and developing new games. Lennart describes that outside the hobbyist scene there were a small number of larger companies in the Netherlands like Davilex, who were founded in 1986 and primarily focused on administrative software but did have a development studio and gaming division in the 1990s that made games for the Dutch market.¹⁵³ With this in mind, the video game industry in the Netherlands was by the majority made up of hobbyist individuals who were developing their own video games and soon founding their own independent software development studios.

Distribution and publishing

As the hobbyist scene in the Netherlands was relatively small and connected, Lennart and Arno made contact with other developers who were also starting up in the industry. Arjan Brussee (from Guerrilla Games) was developing a game called *Jazz Jackrabbit* with American-based company, Epic Games.¹⁵⁴ Epic Games was a software developer and publisher founded in 1991 who were developing their own game, and engine throughout the majority of the 1990s, and a project they called ‘Unreal’. In 1998 they released both game and the Unreal engine. The Unreal engine was a major success, critically acclaimed and made considerable sales.¹⁵⁵ Through Arjan, Triumph Studios was introduced to Epic Games who were at the time distributing games via shareware, which Lennart describes as an early form of digital distribution.¹⁵⁶ Off the success of their engine, Epic Games became a larger publisher, officially establishing a publishing wing together with other initiatives and naming the publisher, Gathering of Developers in 1998. *Age of Wonders* would be developed by Triumph Studios with Epic Games and then published and distributed through Gathering of Developers in 1999. Due to financial instability, Gathering of Developers was bought a year after the release of *Age of Wonders* by Take Two Interactive, a large publisher who owns labels such as 2K and Rockstar Games.¹⁵⁷ Take Two eventually took over the publishing and distributing of *Age of Wonders* and the next two games in the series. Since digital distribution only came later in the 2000s, the publishing and retail sector of the value chain played a larger role in the distribution of video games. Publishers were gatekeepers for software

¹⁵³ Triumph Studios Co-founder, interview.

¹⁵⁴ Ibid.

¹⁵⁵ Chris Plante, "Better With Age: A History Of Epic Games", Polygon, 2012. This made Epic Games a notable figure in the video game industry by the late 1990s as their engine was popular among developers but it also operated as an indie publisher.

¹⁵⁶ Triumph Studios Co-founder, interview. Shareware is a software that can be distributed free to users. The format allows software developers to get their products into the hands of potential users for a test period before deciding if they want to pay for the full version of the program. It became a popular software for video games in the 1990s with regards computer gaming as it gave PC users the chance to try out new games freely.

¹⁵⁷ Bob Mackey, "Gaming's Greatest Flops: Duke Nukem Forever", Usgamer.Net, 2014.

developers to get access to the market. It was essential for Triumph Studios to find a large international publisher in order to get their game into shops since it was a physical market at the time.

By the mid 2000's, the rise of digital distribution made a considerable difference for Triumph Studios ability to reach its customers because it undermined the power of retail. Studios like Triumph were seeing larger revenues by going taking a more direct route in reaching their customers through the digital market. They noticed the difference with digital distribution with their next game *Overlord* (2007), which became a commercial success for the studio when the game (and the sequels following it) were being sold directly to the consumers through platforms like Steam.¹⁵⁸ Although they continued to use an international publisher for the *Overlord* series between 2007 and 2009, when they returned to the *Age of Wonders* series in 2014 with *Age of Wonders III* they could publish the game themselves independently for the first time. It was also through these digital platforms that Triumph had access to more information about who their users were and where they were located, making it easier for them to know for what languages should the game be localised.¹⁵⁹

Internationalisation

Internationalisation was not a large research topic for Triumph Studios in the beginning. Nevertheless, it was clear that to sell the type of game they were developing, they needed to break into the international market as the Netherlands represented a small fragment of an entire market that he describes as core video games (PC games). Understanding this, they sought after a large international publisher who could get their game sold in retail shops worldwide. Consequently, *Age of Wonders* was being immediately developed in the English language as they did not have the hard data to know where the game would be popular making it the only logical route to follow.¹⁶⁰ This also has to do with the fact that the game may appeal better to a Western audience as it incorporates plenty of traditional Western fantasy elements such as dragons, magic and elves, inspired by the Lord of Rings and other influential works in the genre, as illustrated by Figure 1, a still shot from *Age of Wonders*. Even so, they soon found out that they had a following in Eastern Europe and Russia, due to

¹⁵⁸ Triumph Studios Co-founder, interview.

¹⁵⁹ Ibid.

¹⁶⁰ Ibid.

Figure 4: *Age of Wonders* (1999)



Source: “Age of Wonders Download (1999 Strategy Game) in <https://www.old-games.com/download/6328/age-of-wonders>, accessed May 17, 2021

the shared mythology of those regions and started localising the game for those audiences as well.¹⁶¹ As will be seen in the case study of Paladin Studios, the type of game being developed can have an influence on the markets that a studio focuses on. Even though there is the idea to have a game distributed on the international market and to have it localised for as many countries and regions as possible, Triumph Studios knew that due to the Western influence the game possessed it would likely be more popular in countries affiliated and familiar with the style than others. Had the game taken more elements from Asian mythology and fantasy their approach to internationalisation and localisation would have been different. This has now changed over time, with economic globalisation and the Internet bringing markets closer together and exposing customers to a wider range of cultural influences. For Triumph Studios this meant that even though their games had a Western taste it no longer needed to assume that it would do better in those markets as seen with its rising popularity in Russia and Eastern Europe later on.

Lennart emphasised that internationalisation has been key for Triumph Studios from the very start. He explains that the game industry is an example of an industry that grew with and utilised the Internet and related technological innovations effectively and as a result

¹⁶¹ Ibid.

introduced new internationalisation possibilities.¹⁶² Even in 1997, small groups of individuals like Lennart and Arno did not need a large platform or a well-funded large studio to reach the international market. This barrier to the international market has only continued to be lowered as time has gone by. The industry has become more competitive and flooded with independent studios from around the world as a result of this but it has also allowed studios like Triumph to come into contact with other people in the industry who were seeking to collaborate. For instance, a distribution partner from a certain region or country can give a local perspective on a globally sold game, and this can have a direct effect on how well a game can sell in those areas. Working with people from different parts of the world evolved to become also part of their internationalisation strategy.

Support

As said, Triumph Studios was founded in a struggling period for the video game industry in the Netherlands and therefore had little structural support. It was thanks to the community of hobbyist's that the studio was able to get into contact with an international publisher like Epic Games. That being said, over time organisations like the Dutch Game Garden have been able to help new start-up studios by for example, getting them access to international gaming events and conventions and such initiatives are important for young studios as the state of the industry in the Netherlands and abroad enforces a international orientation.¹⁶³ Although the size of Dutch game industry does drive studios to go international, Triumph Studios always relied on parties from countries like the UK and Sweden for financial support of their projects because the Netherlands did not have a larger publisher. An international publisher from the Netherlands could provide a gateway for Dutch talent and attract more financial support going into the Netherlands.¹⁶⁴

Conclusion

Triumph Studios was founded in a period dominated by publishers who acted as gatekeepers for the international distribution of video games. Games were being sold physically at retail stores and were the only way to access the international market. As the industry in the Netherlands consisted of hobbyist's and lacked structural support, they sought after an international publisher who could also provide the financial support to finish their project. Thanks to contacts in the Dutch gaming community at the time, they were able to work with American-based companies, Epic Games and later Take Two Interactive. Having a

¹⁶² Ibid.

¹⁶³ Ibid.

