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CASE STUDIES IN EMERGING MARKETS

MANAGEMENT, BUSINESS, FINANCE, MARKETING

Edited by
Anna Matysek-Jędrych

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Edited by Anna Matysek-Jędrych

MATERIAŁY DYDAKTYCZNE

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AGILE PRODUCT DEVELOPMENT AND USER EXPERIENCE AT ALLEGRO— A RESPONSE TO THE GROWING MARKET OF DEMANDS AND CUSTOMER NEEDS

BY ALINA MAGOWSKA, PIOTR SZATYBEŁKO

Introduction

Poland has 38.5 million residents, and Internet users constitute over 28 million of them. Of that 28 million Internet users, over 20 million are Allegro users (CSR Allegro, 2017), who open over 3 billion pages per month. Allegro provides customers with the most diverse offer and the highest quality. The site is convenient to use irrespective of the device (more than 50% of traffic comes from mobile devices). Most of all, Allegro is a place where shopping becomes a joyful experience.

Annually, there are around 13,000 software implementations to make Allegro even more intuitive and convenient to use (CSR Allegro, 2017). Among many important changes that Allegro introduced in 2017, it is worth mentioning the uniform layout of offers. Thereby, customers can easily find the information they need to make a purchasing decision. Also, the implementation of additional parameters has sped up searching and made it more precise. Being a leader is a commitment to influence the market in a responsible and consistent manner. For this reason, when designing solutions for customers, the service uses the latest techniques that prove to be the most effective. Allegro is agile, and puts the customer in the centre of its activities. This paper aims to shed light on Allegro's actions so as to help understand what the success of the service is all about.

1. Allegro—from local start-up to European e-commerce champion

Since 1999, Allegro has been encouraging Poles to shop online, offering them the widest offer, prices and convenient solutions. So far, almost 23 million accounts have been registered. Every day customers buy over 1.2 million products on Allegro, of which over 90% are new items under guarantee, sold at a fixed price, and recently also with an insurance pack. Allegro also offers modern online financial services, such as 0% instalments and leasing. Moreover, the new subscription program Smart! was launched recently. There are 125,000 companies operating on the platform—although there are the world's largest brands, also small and medium Polish trading companies are present. For this reason, Allegro contributes to the continuous improvement of standards of the e-commerce market: respecting consumer rights and flourishing their shopping experience, while supporting the development of entrepreneurship. Allegro also supports charity organizations, and takes social responsibility seriously.

1.1. History

Allegro is headquartered in Poznan, where it was founded in 1999. Initially, the company, created by several people, was located in the basement of a computer warehouse. These were the times when the e-commerce market in Poland was just in its fledgling state, and Allegro played one of the main roles in its growth. Since then, after several years, the company has undergone a huge metamorphosis. From a simple auction site, Allegro has become the most popular online place to shop.

The idea for the site came from a Dutchman living in Poznan—Arjan Bakker. Eventually, the man changing the vision into a working product was Tomasz Dudziak. At first, it was supposed to be a hobbyist site. Several people used to register on a daily basis, and there were less than 500 items on offer (Ocetkiewicz, 2012). In March 2000 the Poznan company Surf Stop Shop LLC was taken over by QXL.com PLC, and thus Allegro became the Polish branch of this British company specialising in the development of auction sites. From the beginning, Allegro was characterized by rapid growth, as already in 2001, 1 million offers were listed, and two years later the number of buyers increased to a million per month.

In 2003 Allegro started international operations in the Czech Republic, Ukraine, Hungary, Russia, Romania, Bulgaria, Slovakia and Estonia. In some countries, the platform was based on the same technology used to develop Allegro.pl, while in others local trading platforms were adopted.

In March 2008 the media company Naspers, based in the Republic of South Africa, placed an offer to buy shares in Tradus, which included QXL Ricardo. Over the next years, Naspers optimized the portfolio of foreign companies in the Allegro Group, leaving the most profitable ones and selling or closing companies that did not achieve the intended results. The classifieds websites were rebranded into OLX and all financial services providers were united under one umbrella brand—PayU. Some of the retail businesses like Markafoni or eMAG formed a separate business division within Naspers. In 2015 the Russian site Molotok.ru was closed, and in 2016 Aukro.cz and Aukro.ua were sold to investors.

Another breakthrough moment for Allegro was on October 14, 2016. That day Cinven, Permira and Mid Europa announced purchasing the company—the largest online transaction platform in Poland—from Naspers Limited for 3,253 mln USD (Cinven, Permira, & Mid Europa Partners, 2016).

Today, Allegro employs over 1,600 people, of which more than half are top-class technology specialists (CSR Allegro, 2017). The company currently has offices in Poznan, Warsaw, Torun, Wroclaw and Krakow. Since its founding, Allegro has developed many solutions making online shopping easier, thus setting the standards for online shopping in Poland.

Figure 1. Important events in the history of Allegro

1.2. Online shopping in Poland and Allegro customers

Bloomberg analysed 20 developing economies (Figure 2). The ranking was based on a range of metrics including growth, yields, current-account position and asset valuations. Two countries score higher than the others, these are Mexico and Turkey. What is interesting in this analysis is the fact that Asian economies occupy the five lowest-scoring positions. Poland is ranked in the 4th place.