¹⁶⁴ Ibid.

game that was influenced by Western mythology and due to the lack of data concerning non-western consumers, the game was developed in English to appeal to the Western audience as this seemed effective to do at the time. Later, they noticed that the game was popular in non-English speaking countries in Eastern Europe and Russia and started to localise the game for these markets as well. *Age of Wonders* was a commercial hit and gave Triumph Studios the chance to continue developing games in the series and beyond into the 2000s. Digital distribution would prove to play a meaningful role later in the studio's existence with *Overlord* generating significant revenue as it was being sold directly to the customer on digital platforms. It also gave the studio access to information about its users and where they were from, further improving their reach in international markets. Overall, internationalisation was key to the success of the studio and continued to play a role as the access to the global market became easier both in terms of sales and collaborations with other partners worldwide.

4.3 2000-2009: Paladin Studios

Founding the studio and the state of the industry

Paladin Studios was co-founded by two freelancing programmers in 2005, Derk de Geus and Dylan Nagel. Its origins begin with both individuals working on a game engine developed in the Netherlands called 'Quest 3D'.¹⁶⁵ This engine was used for various things such as architecture visualisation and training simulators. By becoming more experienced with this game engine, Derk de Geus eventually landed a job at V-Step, a virtual simulator company based in Rotterdam that specialised in safety training for marine professionals in a virtual environment.¹⁶⁶ This is where Derk first met Dylan and eventually they began to do freelancing jobs together over time. As the projects got larger and consumed more time, both agreed to found a development studio in 2005 that would become Paladin.¹⁶⁷ Paladin Studios specialises in mobile games but have also released games on PC. Over the years they have released multiple successful titles such as *Momonga Pinball Adventures*, *My Tamagotchi Forever* and most recently *Cut the Rope Remastered*.

When founding the development studio, Paladin had little funding, however there was demand for their expertise by many clients and therefore they started working on various

¹⁶⁵ Paladin Studios Executive Chairman, interview.

¹⁶⁶ Jonathan Hodge, "Our Company - VSTEP Simulation", VSTEP Simulation, 2021, <https://www.vstepsimulation.com/about/our-company/>.

¹⁶⁷ Paladin Studios Executive Chairman, interview.

projects for different clients around the world. Essentially, both Derk and Dylan were doing outsourcing development and technically orientated support, for instance, working on a training simulator center for a client in Norway. Passionate for making video games but unsure how to do it, Paladin continued to work on various projects for the first six years of its existence while creating prototypes of games on the side. It was when the App Store and Steam emerged that allowed them to independently start creating games without the need of a publisher.¹⁶⁸

The game industry for Paladin in this period was a walled garden due to the difficulty in networking within the Netherlands.¹⁶⁹ An industry forum existed, ‘gameschool.nl’, which allowed people within the Dutch game industry to connect and speak with each other, however, most studios at the time were porting houses. This meant that the software developers were porting games for publishers to different platforms (console, PC, and handheld). Only a handful of studios existed as original content creating developers. The independent game studios were not common, it mainly consisted of small to medium size firms that have their origins stemming from the demoscene.

Distribution and Publishing

Dutch distributors and publishers in the Netherlands were hard to find so Paladin Studios would join trade missions to many conventions around the world such as Gamescom.¹⁷⁰ The trade missions contributed to growing the network of the company. Their first trade mission was to Games Convention in Leipzig (2008), which introduced them formally to the global video game community. The exposure inspired Paladin Studios to release their first game *Jimmy Pattaya* on the App store independently.¹⁷¹ Without a publisher, the App store was an essential alternative as a platform for them to distribute their game. Already here they had an internationalisation strategy in place as the App store could be accessed by any Apple product user around the world. However, it was in their next project, *Momonga Pinball Adventures* where foundational strategy and planning started to take place. They knew that in order to get a deal with a publisher they needed to have a demo build of a game ready in time for the trade missions to Gamescom and even the Game Developers Conference. It was also apparent that publishers were looking for studios to develop mobile games as the market was growing exponentially and generating a lot of

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

money. It was the success of games such as *Angry Birds* by Finnish studio Rovio, that garnered attention for the mobile market.¹⁷² At Gamescom they successfully received two publishing offers and funding to finish *Momonga Pinball Adventures* but ultimately turned down the offers with the ambition to release the game themselves on mobile. Looking back, Derk admits that from a financial perspective it would have been the wiser choice to have accepted one of the publishing deals. Nonetheless, the success of *Momonga Pinball Adventures* earned Paladin Studios a nomination at the Develop Awards in Brighton. It was here that Paladin Studios was approached by a Japanese publisher to create another game *Wonder Golf*. A pattern started to emerge where through the trade missions, Paladin Studios would get deals with publishers for mobile games and this culminated to a deal with Bandai Namco, one of Japans largest game developers and publishers. The experience with Japanese publishers and the buildup of the portfolio gave Paladin a great deal of knowledge on the gaming industry in Asia, and this has ultimately led them to a publishing deal with Nintendo.¹⁷³

Internationalisation

The experience with meeting a Japanese publisher at the trade show in Brighton made Derk realise the importance of trade shows for Paladin's internationalisation strategy. An international publisher gave them access to markets that would have been difficult to reach due to the lack of global publishers domestically. Despite the advantages the App Store and platforms alike can give, it is apparent that during this period a publisher was necessary not only for funding projects but distributing to the global market. Paladin Studios would average ten trade shows per year, focusing on being present in order to create good relations and connections with people and companies that would do the same. The networking involved being invited to dinners and being introduced to other people, publishers and studios.¹⁷⁴ That extensive network would have not been possible had Paladin not prioritised visiting as many trade shows as possible.

The studio built a strong connection with the Japanese gaming industry and it became a high priority market for the studio. The reason the relationship was strong was due to the approaches in business as both sides preferred keeping the business side informal. Japan was not alone in this approach either, for example, with a Norwegian company Paladin had an agreement that was made on a handshake basis with the idea that they were dependent on

¹⁷² Ibid.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

each other, and the level of trust would negate any intentions of betrayal. Light contracts and handshakes were the way both Paladin and their Japanese and European partners liked to do business.¹⁷⁵ In contrast, Paladin's experience with the likes of the United States, where there is more emphasis on formality, meant that they did not have many projects with American based publishers. This would have an influence on the types of games Paladin created. With such a strong relationship with Japan, many of their projects have gravitated towards certain styles and flavors that are influenced by Japanese culture. However, although considering the importance of the audience the studio is making the game for, the individual publisher has a great influence on the way the game is created. The publisher has its own strategies, beliefs, and values and this in the end effects the end result of the game.¹⁷⁶

Support

The Netherlands being a small market and having not many publishers meant that Paladin needed to operate internationally, yet this was not necessarily a disadvantage. It forced Paladin to go abroad and be at trade shows, gathering market knowledge and building their network. That proved to be a defining part of their success and the reason why they were able to land publishing deals with a renowned studio and publisher like Nintendo. Trade mission and gaming conventions were a catalyst of Paladin's internationalisation strategy. For example, going to Japan on numerous occasions gave them greater exposure to the culture and understanding how people worked and what interested them. Support for a start-up studio can be essential for its success and Paladin was no exception to that. The trade mission to their first Gamescom in Leipzig was organised by members of the Dutch game industry community who were able to get a bus for people like the members of Paladin to journey to Leipzig. Game shows are an opportunity for startups to showcase their work and a critical step in the internationalisation process during this period. Later on, the embassy in Tokyo started to support trade mission from the Netherlands actively for the Tokyo Game Show. This again illustrates the impact game shows and conventions have on Dutch game industry.