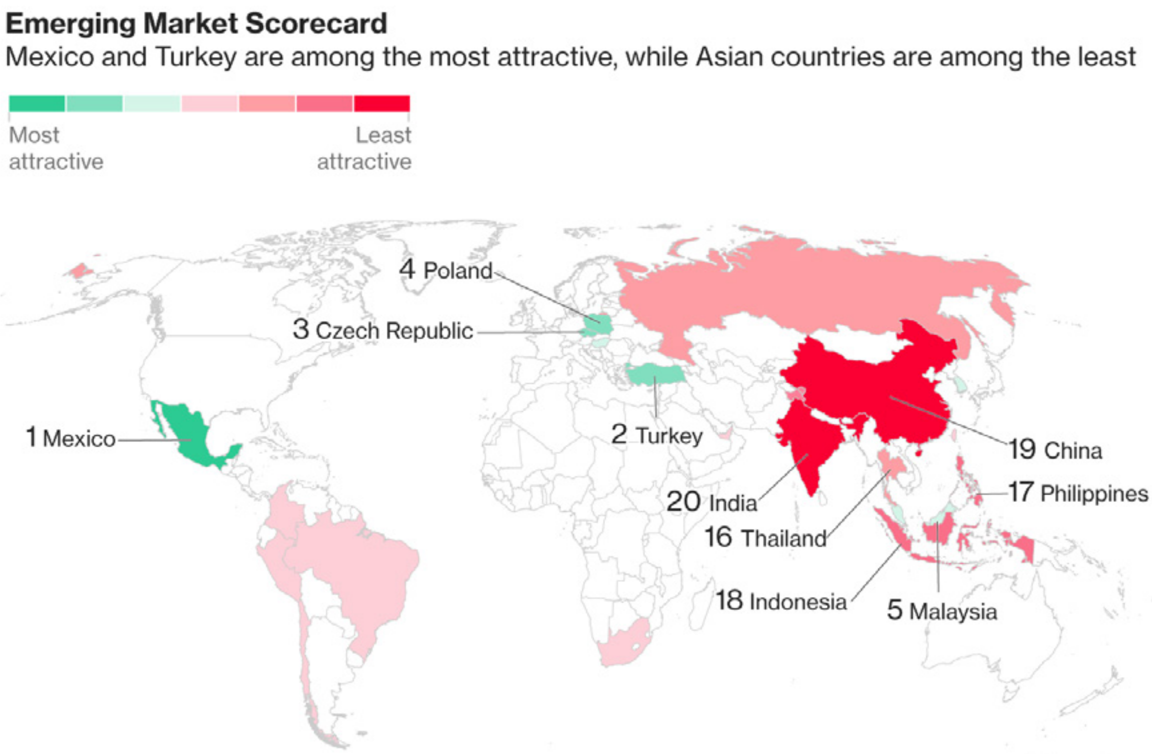

Figure 2. Bloomberg calculations

E-commerce continues to prosper in Europe, but markets grow at different speeds.

In Poland, in 2017, online buyers co-created a market worth around PLN 40 billion. The E-commerce in Poland 2017 study conducted by Gemius for e-Commerce Poland has shown that 56% of Polish Internet users shop online (compared to 50% in 2016).

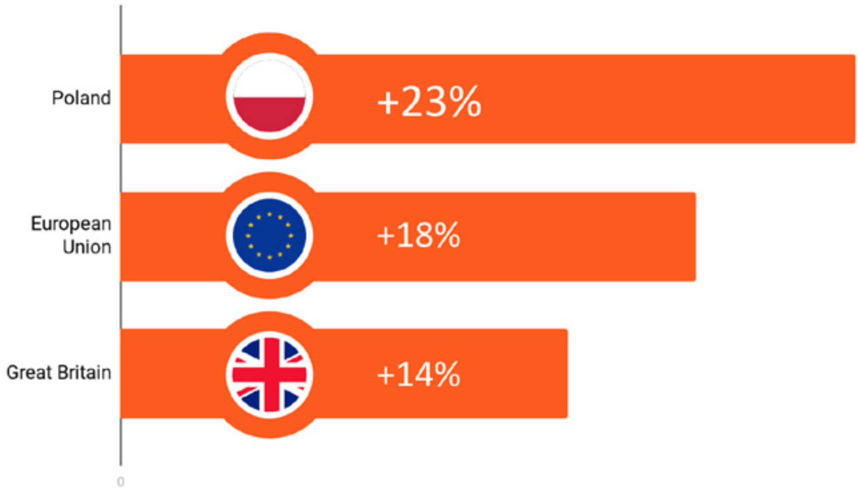

Figure 3. E-commerce sales growth in 2015/2016 (year to year)

Source: (RetailMeNot, 2015).

According to the analyses, the key factor encouraging online shopping is the 24-hour availability of the stores (87% of replies). Online shopping is perceived as easy (41%) and convenient (44%), but also cheaper (33%), and less time consuming (39%) compared to traditional stores. A positive change is observed in the case of the weakest element of the online shopping in the eyes of respondents, i.e. transaction security. While in 2016 43% respondents considered online shopping as risky, in 2017 this opinion was shared by only 38% of them.

What is it that drives people to shop online? There are three important elements influencing the Internet users' decisions about choosing an online store, such as:

These have the greatest impact on the customers' decision. Online buyers know the offer available online, and their awareness of the abundance of e-commerce sites is very high, regardless of the shopping category (*E-commerce in Poland*, 2017). Allegro is one of the strongest Polish brands that stands out owing to its high quality of customer service, confirmed by top positions in rankings such as Superbrands, Service Quality Stars or the OC & C Retail Proposition Index. It also takes the 6th place on the European Retailer 500 list (Top500Guide).

1.3. Allegro customers—their needs and growing demands

Allegro is not only a proxy for transactions concluded between customers and sellers. The company feels responsible for meeting ever growing market requirements. After all, Allegro manages a technological platform that provides a unique customer experience. It means that the company has an obligation to provide efficient service, including the way an offer is presented, payment options, as well as delivery, because the range of the platform is constantly growing. Last year, the number of transactions increased by 11%, and overall by 60% within the last 5 years.

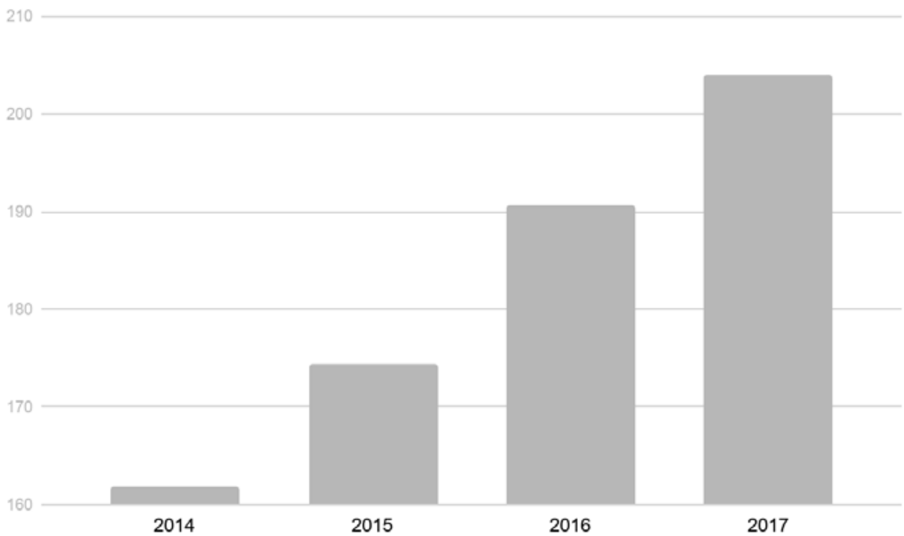

Figure 4. Number of transactions per year (mln)

17 mln Internet users visit Allegro monthly (source: Gemius). Below there are some important facts that describe the behaviour of customers.

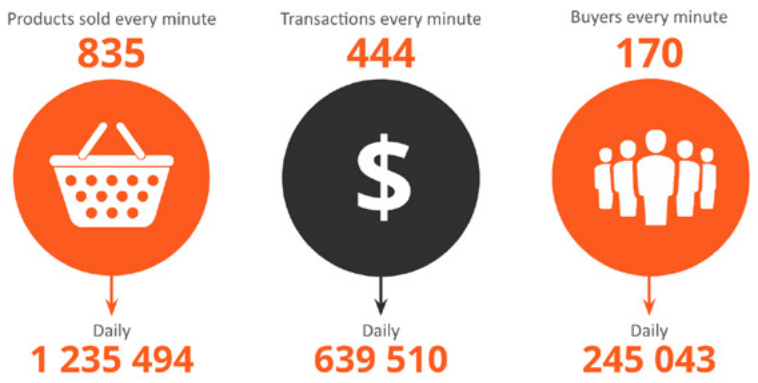

Figure 5. Some facts about Allegro customers

It is not easy to meet such high expectations. Developing and managing such a large and technologically complex platform requires constant improvements. In this paper, product development management will be brought into closer focus.