Conclusion

It is apparent in this case study of Paladin Studios that the Dutch industry is an international industry, focused on exporting their games to the global market. The level of success it reaches as an industry is directly reflected in the way they reach the international

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

market in terms of export. It is not optional but a critical part for a startup studio to internationalise. The main takeaway factor that allowed a studio like Paladin to export their games to the global market were the travels to multiple gaming conventions every year. It was through these trade missions that Paladin could gain market knowledge, build their network and portfolio, and get in contact with potential publishers that would fund and distribute their games. It is also worthy to note that the popularity of mobile gaming at this time was instrumental in the direction Paladin would take for the development of their games.

4.4 2010-2015: Team Reptile

Founding the studio and the state of the industry

Team Reptile was founded in 2011 by Tim Remmers and Dion Custer. Both were students at the HKQ in Utrecht studying game design.¹⁷⁷ Although they graduated separately, both often kept an eye on what they were working on. Eventually, Dion was working on a prototype project that interested Tim and he wanted to help create it. When they wanted to finish the game they decided to formally create a company and hence founded Team Reptile. Team Reptile is an entertainment game studio having released three games on PC and console and a fourth game *Bomb Rush Cyber Punk* is due to be released in 2022.¹⁷⁸

In 2013 their first game *Megabyte Punch*, was released on Steam. Tim describes that around this time it was still difficult to release a game on console. A primary reason for this was their lack of experience with consoles, and therefore they decided to focus on the development for PC and Linux.¹⁷⁹ Steam would play a major role for the release of the game. Steam is an online gaming platform that was first released by Valve Corporations in 2003. For context, Valve Corporations is a developer, publisher and digital distributing American studio founded in 1996. Steam began as a small platform for Valve related games, regularly providing updates on their games for their users. In 2004, Steam had seven games on its platform but now in 2020, Steam has released 10,263 games alone.¹⁸⁰ The platform became successful and popular due to its ability in featuring games that come from the smallest of independent game studios to blockbuster giants such as Rockstar and Bethesda.¹⁸¹ Near the end of 2013, Steam had more than 65 million active account, which was a 30 percent rise

¹⁷⁷ Team Reptile Co-founder, interview.

¹⁷⁸ "Team Reptile", Team Reptile, 2021, <https://team-reptile.com/press/>.

¹⁷⁹ Team Reptile Co-founder, interview.

¹⁸⁰ J. Clement, "Number Of Steam Users 2020 | Statista", Statista, 2021,

<https://www.statista.com/statistics/308330/number-stream-users/>.

¹⁸¹ J. Clement.

over the previous year and it boasted a daily peak of over 6 million concurrent users.¹⁸² Comparatively, Microsoft's Xbox Live service had 48 million accounts.¹⁸³ This was in the same year that both Sony and Microsoft announced their next consoles. Throughout the 2000s and early 2010s, articles and internet forums often wrote about the death of PC gaming. The reason this was commonly discussed had to with the continued growing popularity of consoles.¹⁸⁴ These eulogies often listed a variety of reasons of why PC gaming had met its end: consoles, piracy, retail sales, smartphones, casual games and lack of quality games.¹⁸⁵ The numerous accounts of PC gaming being written off has been well documented. Firstly, in 2010 Game Informer published an interview with Microsoft's Kinect creator Kudo Tsunoda who claimed that hardly anyone played first person shooters (FPS) on the PC as most people have moved on to console.¹⁸⁶ Microsoft Kinect was a new accessory for Xbox where users could use their own bodies as the game controller, eliminating the need for a controller. This new feature gave console users an experience on console that they would not have on PC. Yet, while FPS games were and still are popular on the console, that popularity never killed off gaming on the PC. *Counter-Strike: Global Offensive* was the most popular game played on Steam in 2020 with close to 650,000 players per hour.¹⁸⁷ After the release of Kinect, both console and PC continued to be popular platforms for FPS games while the Kinect would initially be a selling success, is now considered a dead accessory that is no longer supported by Microsoft.¹⁸⁸ In 2011, ZDNET published an article “*Forget the gaming PC, buy a console*” and argued that digital downloads will decline over the decade because they simply cannot be resold due to their digital nature. The console will become the default game platform and the PC will be reduced to a platform where people can play web browser games like *Farmville* (A Facebook web browser game).¹⁸⁹ In 2011, the ratio of games sold in

¹⁸² Rich McCormick, "Steam Rises To 65 Million Active Users, Eclipsing Xbox Live", The Verge, 2021, <https://www.theverge.com/2013/10/30/5045830/steam-65-million-active-accounts-6-million-concurrent-users>.

¹⁸³ Rich McCormick.

¹⁸⁴ Richard Moss, "Build, Gather, Brawl, Repeat: The History Of Real-Time Strategy Games", Ars Technica, 2017.

¹⁸⁵ Christopher Livingston, "The 13 Times PC Gaming Died This Decade | PC Gamer", Pcgamer.Com, 2019, <https://www.pcgamer.com/the-13-times-pc-gaming-died-this-decade/>.

¹⁸⁶ Meagan Marie, "Talking Kinect With Kudo", Game Informer, 2010, <https://www.gameinformer.com/b/news/archive/2010/09/18/-talking-kinect-with-kudo.aspx>.

¹⁸⁷ J. Clement, "Steam Most Played Games By Hourly Player Number 2020 | Statista", Statista, 2021, <https://www.statista.com/statistics/656319/steam-most-played-games-average-player-per-hour/>.

¹⁸⁸ Jez Corden, "Is Xbox One Kinect Still Worth Buying In 2021?", Windows Central, 2020, <https://www.windowscentral.com/xbox-one-kinect-still-worth-buying-2018-lets-look-pros-and-cons>.

¹⁸⁹ Adrian Kingsley-Hughes, "Forget The Gaming PC, Buy A Console | Zdnet", Zdnet, 2011, <https://www.zdnet.com/article/forget-the-gaming-pc-buy-a-console/>.

the United States was 65% physical and 35% digital.¹⁹⁰ This ratio has overwhelmingly changed in less than a decade, where in 2018 only 17% of games were sold physically.¹⁹¹ Not only does the prediction that digital distribution would dwindle not occur, it already became the popular avenue as early as 2013, two years after the article was published.¹⁹² Lastly, The Wired published an article in 2015 titled “*No, Really, the PC Is Dying and It’s Not Coming Back*” which based its argument on comparing the revenues and sales of Apple and it’s iPhone to the PC industry.¹⁹³ Their verdict is that the dominance of the mobile signals the death of the PC.¹⁹⁴ The idea that the growing sales of iPhones indicates the end of computers almost assumes that no one owns both a computer and phone at the same time. If the PC gaming industry was to die according to these three examples and many more like them, why did Team Reptile solely distribute their first game on Steam in 2013? In straightforward terms, although console (and mobile for that matter) was the dominant medium for gaming, Steam made PC gaming a strong challenger and a more accessible platform for studios to reach their customers. As seen with the evolution of the value chain, digital distribution created a direct link from development studio to client, which made the process of making a game cheaper. It should be addressed that the tone against PC gaming has seen change recently. An article written in 2020 that shares new data about number of people who play video games worldwide, regionally and on what platforms also emphasises the fact that most people are not exclusively playing games on one platform. Only 8-percent of people from the data collection identify exclusively as console gamers and this implies most people play games across multiple devices.¹⁹⁵ Out of the 3.1 billion people who play video games worldwide, 48% of all gaming happens on the PC as of 2020.¹⁹⁶

Another trend that was popular during this period in the Dutch game industry was the applied gaming sector. Serious games became uniquely popular in the Dutch game industry, and at the time, it was a valuable way to make money. Virtual Reality (VR) was another trend on the rise that was gaining popularity as the technology and innovation started improving the

¹⁹⁰ J. Clement, "U.S. Computer And Video Game Sales - Digital Vs. Physical 2017 | Statista", Statista, 2021, <https://www.statista.com/statistics/190225/digital-and-physical-game-sales-in-the-us-since-2009/>.