2. Agile product development and user experience at Allegro—a response to the growing market demands and customer needs

2.1. History of product development at Allegro

2.1.1. The beginning of agile product development at Allegro

At first, the projects at Allegro were not managed pursuant to a structure or a methodology. As in every small company, ideas of the founders were changed into solutions by the employees on the principle of 'all hands on the board'. The platform itself, initially quite simple, had a natural way of developing the most critical functions to enable merchants and customers to make transactions. The challenges facing the IT focused on ensuring sufficient performance and stability of the platform with an ever-growing number of customers (Szybiak, 2009). Although this may look chaotic, there was a pattern. These actions can be defined—according to the Agile Manifesto—as project management, but without specifying a methodology that would give the framework to the applicable process.

Along with the growth of the company, the increasing number of employees, and further development of the platform, it was necessary to organise the whole process, from the idea to the implementation. In January 2009 the PMO department (Project Management Office) was created. It was responsible for developing project management standards, introducing the best practices related to the project portfolio management, business analysis and compliance with the company's strategy. The department's goal was to ensure the repeatability of project management procedures while maintaining established standards and measurement criteria: reducing the product concept-release time frame by 40%, and increasing the effectiveness of the introduced changes by 35%.

The PMO department was responsible for supervising the development of the project management methodology used in the organization, including policy, frameworks, metrics, reporting requirements, etc. The applied methodology was to improve cooperation between departments, as well as resource management and sharing. The projects were carried out in accordance with cascade methods:

- The SDLC project (and Software Development Life Cycle),
- Project SDLC Full,
- SDLC Project Simplified,
- The SDLC Urgent project,
- Research project,
- Generic project.

Each project initiative, before getting to the PMO, went through a verification and evaluation process. An entity submitting a project initiative was required to nominate a Project Owner authorized to define the project's objectives, approve the budget and project related expenditure, as well as resolve conflicts over priorities. The project initiative was verified with the help of Business Analysts from the PMO, who checked its completeness, in particular in terms of the scope of the project and the criteria for measuring its success.

In this way, the prepared initiative went to the PSO department (Project Support Office), which was responsible for assessing the notified project initiative, prioritising it to other initiatives in the organisation. Projects requiring a significant budget were transferred to the Steering Committee. Once the approval was granted, necessary resources were allocated and a Project Manager was designated.

The methodology of project management was modelled on the Project Management Life Cycle included in the Project Management Institute's set of standards *A guide to the project management body of knowledge* (2009). It involved five main phases—start, plan, implementation, control and end. For the purposes of Allegro and reporting, the number of phases was increased to seven and—depending on the type of project—named differently. The project manager, who was assigned to the initiative, was responsible for the consistent application of a specific project management methodology to all projects. As each project is different, the methodology was created in a way enabling it to be adjusted to the type, size, level of complexity and importance of a given project.

Business analyses were inspired by good practices gathered in *The guide to the business analysis of the body of knowledge* (International Institute of Business Analysis, 2009). The costs of implementing a given technique, its applications throughout the organisation and the added value were all taken into account.

2.1.2. Transition from the classic to agile project management

The classic project management methodologies are based on a non-dynamic, linear and cascaded approach. They perform well in orchestrating simple and repetitive activities; however, they are not very effective when it comes to planning and controlling the implementation of complex and innovative projects. Each plan deviation or a corner case requires a quick response that somewhat is not in line with the cascade approach. In the case of Allegro, where response time matters, and the outcome of changes or dependencies are unpredictable, a flexible approach to the evolutionary and non-linear processes occurring in the project was necessary. It was important to have a complete overview, including different perspectives of the problem. The company needed to be more agile.

The Scrum methodology was first mentioned during an informal meeting of the PMO team on November 30, 2009. In April 2010 the PMO Policy was published. According to the document, the PMO team used two methods of project management: the traditional (SDLC) and the light methods (SCRUM). It was the latter that was used for specific types of projects that required the consent of the PSO and the PMO.

2011 was a breakthrough year in terms of the emergence of agile methodologies in the organisation. That year a first test team called Alpha was created. After five weeks of work, it was clear it was a road to nowhere. Despite the unsuccessful first Scrum trial, it was decided to start / change the transformation process from the traditional project management to an agile organization. Krzysztof Dąbrowski, former Allegro CIO, discussed during the Atmosphere conference in 2013 the Scrum introduction. However, 'one lonely scrum island' was too small to have an impact on such a large organisation. Therefore, it was decided that the change must be holistic or not at all and the 'Big Bang' strategy was applied (Murthi, 2002). Scrum has become a standard and obligatory method for all innovative projects involving the improvement of the user experience (Dąbrowski, 2013).

2.1.3. Comparing the efficiency of two methodologies

In 2012 a study was conducted to compare the effectiveness of both methods. In selected periods, the number of tasks completed (implemented and closed as resolved), the average task execution time (in days), and the waiting time from the moment of creation to submission (in days) was compared. With Scrum, not only the level of task implementation was increased (400% during 18 months of the study—December 2010 to June 2012; source: internal research), but also the time necessary to implement an idea significantly improved too (in the mentioned period, the average time of completing the task decreased by 54 days).

The above results were subject to some errors. First of all, partial deployment was not included, i.e. a situation when a client received part of the functionality, although the task remained open. In addition, due to not very strict working time reporting, there could be discrepancies in the dates of the actual start of work on the task and the status in the system for reporting the implementation status, as well as in the dates of the actual completion of the task and the change of the task status to 'Closed / Solved' in the job reporting system. The research was also somewhat affected by the contractual scale of tasks—in the case of the SDLC, tasks are classified due to their expected time of implementation, while in Scrum tasks are classified due to the value provided and compliance with the objectives of Allegro. Tasks marked as 'maintenance' in Scrum were implemented in two ways—as small projects (included in the study), and as operational tasks reported directly to the team of programmers (not included in the study). It is worth remembering that some of the tasks that were started in the SDLC were continued in Scrum. Despite these errors and simplified assumptions, it can be shown that this change has had a positive impact on the effectiveness of the implementation of tasks. What is more, Scrum has had a positive impact on changing the company's organisational culture. Allegro has become an organisation based on relationships, an empirical learning process and continuous improvement, which translated into employee engagement.