¹⁹¹ J. Clement.

¹⁹² Ibid.

¹⁹³ Davey Alba, "No, Really, The PC Is Dying And It's Not Coming Back", Wired, 2015, <https://www.wired.com/2015/03/no-really-pc-dying-not-coming-back/>

¹⁹⁴ Davey Alba.

¹⁹⁵ Joel Hruska, "3 Billion People Worldwide Are Gamers, And Nearly Half Play On PCs - Extremetech", Extremetech, 2020.

¹⁹⁶ Ibid.

user experience. Yet, both trends did not match Team Reptile's interest or passion, they were determined to make entertainment games.¹⁹⁷

Distribution and publishing

Although a closed and highly curated system, Steam gave studios like Team Reptile the opportunity to showcase their game on a project called Steam Greenlight.¹⁹⁸ Essentially, Steam Greenlight was a page where developers could showcase their projects online and then the platform users could vote on what game they liked best. With enough votes, Steam would allow the game to be distributed on their online store. The Steam Greenlight initiative emerged around the same period as the time *Megabyte Punch* was being developed. It was an open opportunity for many aspiring studios to showcase their projects and have them released on a worldwide platform that were used by a majority of PC users. However, the disadvantage of the Greenlight project was that many projects got through on false hope and were never delivered. Steam had to develop a system where the game developer needs to pay \$100 to have the game released on Steam, an attempt to avoid flooding and saturation of games.¹⁹⁹

Despite this, it is clear that Steam and the Greenlight initiative gave Team Reptile the opportunity on a PC platform that challenged consoles in popularity. With their second game *Lethal League* (2014), Team Reptile would release the game on Steam first as this proved to be a reliable distribution strategy. It was only later in 2017, when they garnered popularity, did they port *Lethal League* on the PS4 and Xbox One. All in all, digital distribution would be key component for their internationalisation process.

Internationalisation

Team Reptile did not have a concrete internationalisation strategy when they founded the company. However, it was common sense to them to make the game as 'international' as possible and not limit themselves.²⁰⁰ Being a platform that can be used by any PC user around the world, Steam essentially exposed *Megabyte Punch* to the international market on Team Reptile's behalf. However, throughout the years they have realised that this only got them to a certain point. Steam is an American platform and popular among western users, so their idea of being international was to make the game in English. After the release of *Megabyte Punch*, when their network increased to non-English speaking countries who were

¹⁹⁷ Team Reptile Co-founder, interview.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

asking for localised versions of their games, did they quickly realise that internationalisation is not just about making your game in English because you miss out on a major chunk of the global market.²⁰¹ This may come across as logic retroactively speaking, however, this was a studio founded by recently graduated students who prioritised making games they enjoyed and concentrated on the quality and content of the game itself rather than distribution and global market reach. After specific data and statistics were gathered that showed a significant amount of Japanese users playing their games on Steam, did Team Reptile understand what it meant to internationalise.²⁰² This caught them by surprise as Steam is comparatively not popular in Japan as it is in Europe and North America. Therefore, relatively speaking there were a lot of players from Japan playing their games. Tim describes the relationship between Japan and Team Reptile as unique because their product was seen as ‘exotic’. Being a game that is not necessarily influenced and tailored to Japanese culture has made it appealing to the Japanese audience. They proactively worked towards getting more information and understanding the Japanese market to help promote their games more effectively.

Support

It was help within their network, specifically an individual within the Dutch Embassy in Japan and their Japanese account manager that pushed their game in order to get a foothold in the Japanese market. That network proved to pay off with the success of their second game *Lethal League*, which earned Team Reptile international recognition. It got them an invite to the Tokyo Game Show on two occasions and on one of those occasions they were able to host a tournament for their game *Lethal League: Blaze* at the house of the ambassador in Japan.²⁰³ As mentioned in the previous case study, the embassy in Tokyo supported trade missions from the Netherlands actively for their Tokyo Game Show. Team Reptile’s experience is an example of this international support the Netherlands has received.

Moving to national support, their first game *Megabyte Punch* was developed, released and distributed with barely any national support or network. Their connections in the Netherlands, mainly through their internships and events organised by the Dutch Game Garden, were interesting but not useful when the studio was starting out. However, later on they continued to be part of events organised by the Dutch Game Garden, such as the Dutch pavilion at Gamescom in Germany. Large events such as Gamescom were beneficial as it give notable

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ Ibid.

companies from the Netherlands exposure to a larger market.²⁰⁴ Yet, it was the campaign for Dutch companies in Japan that remains to having the biggest impact in terms of support.

Conclusion

Digital distribution seems to be the key difference between the case study of Team Reptile and that of Paladin Studios and Triumph Studios. By focusing on developing a game for PC and using Steam as its platform for distribution, Team Reptile did not need to rely on a publisher to fund and distribute their game. This mainly had to do with the cost of making a game not being as high as it was in the 1990s and 2000s. Team Reptile could spend more time and energy working on developing their game and worry less about publishing and distribution. Despite that console and mobile were the popular platforms for gaming this did not undermine the success the studio had with releasing their game on PC. Uniquely, Team Reptile's focus on building games they enjoyed and that matched with their preferences lead them to find considerable success in international markets such as Japan because they stood out- a feat difficult to achieve in an increasingly oversaturated market. With the support of an international network the studio came to the realisation that an affective internationalisation strategy involves understanding the importance of the non-English speaking market and having the opportunity to experience these markets opens up a greater amount of knowledge of the audience that enjoys what they create.

4.5 Conclusion

The purpose of these case studies of studios in the Dutch game industry that were founded between 1990 and 2015 was to explore how internationalisation strategies have developed over time and the impact this had on the position of the Netherlands within the global game industry. The interviews that made up the majority of the source material for this chapter revealed a few key observations that can already be made in this conclusive paragraph. Firstly, through time it can be observed that digital distribution played a gradually prominent part in the internationalisation strategies of these studios, and at the same time diminishing the function of publishers and retail. That being said, international publishers have contributed to Triumph Studios and Paladin Studios ambitions to reach the international market thanks in part to the limited size of the Dutch game industry by providing the financial support and ability to distribute. The growing number of platforms for games, like mobile, also diversified the opportunities for these studios to reach their customers. Digital

²⁰⁴ Ibid.

platforms gave studios the market and industry knowledge to rapidly internationalise in a shorter period of time and even immediately from its founding, as seen with Team Reptile. International and domestic support had also gave studios like Paladin and Team Reptile the opportunity to visit conventions and related events and grow their network and expose them to potential business partners. Both the United States and Japan had also made an impression both providing publishing support and Japan having a strong relationship with Paladin Studios and Team Reptile with regards to promoting their respective works at the Tokyo Game Show.

Chapter 5: Analysis

5.1 Introduction

The purpose of this chapter is to analyse the applicability of the two models of internationalisation and assess the role of the Dutch game industry internationally. To achieve this, the chapter will analyse the similarities and differences between the studios and their respective periods in their approaches to internationalisation. Furthermore, it will look into developments that influenced change in reaching international markets of these studios over time, including the relevance of domestic and international considerations. Here a discussion on the influence of the Japanese and American firms will be included. This analysis is essential for understanding the role of the Dutch industry in the global industry and to map the developments that have changed the conditions for internationalisation. Technological developments have been central to the changing face of the video game industry since the 1990s. This chapter will demonstrate how technological developments have changed the type of games being developed and the role of the intermediaries seen in the value chain. Most significantly, it will show the changes made in the approach to internationalisation is closely related to improvements in technology and access to market information. When comparing all three case studies this is evident with their emphasis on digital distribution- all could expand their market reach far greater thanks to it. With that being said, personal and business networks both domestic and international were significant for the software developer studios internationalisation. Following the analysis, a discussion of the applicability of the models will be made.