2.1.4. The most important organisational changes in 2011–2018

The agile approach forced organisational changes and the evolution of the product management model. The platform was divided into more than 50 functions and areas to which scrum teams were assigned. Before this shift, the teams were delegated to subsequent projects. In sixteen months, four structural changes were carried out (Dąbrowski, 2013). The following months were the time of numerous changes, adjustment and subsequent restructuring operations. During 2011–2015 an organisation managed by the Steering Committee was transformed into an organisation managing the product strategy in an agile way. The process saw three milestones:

- Changing the role of the PMO. The PMO department remained in the organisation and its role was to manage projects in a separate part of the IT Department responsible for corporate projects, e.g. the implementation of back office systems.
- Changing the role of the Product Department. Allegro built different sites which took over the responsibility for the sustainable development and management of global product registers (international platforms such as allegro.pl, OtoDom, OtoWakacje, OtoMoto, Tablica.pl and PayU). It allowed Allegro to pay more attention to each of the sites individually and provide the desired value to the customer. It was also about introducing new positions: Product Manager and UX Specialist (User Experience). The Product Manager dealt with exploring and defining solutions for the needs and problems of users together with the UX (User Experience), and together with development teams was responsible for determining a way to create a solution that would meet the expectations of customers and stakeholders.

- Changing the role of the IT Department. Thanks to the separation of rather fixed development teams responsible for the development and maintenance of specific pieces, areas or functions of the platform, developers have begun to participate in establishing product requirements and take responsibility for the software quality.

In 2013 and 2014 Naspers created separate business lines at Allegro, such as online classifieds, payment services, price comparison services, and stores and trading platforms, and at the same time kept the Product and IT departments responsible for the Allegro platform, as well as the corporate IT department. Owing to the transformation that began in 2011, the process ran very seamlessly and did not affect the organisation.

In 2015 the evolution of agile product development and product management at Allegro sparked a revolution in the organisation itself. It was decided to combine the Product and IT departments responsible for the Allegro platform into one technology department. Initially, the new organisation of the department did not bring the intended effect. Therefore, in early 2016, the department underwent another reorganisation—the entire platform was divided into several areas that respond to customer, business needs and technology requirements.

In the spirit of agile culture, the current Technology and Product departments are undergoing further changes. In 2018 the company reorganised work in terms of orchestration activities in different departments, mainly on the Technology, Product and Commerce line. The changes were necessary to respond to the ambitious target which is set by the market and the needs of clients as well as business partners.

2.2. From user experience design towards experience design management

Peter Drucker wrote: "It's not about doing the things right. The main point is to do the right things" (Drucker, 2008). Allegro from the beginning followed this thought, but not always acted according to it. As it has been mentioned earlier, product development, including project management, has gone through different phases, and ideas for the platform development have often appeared chaotically. The introduction of an agile methodology to the organisation has certainly ordered thinking about satisfying the needs of customers; however, it was still not enough.

According to the first agile principle, which says "The highest priority is to satisfy the customer through the early and continuous delivery of valuable software", in whatever the company does, the end-user's satisfaction is the most important. However, it was not always clear how to understand the term 'satisfaction'. Along with the development of agile thinking, design thinking was born.

As agile is a big term that can refer to the values, manifesto, and all of the processes that emerged from the movement, the design approach is also broad and sometimes controversial (DeMarco Brown, 2013). Design thinking is a method of meeting people's needs and desires in a technologically feasible and strategically viable way (Brown, 2008). Design-led companies have maintained a significant stock market advantage, outperforming the S&P by 228% over ten years (DMI, 2014). Having this knowledge, although there had been little experience on the Polish market in this regard, Allegro has invested in design. In 2009, Allegro made its first steps in the User Experience (UX) field. UX was at the time a new branch of the design field. UX may be seen as the industrial design competency shifted to the design of digital products. Allegro set up a small unit that was delegated to do research and improve the usability of its site. Soon it turned out that the result of usability specialists' work provides an advantage, although not measurable, for the platform development. Thus, in 2011 a usability team was created that works like an agency inside the company. A quick reminder—2011 was the time of the Alpha team's agile trial, during which the team cooperated with designers and usability researchers. Heading towards Experience-Based Differentiation (EBD), the usability team expanded its activity and in 2013 it became the User Experience Department. Although the UX maturity was still to come, in some teams UX was not only recognised, but also incorporated into the work of agile teams. The whole IT and Product Department has followed a good example involving the incorporation of UX into the software development process, and in 2015 it resulted in the end of there being just one, central team. Therefore, researchers, designers and analysts were dispersed throughout the whole department.

The most important reason for the UX to grow at Allegro was its role in decreasing the product development risk by:

1. Saving time and money that might be spent on developing unsuccessful product features or the product itself—UX specialists investigated users' needs at an early stage of the project to make a decision whether the product was worth working on. They also tested the product during development to check if it is going in the right direction.

2. Gain an advantage over the competition by constant benchmarking and designing functionalities that outperform the competitors.
3. Engage customers and make them loyal by defining consumer value and designing solutions tailored to their needs.

The market is growing fast, and e-commerce customers are increasingly demanding. It is not just that the platform needs to work well, but it has to exceed customers' expectations and invoke emotions. They want not only a good product but also a great service. This is how Service Design and Customer Experience domains came to life at Allegro. Service Design focuses more on the digital domain, and Customer Experience aims at physical processes and services.

In previous sub-chapters, some light on the history of Allegro has been shed, as well as details of implementing the agile methodology and user experience into the organisation. The following one will describe one of the most important technological projects to illustrate the above. The initiative was about improving the shopping experience. The reasons behind it, its structure (roles, tasks, dependencies), and organisation (workflow) will be discussed, as well as difficulties and ways of dealing with them.

3. Improving the shopping experience by facilitating the purchase decision. A case study of agile product development and the user experience approach

3.1. Reasons for starting the product

Each minute, 170 customers make a purchase. Each customer has their own user journey—from the moment of recognising the purchase need to receiving the ordered item.

Core touchpoints on the client's path are: inspiration, search and selection, making purchase decisions, checkout and receiving orders. Products implemented by the Technology Department[1] are organised, in general, around these critical stages. For example, the Offer area is responsible for products dedicated to the facilitation of making purchase decisions.

[1] The IT Department in Allegro is responsible for both the technology and shape of the product, i.e. the purchasing platform and tools for merchants.