5.2 Comparing internationalisation strategies of Dutch game studios

A comparison of the internationalisation strategies of the case studies begins with an outline of the setting for each period. Console and PC games developed and released in the 1990s and into the 2000s reflect an internationalisation strategy that maps to the retail value chain. Later in the 2000s, the online and mobile game sector have given developers diversified options in the way of reaching their customers and therefore influence their internationalisation strategies. It became no longer necessary to work with various different intermediaries such as a publisher, distributor and retailer. If they wished to increase their global reach, they could have their game distributed through an online platform with or without a publisher (depending on their specific situation) who then provide the access, localisation and promotion of their game to a global user base.

Publishing and Distribution

The dependent relationship between an independent development studio and a publisher defined the video game industry in the 1990s. With games being sold as physical copies, the retailer had greater power as well and therefore it was vital that the publisher had connections with retailers to ensure that when the game was published it got to the consumers effectively. For Triumph Studios, their first game *Age of Wonders* was released on PC through an international publisher who would guarantee that their game would be distributed and sold at retail stores around the world. Since there was no digital distribution or platform for the game to be released on, they relied on retail and the sale of physical copies. That dependency and their position in the value chain does mean that a good publisher is a make-or-break factor for a software development studio. It has been seen in other studies of internationalisation of European game studios, that an ineffective publisher who did not have the sufficient resources, knowledge and network can ruin any chance of success for a start-up software development studio.²⁰⁵ Having the right publisher was key to Triumph Studios success with *Age of Wonders* and hence Epic Games and Take Two Interactive played an influential role in making sure *Age of Wonders* was distributed effectively. It was also to Triumph Studios benefit that both were regarded as one of the largest and well-known publishers in the industry.²⁰⁶

It is evident that game developers need to recognise and exploit windows of opportunities in the video game industry but their ability to do so is dependent on their national and transnational networks that they have built. Not only did Epic Games and later Take Two Interactive provide the means of distribution to the retailers, they also could provide Triumph Studios the necessary financial support to have their game completed. As seen in the third chapter, the innovation boom of the 1990s was due to many rapid technological innovations which made video games increasingly expensive to create as graphics and precision were becoming greater determinants of a video game's quality. In such an intense period of innovation where shifts occurred, windows of opportunities are often small for developers to exploit. Turn-based strategy games was a genre that had exploded in popularity in the latter half of the 1990s and Triumph Studios had the

²⁰⁵ Cunningham, Loane, and Ibbotson, "The Internationalisation of Small Games Development Firms: Evidence from Poland and Hungary.", 252.

²⁰⁶ "Leading Game Publisher | Take-Two Interactive", Take2games.Com, 2021, <https://www.take2games.com/>. "Learn About Epic Games", Epic Games, 2021, <https://www.epicgames.com/site/en-US/about>.

opportunity to exploit it.²⁰⁷ Hence, *Age of Wonders* required the appropriate funding to develop a high-quality standard game and for it to be released and distributed at the right time. With the lack of a strong domestic publisher, Triumph Studios was left with no choice but to look for an international publisher, who had the resources and ability to distribute to international markets due to the struggling situation of the Dutch game industry at the time. Essentially, the publisher was the gatekeeper between the development studio and the consumer for they had the market knowledge and connections to distribute the game. Although there was little national structural support for a start-up studio and hobbyists in the Dutch video game scene, through the small community that was the Dutch game industry, they were able to get into contact with the right publisher. This also ensured Triumph Studios to take a global approach in the distribution of their game as they were now in contact with international players in the industry.

In the mid-2000s Paladin Studios sought after a large international publisher under similar circumstances as Triumph Studios regarding the lack of a strong domestic publisher. Paladin Studios turned to digital distribution since its inception, releasing and developing games for the emerging mobile market. The mobile market was growing and the demand from publishers for software developer studios to create mobile entertainment games influenced Paladin's approach not only for the types of games they created but also for their publishing and distribution strategy. Their approach to the problem was to visit as many trade shows and game conventions as possible, building their network and reputation and pitching their games to publishers. Although they decided to release their first two games independently, the founder of Paladin had admitted that upon reflection it would have been financially a better option to have accepted a publishing deal. Still, they continued to go on trade missions and eventually this led to agreements where they would develop mobile games and have them released under a publisher on the appropriate mobile app stores. Here again we see the publisher having the beneficial factor of facilitating the development of a game in a window of opportunity for an independent studio by offering the resources and capabilities. Furthermore, the publishing deals with Japanese publisher introduced Paladin Studios to a significant non-Western market who they now could reach with greater effectiveness. Once again, the publisher acts as a gatekeeper to a distant markets.

²⁰⁷ Richard Moss, "Build, Gather, Brawl, Repeat: The History Of Real-Time Strategy Games", Ars Technica, 2017.

Unlike the previous two case studies, Team Reptile's networking and distribution was fully digital. Without using contacts in the Netherlands or travelling to trade shows, they were able to independently develop and release their game on Steam in 2013. By the 2010s, digital distribution and digital stores had become the central place for games to be distributed and sold on. This undermined the distribution power of a publisher and made physical retail stores almost irrelevant (even though they do continue to exist). Platforms like Steam handled the distribution of games for the developers. Through an online initiative called Steam Greenlight, their first game was voted for and released on Steam. By then, Steam was the biggest digital marketplace for PC gaming and Team Reptile's game was released to a global user base immediately. Both Triumph and Team Reptile had developed their first game for PC, however, the former needed the appropriate financing to see the game finished while the latter was able to do it independently. According to Team Reptile's co-founder, the development costs for games had dropped since and so the need for a publisher was less pertinent.²⁰⁸ Reaching customers required less intermediaries as well reducing the costs of distribution.

There are a number of key differences with regards to the publishing and distribution of these studios for their first games. Triumph was founded in a period dominated by consoles and, as a result, had limited platform options for releasing games. Since the founders of Triumph came from the hobbyist and 'bedroom coder' scene, they were familiar with the PC as a hardware and could develop a game for the computer with the knowledge they had. Being programmers, Paladin's founders were experienced with software development but not with the console as a system. The mobile sector had given Paladin the opportunity to develop mobile entertainment games due to its open nature. To specify and give an example of what it is meant by its open nature, mobile systems have software developer kits (SDKs), which are collection of software development tools that are compiled in one installable package that can be used to facilitate the process of creating apps such as video games.²⁰⁹ Essentially, a toolbox to help build a game. Given the popularity of digital distribution on PC and their familiarity with developing PC games, Team Reptile took an independent and digital-only approach for distribution. What is seen here is a gradual change in distribution due to technological developments and this has affected the role of the publisher.

²⁰⁸ Team Reptile Co-founder, interview.

²⁰⁹ Kristopher Sandoval, "What Is The Difference Between An API And An SDK?", Nordic APIs, 2016.

The value chain and the changing role of the publisher

All three variations of the value chain that were addressed in the theoretical framework were present in the case studies. For Triumph Studios, the retail value chain due to the number of intermediaries including publisher and retailer. For Paladin Studios, the mobile value chain because it still included the intermediary role of publisher. And finally, for Team Reptile, the online value chain, where their game could be sold to their consumer directly through the digital marketplace. Yet, an argument can be made regarding the directness of Team Reptile's internationalisation strategy that maps the online value chain. Although Team Reptile handles the distribution by choosing to use Steam as its digital marketplace, it is Steam itself that provides the means to do so and therefore can be considered an intermediary. A purely direct developer-to-consumer value chain would come in the form of Team Reptile selling their game on their own online store and or website. A main limitation of selling their game on their own online store would be that they would not reach the same number of consumers. Hence, despite Steam making the distribution process easier and direct, they can be also regarded as a gatekeeper because their platform provides the access to a large consumer base.

Regardless, the case studies show the disruption of the online and mobile sector and the effect this has had on the dependence of Dutch software development studios on other partners such as the publisher and retailer, thanks to technological innovations that had occurred. This was realised by Triumph Studios who experienced the difference between distribution through a publisher and physical retailer, and digital distribution with the latter bringing more revenue from their games.²¹⁰

Despite these disruptions the publisher continues to play a role in the value chain even in the mobile and online sectors. Not only does the publisher provide the financial means to have a game produced, they also act as gatekeepers to market information and help with market localisation. Triumph Studios relied on Epic Games and Take Two Interactive because it also had the market information to have the game distributed to the international market. Withholding such information can ensure that a publisher remains relied upon. Paladin Studios leaned on its Japanese publishers to effectively reach the Japanese and other Asian consumers since they also had greater knowledge of those markets. So while the online and mobile value chain show that a publisher is not a guaranteed intermediary in their

²¹⁰ Triumph Studios Co-founder, interview.

respective value chains, the case study of Paladin Studios still shows that this is also dependent on the situation of the development studio themselves.

Internationalisation approach on first game release

Each studio approached developing their first games in different ways due to the available distribution mechanisms and access to consumer data.

For example, limited by lack of hard consumer data, Triumph Studios approached the idea of reaching international markets as developing their game in English. The assumption was that due to the game having been heavily influenced by Western mythology and therefore would appeal greater to the western market. Significantly, when they had access to market information later on about their consumers, they found out that their game had done well in non-English speaking markets in Eastern Europe and Russia. In light of this, they had the game localised for those markets. When Triumph Studios founder spoke about the change to digital distribution, it is evident that the development of the game industry exhibits aspects of economic globalisation. Rapid economic globalisation in the 1990s with the introduction of the internet brought markets closer together and exposed customers to a wider range of cultural influences. Despite their game having a Western taste, the studio no longer needed to assume that it would do better in those markets as seen with its rising popularity in Russia and Eastern Europe later on.

Aspects of economic globalisation can also be seen when comparing Triumph Studio's approach to reaching international markets to Team Reptile's, who released their game in 2013. It is apparent that incremental localisation was still present in the late 1990s and going into the 21st century. Without the sufficient consumer data, Triumph Studio had to make assumption as to where the game would be more likely to succeed and hence chose to develop the game based on that market. For Team Reptile, they too developed their first game entirely in English because that is how they understood the process of internationalisation at the time. This could have also been assumed since Steam was an American based platform. That being said, thanks to Steam's innate structure of being an online platform and therefore having an international orientation, Team Reptile quickly realised that they needed to have localised versions of their first game for non-English speaking markets. It was the popularity of their game among Japanese Steam users that this was brought to their attention. Although both had assumed internationalisation was about developing their game in English, the access to knowledge about consumers of the international market was easier for Team Reptile and gave them the opportunity to localise their game shortly after its release.

Paladin Studio was comparatively unique because it had been to various trade shows and game conventions before their first games were released. These experiences, which consisted of networking and pitching potential projects for publishers to fund, gave Paladin Studio the vantage point of knowing what publisher's and the respective markets expect of software developers. Mobile games were increasing in popularity thanks to the smartphone and hence there was expectations for developers to develop entertainment games for the mobile market. By visiting game conventions in Europe, North America and Asia, the studio was building an international network. They continued this practice of going on trade missions which allowed them to make a name for themselves particularly among Japanese publishers. Japanese publishers would approach Paladin studio because they understood the needs and wants of the consumers and were familiar with the culture of the country. Furthermore, being a European based development studio also ensures that they are able to have games that will also appeal to the Western market. The experience of going to these trade shows and game conventions exposed the founders of Paladin Studio to an understanding of the global video game market and to international contacts, influencing them to take a more inclusive international orientation.

Barriers of entry and adaptation

A main barrier of entry in all three cases has been a multi-platform strategy for development and distribution of their games. In short, there was not an immediate distribution of their games on more than one available platform. Triumph Studio would continue to release games for the PC until 2006 when their new franchise *Overlords* was available for Xbox and PlayStation 2. In the case of Triumph Studio the barrier of entry for the console was higher when considering the type of game they were developing as well. Turn-based strategy games as a genre has historically been limited to the PC. Porting this style of game to console was not worth the time and cost. A main reason for this was because of the technical limitations of consoles at the time and the fact that most turn-based strategy games relied on the mouse as part of the controls.²¹¹ Simply put, turn-based strategy games were being designed with the hardware of the PC in mind, not the console. The genre had received major popularity during the late 1990s and this would continue into the early 2000's, however as mentioned before in the case study of Team Reptile, the continued growing popularity of console resulted in plenty of skepticism and discussion surrounding the survivability of the PC video game sector. When the consoles rapidly improved on their

²¹¹ Zack Millsap, "Why Real-Time Strategy Games Rarely Come To Home Consoles", CBR, 2020.

technological capabilities, Triumph Studio adapted and develop their games for console as well.

Paladin Studio primarily focused on developing mobile games that were first released on the Apple App Store but later also released games for Android phones and the Google Play store. After capitalising the success of the mobile market, they began developing games that were also available on PC and most recently had developed their first console exclusive game *Good Job!* for the Nintendo Switch in 2020. Remaining on the mobile market exclusively and not branching out to other platforms would have stunted their growth as a studio.

Team Reptile's *Megabyte Punch* was released on Steam in 2013 and was eventually made available for the Nintendo Switch in 2020. In the interview with Team Reptile's founder he explained that with their lack of experience and knowledge with consoles it was not a feasible option to have their game simultaneously developed and ported for those systems. This could only be realistically achieved as the company grew and had the skills and finance to do so.

Irrespective of period, the ability to have a game developed and released on multiple platform appears to be challenging. It was stated by both the founder of Paladin Studios and Team Reptile that their lack of experience and knowledge with consoles prevented them from attempting to develop their first game for the platform. However, adapting and overcoming such hurdles is key to keeping up with trends and changes in the industry but also important for the growth of the companies. For instance, Triumph Studios expanded to the console platform in the 2000s due to its rising popularity in comparison to PC, which gave them a greater chance to reach more markets.

5.3 Domestic and International Networks

Domestic and international networks had been instrumental to the approaches the internationalisation of these studios.

Personal networks in the Netherlands brought Triumph Studio into contact with an international publisher, who they would continue to collaborate with later. Although there was little financial support for a start-up studio in the Dutch video game industry, through the hobbyist scene present in the Netherlands they were able to get the right publisher. Trade mission to Gamescom in Leipzig was organised by members of the Dutch game industry community who were able to get a bus for people like the members of Paladin to travel to

Leipzig and giving them an experience of how the global video game market looked like. Although they had not used their domestic network extensively for their first game, Team Reptile had the opportunity to go to the Dutch Pavilion at Gamescom in Germany through the Dutch Games Association.