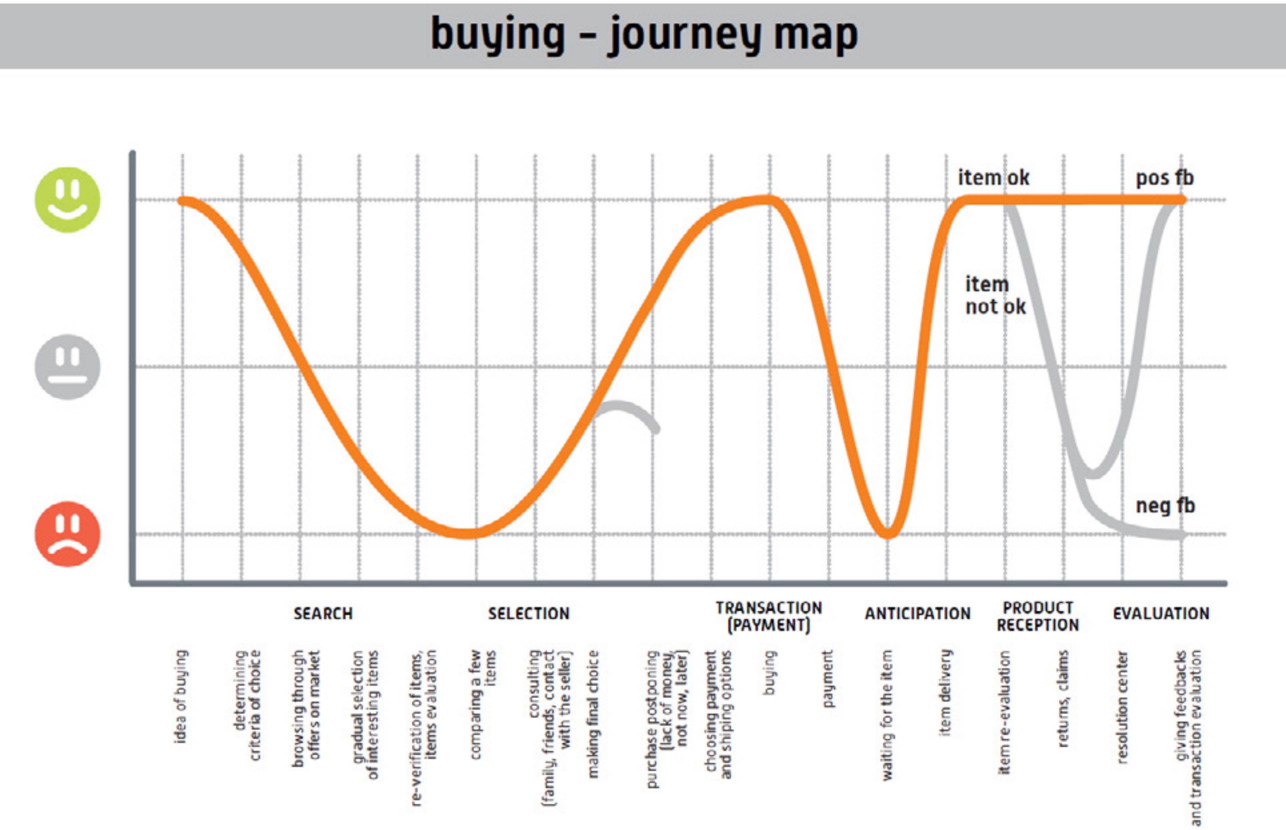

Figure 6. Allegro purchase process—customer journey map

An offer page is a place where an Allegro platform customer can get detailed information about a product or service and the terms laid out by the seller (return and complaints policies, warranty, delivery methods and cost), and check the seller's rating based on the opinions of other clients. The task of this area is to facilitate purchasing in the event of clients browsing this page, which means they are already involved in the process, but need detailed information about the subject, as well as the terms of purchase and delivery.

The offer area is constituted also to ensure efficient management of offers to sellers. In terms of sales, the user journey is one of the key stages due to its complexity and time-consuming nature (Figure 7). The sellers each time prepare an offer to issue and monitor its popularity or edit it (e.g. edit the description or change photos).

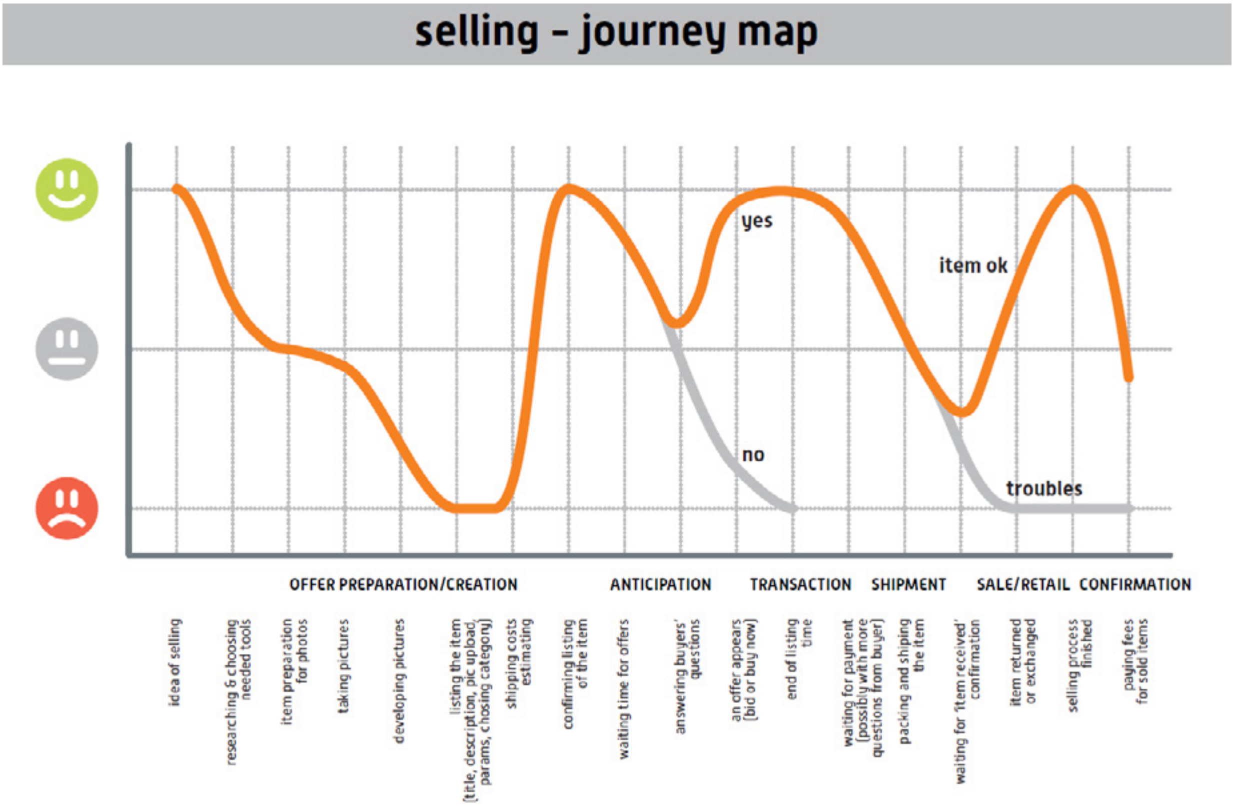

Figure 7. Allegro's merchant journey map

The offer-management may be performed via one of three available channels: the sales form, dedicated tools available in the 'My Sales' tab displayed after logging in, and functions available in a dedicated toolkit called 'Sales Manager'. The API (Application Programming Interface) is also workable. The latter methods are understood as a strictly defined set of rules and their descriptions of how computer programs communicate with each other (Beal, Pianini, & Viroli, 2015).

Among the main reasons for introducing changes stand out (CSR Allegro, 2017):

- Making offer selection more convenient. Studies carried out by Allegro show that 89% of consumers in Poland declared that when shopping online they pay attention to the terms of purchase, including the delivery time, return and complaints policies. And 35% of Allegro's customers declared that they would like to find more relevant information about the terms of the offer. Therefore, the description of the item on the new offer page was separated from the terms. Moreover, the terms were also divided into sections of fixed location.

- Facilitating the offer management. Until now, merchants had to change the terms of each single offer. A mechanism enabling group editing of offers was therefore a necessary element of this project. Currently, merchants can edit several offers at the same time.
- Adapting descriptions to mobile devices. According to research, 37% of Internet users make purchases using a mobile device. Presenting offers on a small display was more challenging. With the new item description editor, merchants can now create legible, mobile-relevant descriptions of items. This change has provided consistent user experience regardless of the device they use (omnichannel[2]). The goal was to engage customers across all the channels (desktop and mobile) by orchestrating the design and service to make using Allegro seamless and pleasant.
- Fulfilling the latest security principles. Allegro strove to ensure that all their site pages are encrypted with HTTPS (Hypertext Transfer Protocol Secure), which provides more security than HTTP. The most popular browsers warn users about using the HTTP protocol and inform about the risks associated with the protection of privacy and integrity of the exchanged data. The links and photos from external servers uploaded by merchants on Allegro were not always encrypted with the HTTPS protocol, and therefore the changes assumed that all photos in the gallery and in the description must have been stored on Allegro servers in order to ensure the highest security level.

The main challenge facing the offer product was to make the offer pages available to everyone at any time. Seemingly, this task appeared to be an easy one, but the difficulty was the technological complexity and the size of the product. Allegro has 92 million active offers,[3] which makes it one of the most popular sites on the Polish Internet.

What made this project even more difficult was that sellers used to be in fact responsible for the offer page layout, and the main task was to change their habits. Over 125,000 companies trading on Allegro were involved, and therefore changes have been introduced in stages. All works ended in the beginning of 2018. Not only was the change exhaustively announced to merchants, but they were also invited to co-create the product whilst the product development process was undergoing.

[2] Omnichannel seamless and effortless, high-quality customer experiences that occur within and between contact channels (Frost & Sullivan, 2015).

[3] Source: Allegro, 21.10.2018.

3.2. Organisation of work in the offer structuring the product

3.2.1. Organisational structure in the product development

Creating successful products requires the skills, expertise and involvement of many people. About 50 people with different skills participated in the offer structuring project. The product was managed by a Development Manager who supervised the work of: researchers (UX Researcher), designers (called UX Designer), data analysts (Data Analyst), product managers, leaders of development teams (the Team Leader) and eight agile teams.

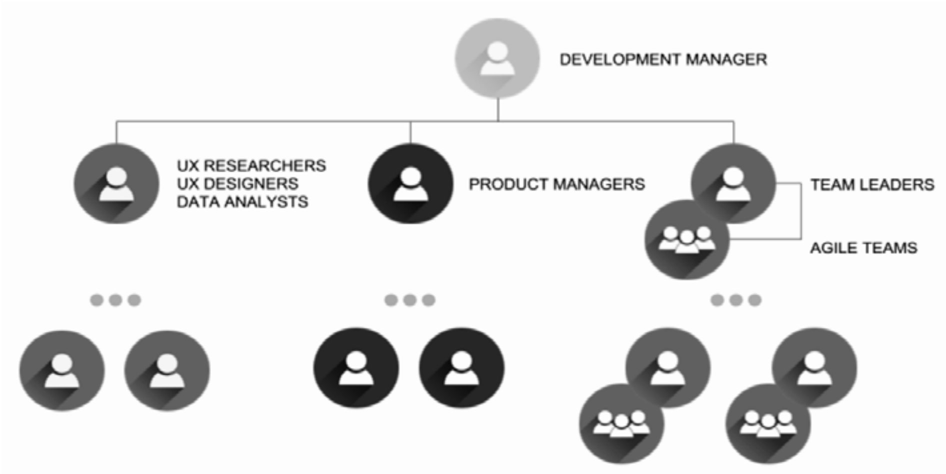

Figure 8. Organisation of offers area structure in the product development

Team members and their tasks:

- Development Manager—a person who manages the entire area of the Allegro platform as a whole. He determines the organisational structure of his area, the strategy of its product development, the technology used for software development and the methodology of work. The Development Manager reports directly to the Chief Technology Officer, who is a member of the board.
- Researcher—analyses users and their requirements in order to add context and insight into the process of designing the user experience. UX research employs a variety of techniques, tools, and methodologies to reach conclusions, determine facts, and uncover problems, thereby revealing valuable information which can be fed into the design process. The focus is on

the systematic approach to gathering and interpreting collected data. The Researcher presents research results to the team.

- Analysts—through in-depth data analysis, the Analyst examines the needs and concerns of customers and stakeholders.
- UX Designer—creates products that provide meaningful and relevant experiences to users. This involves the design of the entire process of acquiring and integrating the product, including aspects of communication, design, usability, and function.
- Product Manager—is responsible for guiding the success of a product and leading the cross-functional team that is responsible for improving it, and sets the strategy, roadmap, and feature definition for a product or product line.
- IT Team Leader—manages the work of the technological team, supervises cooperation between teams, presents the necessary technical work in the context of business risks, and cooperates with the PM and UX over the product strategy.
- Agile Team—the team is mostly made up of software engineers. Importantly, they are sensitive to feedback from the client and willing to submit their initiatives. They are not passive performers of product strategy, but proactively co-create it.

The team was supported by other company units, including a Communication team, PR, Commerce, Customer Service and Merchant Support.

3.2.2. Organisation of work in the product development

Building or improving the Allegro platform is a complex activity. The integration process, leading to a working and potentially transferable increase in functionality, requires the coordination of many activities and the use of many components. These activities must be properly organised and aligned with each other. Furthermore, all the relationships between them must be identified and managed in order to orchestrate them.

An additional difficulty is the fact that more than one team is working on the same source code. Developers who work in different teams must find a way to integrate the results of their work and test a common increase in functionality. Such challenges appear already during the integration of two teams.

In the product development in the offer area there were eight cooperating teams, and each had a different structure, which increased the difficulty level even more.

There were many dependencies between the teams working together to create a full and potentially marketable increase in functionality, at least once per sprint. They concerned the following areas:

- Requirements: the scope of individual requirements might overlap, and the ways in which they might be implemented could interact. This has to be taken into account when organising the elements of the product register and selecting the requirements for individual teams.
- Domain knowledge: team members had diverse business knowledge and knowledge about the construction and operation of the platform. This knowledge should have been reflected in the teams working on a given functional area. This might minimise the acquisition of knowledge from the outside, which could cause disruptions in work between teams during the sprint.
- Software and test: the individual requirements were reflected in the source code and test sets. As far as the requirements, knowledge of team members, source code and test sets would have been matched to each other within teams in the area, the dependencies between them would be reduced.

With such a complex and multifaceted product development, effective organisation had to be met by the following principles:

- limit dependencies between teams,
- maximise the use of domain knowledge in order to increase productivity.

It should also be added that the teams were free to choose the methods of work. Although most teams in this project followed the Scrum methodology, one of the teams also used Kanban.

3.2.3. Product development framework

Initially, the teams were not synchronised. Sprints lasted one or two weeks depending on the team and ended on different days of the week. Despite the dependence between the functional increments, the teams worked independently. However, a team responsible for a given area was always ready to provide support for the code review. Over the following months, work organisation frameworks were developed. Therefore, we were able to release the announced changes on time and make sure that the entire area was focused on the most important issues. We could also provide long-term solutions to more complex problems and take on new challenges posed by stakeholders. The organisation of work in the product development process is shown in Figure 9.