With regards to international networks, the internationalisation course of Paladin Studio was directly influenced by the publishers pre-existing network and country of origin. When asked about the international factors that influence their approach in reaching different markets and specifically how this influenced the type of games they made Derk from Paladin responded with:

*This really boils down to the individual companies because they all have their own strategy, they all have their own things that they value and that they believe in. For example, in Japan, companies there they tend to gravitate towards a certain flavor but it's all over the place in the end, you get all kinds of games but of course it's drenched in Japanese culture for sure.*²¹²

Although the video game industry over time has grown into a global industry with studios and publishers emerging in other Asian countries and in Europe, the United States and Japan have remained industry leaders and have been influential in the Dutch video game industry. A network relationship between Japan and the Netherlands was addressed by the founder of Paladin Studio and Team Reptile who gave credit to it for increasing their games' market reach. It was with Japanese publisher's that Paladin Studio had created a strong business relationship, eventually leading to a publishing deal with Nintendo. Invitations to the Tokyo Game Show through the embassy in Tokyo helped polish Team Reptile's approach internationalisation for their next game *Lethal League* as they now better understood a market they had initially no idea that their game would have success in. This is because they could showcase their game to the Japanese and the greater Asian market in person, which allowed them to gain a first-hand impression of how consumers from these markets responded to their game. Credit must also be given to digital distribution because although it was a market Team Reptile had not specifically focused on, they had successfully reached anyhow. Nonetheless, the relationship of these two studios with the Japanese video game industry indicates that Dutch video game industry has been able to establish a network with one of the industry's most influential leaders and thereby contributing to their internationalisation approach.

²¹² Paladin Studios Executive Chairman, interview.

With the case of the United States, it seems that its leading position in the industry in the 1990s contributed to the internationalisation approach of Triumph Studios. Epic Games had made a name for themselves with their Unreal engine which was well received, and this allowed them to take on the role of publishing and set up a publishing wing with global ambition. These developments happening in the United States had benefited the Dutch video game industry and this is seen not only in Triumph's ability to release their game under an international publisher but also the state of the industry domestically entering into the 2000's who now had a few well-established development studios with franchise games. Had it not been for publishers like Epic Games and Take Two Interactive, Triumph Studios would have had difficulty in getting their game onto the international market.

5.4 Applying theory: Born global?

An integral component of this research was to apply the INV theory developed by Oviatt and McDougall to evaluate whether Dutch studios in the video game industry followed suit to previous studies on European video game development studios in that they were "born global" due to the close connection the industry generally has with the emerging influence of technology on business approaches. To see how applicable INV theory is to the case studies it will also be compared to the Stage theory and Uppsala model. What this paper wanted to further evaluate is whether the idea of being "born global" had always been the case or if it was a phenomena that only occurred later as the industry in the Netherlands matured and innovations in technology allowed it to happen. What has been discussed thus far in this analysis suggests that given the global orientation innate to the global video game industry, internationalisation has always remained key to the success of Dutch game studios in the studied periods. This is not only in terms of reaching the global market and in sales but also collaborating with people from around the world. Developers and publishers can give a studio a local perspective in the development stage to help the process of creating a global game.

An instrumental element of INV theory is that firms acquire industry and market knowledge in order for them to internationalise straightaway. With Triumph Studio there is evidence of some incremental behavior towards internationalisation that can support the original theory of Jan Johanson's and Finn Wiedersheim Paul's Stage theory and Uppsala model. To start, they approached the idea of internationalisation as developing their game in English and only later did they steadily localise their game for non-English speaking markets. However, this was done unintentionally as their limited knowledge and access to the market

influenced their initial approach. The execution of internationalising might have not been perfect, as also seen in the case of Team Reptile but this does not discredit the fact that they had the intention of reaching the international market from the start. Nonetheless, Paladin Studios only started understanding the Japanese and other Asian markets when beginning to produce games under Japanese publishers as well, whom they met at trade shows. For Team Reptile, only after the game was released on Steam did they recognise that their game was popular in Japan and started to localise for that market too. These case studies are therefore showing Dutch game development studios acquiring market information incrementally and understanding the internationalisation process over time.

Nevertheless, what is also apparent in all three cases is that approaching internationalisation in an incremental manner made little sense given the global orientation of the video game industry. Beginning with the late 1990s, the influence of technological developments and cross transfer of labor had brought an opportunity for Triumph Studio to establish a business relationship with an international publisher in order to distribute their game in physical retail stores worldwide. It cannot go without saying that indeed the influence of technology and more specifically the internet and digital distribution played the largest role in the internationalisation of these studios going into the 2000s and 2010s. Distribution online via mobile, PC and later on the console results in a more immediate internationalisation with less effort on the side of the development studio. Such technologies make internationalisation an almost given. Hence, stage theory and the Uppsala Model is not fully applicable to these case studies as it is apparent that the influence of technology has made the process of internationalisation far quicker and with less investment.

That being said, there are limitations of INV theory that should be discussed. To start, the influence of technology allowing gaming studios to be born global is not the sole reason internationalisation happened rapidly in these cases. INV theory does not often take into account the power structure present in the industry and the value chain- there are far more moving parts than the theory assumes. For instance, the founder of Paladin Studio explained that operating internationally was a given because catering to one market like the Dutch market or specific clients was not a viable option. The Dutch market remains too small for this to be possible and that naturally forced these studios to look abroad. He further elaborates that this limitation is a strength that the Netherlands has historically carried and is not specific to just the video game industry. This implies that added to the emerging influence of technology on the business approaches of these studios, it was the nature of the Dutch video game industry itself that was a force for internationalisation as well. Studios were

internationally orientated because they had to be, not necessarily because they intended to be. Furthermore, the support from within the Dutch game industry like the Dutch Game Garden played a pivotal role in influencing Dutch studios to reach the global market by promoting the industry abroad and facilitating contacts. With regards to the value chain, although technologies like digital distribution allow for studios to reach international markets directly, it has been shown that the publisher has a gatekeeping presence that makes them relied upon. Lastly, the type of game being developed can also influence the markets that a studio will focus on, as seen with Triumph Studios and their Western mythology influenced game.

5.5 Conclusion

The purpose of this chapter was to analyse the applicability of the two models of internationalisation and assess the role of the Dutch game industry internationally. As said, technological developments have been central to the changing face of the video game industry since the 1990s. This analysis has shown that technological developments can change the type of game being developed, change the role of the intermediaries seen in the value chain, and ultimately the changes to internationalisation and the way studios approach to accessing their audiences. By looking at distribution and publishing, a progression towards less dependency on a publisher and retailer for distribution is clear. However, the publisher still plays a role in the development process and internationalisation through financial support and gatekeeping information on the international market. This is also dependent on studio's specific situation, primarily the type of game being developed and what platform they chose to have it released on. In short, each studio approached developing their first games in different ways due to the available distribution mechanisms and access to consumer data. Barriers to entry remained relatively low considering the diversified options in platforms and the accessibility of the video game market increasingly becoming easier over time. Nonetheless, all case studies were not able to release their first games on multiple platforms upon release. For Triumph Studio this mainly had to do with the technological limitations of consoles at the time and the type of game they developed but for the latter two case studies it was the lack of familiarity with the console as hardware that hindered them from developing and porting their games for these systems. Yet, all studios were able to adapt and found their way onto the console market eventually.

A discussion about the developments that influenced change in reaching international markets of these studios showed that domestic and international support has evolved.

Domestic support begun with a small community that was the Dutch game industry, who had some international connections with major players in the industry (such as Epic Games and Take Two interactive). Structural support developed in the 2000s and 2010s with establishments such as the Dutch Game Garden promoting the Dutch game industry domestically and abroad. International support mainly revolved around publishing yet a growing relationship with Japan and the promotion of Dutch development studios at the Tokyo Game Show has improved the ability for these studios to reach new markets more effectively. The relationship established with American and Japanese firms with these Dutch studios demonstrates the position these nations have as industry leaders.