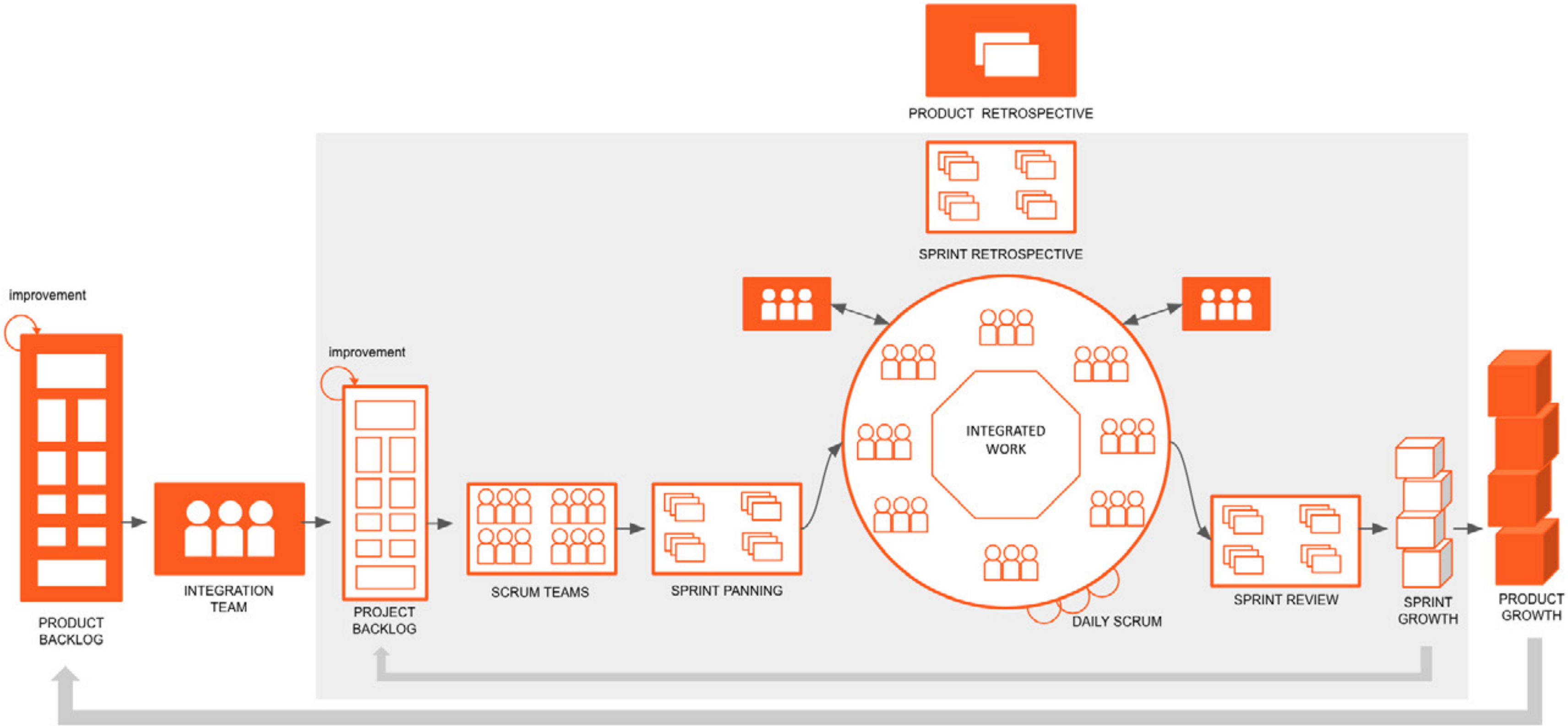

Figure 9. Product development framework

Integration Team: product and projects backlog planning and execution

In the offer area, three pillars were distinguished: a transparent offer description (with terms presented separately from product information), flexible sales tools, and parameterisation. Each of these areas were led by a Product Manager. Product Managers were responsible for creating a quarterly plan and handing it over to the teams.

Works for the whole offer area were planned in a quarterly cycle. At the end of the quarter, the Integration team, which included all people reporting to the Development Manager, met to summarise the work done during the quarter and to plan activities for the next one. Any incomplete tasks in the product register had to be completed during the next quarter. The estimated time needed to complete the postponed tasks was included in the team workload for the next quarter.

The Development Manager cooperated with managers responsible for other strategic products in the company and he was informed about initiatives that may affect the offer area plans. Therefore, a product backlog was established for the area for the next quarter, which took into account the dependencies between teams and mutual help within the area and other areas of the Technology Department.

Next, the previously prepared backlog went to teams that plan in detail the activities necessary to meet the requirements for the next quarter and that estimate the time necessary for their implementation. In the case of initiatives common for several teams, Product Managers met with team leaders in order to synchronise activities and minimise dependencies.

At the beginning of the quarter, the integration team met again with the Development Manager in order to confirm the quarterly goals for the teams. This meeting was an opportunity to pre-plan work for the next quarter. This was important for two reasons. First of all, the research and development group could carry out exploratory research and test hypotheses during the current quarter upon which the Product Managers had set priorities for activities within the field. The second reason concerns development. It was about future plans included in the current work, which, in the event that the architecture of the solutions created was poorly designed, could waste the time needed to adapt the source code to the required functional changes.

Agile Team: sprint planning and execution

Teams work in a weekly work rhythm. Sprints and the sprint register are prepared jointly with a Product Manager assigned to the team who acts as the product owner. In this process, the Product Manager is responsible for the shape of the product and increase in functionality.

Teams met stakeholders once a week on a joint team sprints review. They presented new functionalities, discussed mutual dependencies, shared good practices, and discussed problems. It was not an unusual thing that a problem faced by one team had already been solved by another one. These meetings helped as well to share knowledge among teams. Immediately after the sprint review, the Integration Team met (with the optional presence of the Development Manager) at the synchronisation meeting. The formula was similar to a Daily Scrum meeting. In the event of problems appearing during the sprint overview, the team establishes a recovery plan and synchronises the actions for the next sprint.

Once a quarter, the Integration Team met on a joint retrospective to summarise the cooperation of the product area in the previous quarter. This was the time when joint arrangements affected the framework of the work methodology, and therefore its current shape would be subject to further adjustments.

3.3. UX Research and the design process in the agile environment

Fitting the UX Research and design process into the agile environment is not easy. The UX team often supports development teams and tends to be directly affected by the work of different departments in the organisation. Organisational issues and communication breakdowns have also an impact on how the UX team organises its work. Development teams have a much clearer path for moving from one methodology to the other, because the processes are development centric. Due to many dependencies, the UX team might want to work differently.

The task of the user experience team was to develop a general outline of the product, as well as any interaction with it, and necessary communication.