In light of the assessment on whether INV theory is reflected in the internationalisation approaches of Dutch development studios by mirroring it with Stage theory and the Uppsala model, it is argued that Stage theory and the Uppsala model are redundant in explaining the internationalisation strategies of firms in the video game industry during the discussed periods. Although we have seen incremental behavior that lends to the Uppsala model, the evidence brought in this analysis upholds the latter theory. The rapid increase in economic globalisation in the 1990s with the introduction of the internet brought markets closer together and exposed customers to a wider range of cultural influences. The influence of technology like the internet and digital distribution played the largest role in the internationalisation of these studios. Distribution online via mobile, PC and console resulted in a more immediate internationalisation with less effort on the side of the development studio. Such technologies make internationalisation an almost given and automatic process. This being said, applying internationalisation theory is important to understanding the internationalisation process of Dutch game studios but it is equally important to highlight that theories have their limitations and cannot fully explain the internationalisation of specific studies.

Chapter 6: Conclusion

The central research question of this paper was to seek how internationalisation strategies of Dutch game firms contributed to their position within the global video game industry. Video games are a globally popular entertainment medium and a rapidly growing industry that continues to receive attention for its creativity and intensive innovation. Entering a global industry and a highly competitive international market requires not only the ability to develop a high-quality product but effectively reach a growing global consumer base. As seen in the cases of Triumph Studios, Paladin Studios and Team Reptile, the Dutch video game industry and its domestic limitations have produced development studios with the ambition to compete in the international arena. Internationalising was pertinent to their survival in the industry.

Through domestic contacts, Triumph Studios established a relationship with two of the largest publishers in the industry who could effectively fund and distribute their games to the international market. Paladin Studios took trade missions as an avenue to understand the global market and to create networks with publishers who could effectively expose them to distant markets such as Japan. It was with Team Reptile that we see the influence of digital distribution in assisting the distribution and internationalisation process of a young development studio by using an online platform that had users from around the world whom the studio could reach in a more direct manner.

When it comes to internationalisation there are a few key points to takeaway. For one, the type of game being produced can have an influence on the markets a studio intends to target as certain genres and tastes may appeal better to specific locations. That being said, due to the increasing reach that studios have with digital distribution, a studio must also consider localising their game for more distant markets who have been exposed to new tastes and genres thanks to economic globalisation. It can be argued that with these cases the studios were internationally orientated but not intentionally. The domestic setting has determined this. Without a global publisher in the Netherlands, these studios were made to look abroad and made contact with international players that helped them create an international orientation. Coupled with the innovations of technology that made reaching international markets easier, these studios were born global according to INV theory. Yet, their execution of internationalisation was not immediately effective, they still needed to learn over time how to internationalise better as they began to understand the global video game market. Such incremental behavior does lend itself to Stage theory and the Uppsala Model, however, the apparent influence of technological innovations does show that these studios were able to

internationalise in a short amount of time and this only improved between the 1990s and the 2010s to the point where internationalisation was a given assumption since the global market was digitally accessible.

The research of this paper has made a contribution to understanding the historical evolution of Dutch game studios and their approach to internationalisation. It bridges an understanding between the developments that have happened in the video game industry and what this has meant for the Dutch sector. The industry in the Netherlands has shown signs of growth and maturity with the rising number of studios and the growing infrastructural support such as the Dutch Game Garden and the Dutch Games Association. Yet, without a global publisher domestically present, understanding how to internationalise effectively will be key for any studio to compete in the global industry. These three case studies have been examples of studios that have effectively found a way to internationalise and become part of a global industry. Their stories and the lessons learned within them are crucial for the Dutch game industry in approaching internationalisation going forward and are a sufficient platform for future research to be built upon.

Limitations and further research

Despite the contributions of this paper, there remains limitations and research opportunities in the future. The intent with a multiple case study approach was to make generalisations about Dutch game studios and the historical evolution of their approaches to internationalisation. The author acknowledges that their limited number of case studies prohibits making arguments that apply generally to the majority of Dutch game studios. These studios conditions are comparable but they do have different trajectories. A continued full-scale research study on internationalisation of Dutch entertainment studios would help generalise the findings found in this research. Moreover, a quantitative approach with statistical data that can encompass a larger number of cases could be an effective approach of achieving this.

The case studies in this research can be considered success stories and are therefore not fully reflective of the experiences that the majority of Dutch game studios have had with internationalisation. Research on studios in the Netherlands that no longer exist or have not been able to grow to their full potential will provide insight on what is and what is not effective in approaches to internationalisation and may also reveal possible infrastructural and power structural issues that studios face domestically and internationally.

With regards to the historical development of the video game industry in the Netherlands it became apparent that the struggles in the 1990s had been added by Philips withdrawal from the computer and video game industry altogether. Further research is needed on what led to this withdrawal and how influential the supporting role of computer technology manufactures like Philips have on the development of the video game industry domestically. An analysis on the overall role infrastructural setups like the Dutch Game Garden have on the way the industry has evolved in the Netherlands will be needed to understand the impact of structural support on Dutch game development studios.

An important finding in this research has been the role of the publisher in the value chain of the industry. The assumption that with the mobile and digital market had disrupted the traditional value chain and therefore rendered the publisher as a less influential intermediary is not entirely the case. It's gatekeeping capabilities and financial support are two main reasons they continue to exist, even for studios that distribute on mobile and through digital platforms. Given that the Netherlands does not have a global publisher there is an opportunity for research on the evolutionary role of publishers in the industry and what impact this could have on the Netherlands in terms of growth and maturity.

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Annex

Semi-structured interview questions

1. Introduction (company, name, position)
2. Background information about the interviewee and the studio
 - a. How was the studio founded?
 - i. Which individuals were involved and how did you meet?
 - ii. What steps were taken to found the company?
 - b. What games did you make in the beginning?
 - c. How would you describe the state of the global game industry at the time?
 - i. How would you describe the state of the game industry in the Netherlands at the time?
 - ii. Which distributors and publishers did you contact to release your game?
 - iii. Did you consider which platform you would release the game on as you were developing the game, or after it had been developed?
3. Did you have an internationalisation strategy when you first founded your company? If so, what was your initial approach to internationalisation strategies?
 - a. How did you reach international markets when you started?
 - b. Who was your intended audience for your games? Did this change over time?
 - c. What barriers to internationalisation did you face?
 - d. When did you develop an internationalisation strategy? How did this change over time?
4. Did international or domestic networks help you to develop or publish this game?
(Question dependent on the game listed, make sure to have a timeline of each game developed by the studio)
5. What international and domestic factors played into your approach in reaching different markets?
 - a. Did your company have strong industry connections in the Netherlands?
 - b. You will most likely need a few more follow up questions here to address the specific type of ‘international and domestic factors’ you are interested in.
6. What are the biggest obstacles you faced in terms of internationalising?
 - a. Access to distributors and publishers?
 - b. Limited access to other game studios to develop games with?

- c. What other obstacles can you ask the game studios about?

7. What changes have you seen in the game industry that have influenced your strategies in internationalisation?

- a. How has your studio dealt with changing platforms in the game industry (PC, console, mobile, handheld)?
- b. What future developments in the game industry is your studio preparing to adapt to?

8. Does being an entertainment game studio influence your approach to internationalisation?

- a. Have the type of games you have produced matter for the process? Why or why not?

9. In your opinion, have internationalisation strategies played a role in the Dutch game industry's current position within the global video game industry? Why or why not?

- a. What are the barriers to internationalisation for Dutch game developers?
- b. What types of support do Dutch game developers need to internationalise? (have organisations like the Dutch Game Garden helped? What about policy and funding?)
- c. Have North America and Japan been of influence to the Dutch game industry and internationalisation approaches?

10. Thank you and close.

List of interviewees

	Company and position of interviewee	Name
1	Triumph Studio, Co-founder	Lennart Sas
2	Paladin Studio, Executive Chairman	Derk de Geus
3	Team Reptile, Co-founder	Tim Remmers