The UX team was also responsible for monitoring the behaviour of customers and responding to possible problems in no time. Along with testing hypotheses, the shape of the product was established. Because of the nature of the work, the UX specialists were not a part of the scrum teams, but they created a 'meta-team' that worked directly with the Development Manager, the PMs, the IT Leader and other members as part of the Integration Team.

A detailed description of the research and design process and the organisation of the UX team work will be presented in the following sections.

3.3.1. The UX Research and design process

What challenged the UX Team was to join working on a strategy with the execution of the right solution. 'Strategy' means here setting a general direction for a product, not a rigid product frame. Defining a strategy was not a static exercise. Creating successful products required predicting the future, which is always full of uncertainty. New information might appear and it was necessary to test hypotheses that could appear when the work was in progress. To all this, constant testing and monitoring of the product was essential.

Another challenge for the team was to break down a large product into manageable chunks. There was no need to perfect the entire solution upfront, but smaller packages of value for release were created. The team responded to real-life case studies to refine and adapt the architecture of the product. The strategy adjusted to the feedback from users of the product.

To illustrate the process, the modified Double Diamond model was used. The Double Diamond process maps the divergent and convergent stages of a design process. The model was created by the British Design Council and consists of four phases:

- Understand: in this stage the team identify, research and understand the initial problem. This is an exploration stage with primary research as a main activity.
- Define: this phase is about limiting and defining a clear problem to be solved; thus, prioritisation of problems is the main task.
- Explore: here, the team focus on and develop a solution and test different versions of the product.
- Create: this stage is about testing, evaluating and improving.

The first two above relate to building an overall strategy. This may refer to the aforementioned quote 'doing the right things'. The second part concerns more 'doing things right', meaning more product testing and monitoring of users' behaviour.

This model seems like a linear process, but in fact, it is more complex. The exploratory phase is more linear than the executive, but the latter is entirely circular and is about repeating the loop: build-measure-learn, common for agile methodology.

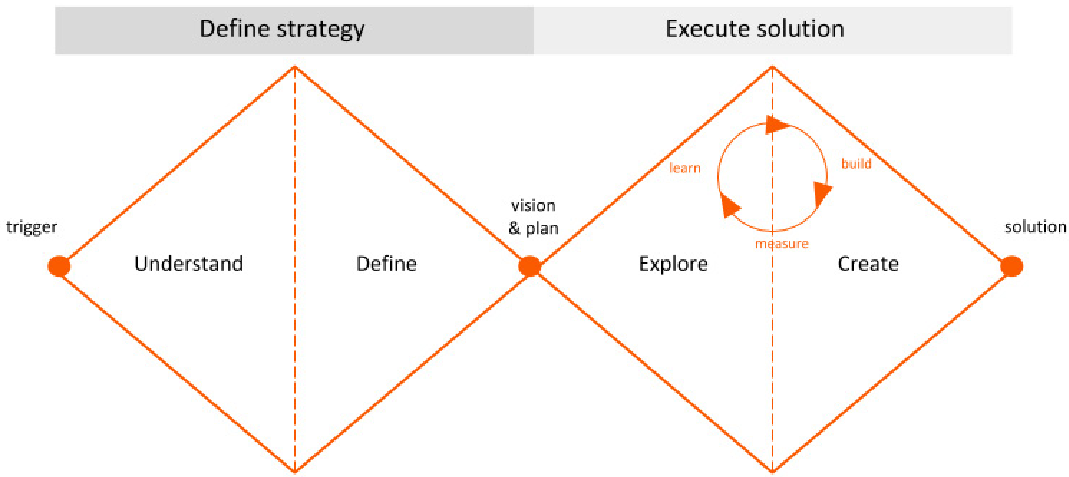

Figure 10. Modified Double Diamond model, adjusted for software products and services

Source: (Design Council, 2005).

In the case that is discussed, the team consulted the product with over 7,505 people, clients and merchants. They provided the team with insight into their everyday shopping and selling behaviour, as well as their personal opinion about Allegro. Based on users' feedback, the team has been working on the product since May 2016 and the design process involved:

Understand and define

On a daily basis UX specialists research how people buy: what are their needs, what devices they use, what they like and what bothers them. To gain this knowledge, the team uses diverse methods starting from exploratory data analysis, through to qualitative and quantitative research. Understanding users' needs is mostly qualitative, and therefore such techniques as in-depth interviews, group workshops and mainly field research had primacy at this stage.

UX specialists gained unique knowledge about users. They got to know that the buyer in Poland is primarily a Smart-shopper guided by objective product features and detailed descriptions (35%), is rational and analytical (29%) and needs time to complete the purchase process to carefully compare offers and rethink purchases (30%) (source: Mobile Institute). The team analysed how Allegro's buyers use the service and at what stages of buying they encounter problems. The team wanted to solve these problems, and one of them was making the purchase decision. It turned out that 37% of buyers declared that they often cannot find important information on the offer page. 42% of buyers stated that information about the item they want to buy is insufficient, and 35% of them did not find all the relevant information about the terms of the offer (e.g. warranty, return) (source: Allegro research).

The research findings helped the team to define the product goal: buyers will be able to reach the terms of the offer more quickly and they will receive only reliable data that are necessary to make a purchase decision. UX specialists also wanted to facilitate shopping on mobile devices. In addition, the goal was to facilitate the management of the offer for sellers. They knew that it was not possible to edit the offer and quickly change its terms.

Create

This phase was mainly about translating the assumptions raised in the previous step into a tangible product. It was a creative work, during which the team put to the test as many hypotheses as possible. Hence, the main activity of the team was to focus on specific elements of the product, prototype them and to carry out A/B tests.[4] They had hypothesised, for example, that the offer page should be adjusted to different categories. During the design work it turned out that the information on each offer seems to be arranged in a scheme, making sure that the buyer, who searches during one visit from 1 to over 100 offers, finds the information he needs, always in the same place. Therefore, the team focused on consistency of experience throughout the service, regardless of the viewed page or category.

[4] A/B test—is a randomized experiment with two variants, A and B (Kohavi & Longbotham, 2017; Kohavi & Thomke, 2017).

Measure and learn

In this phase, metrics were developed so that the team could assess whether the product development was going in the right direction. This showed progress in the work and helped to react quickly when the team realised that the product development was not going as it should. For example, the metric of a percentage of structured offers on the site in comparison of conversions between old and new offers were set. Because metrics showed if something worked or not, the team also introduced qualitative and quantitative research that revealed the core of the problem. In addition, surveys to monitor the impact of changes on convenience in terms of purchasing decisions were conducted.

This process was repeated for each feature being added or changed on the offer or function page in the seller's tools, e.g., within the returns section, legal requirements, clients and sellers' needs were taken into account in order to reliably describe the refund policy, and elements of this section were used to create a claim form for the return of goods to the seller implemented as part of work in another area of the Technology department.

Service design

The product development required not only to design the product itself, but also to build the entire service around it and change the management. UX specialists looked in a holistic manner at the related actors, both internal and external, their everyday duties towards Allegro, tools they use, and different channels of communication.

The team responsibility was to help merchants to adapt to the change that concerned them. This was not a change in the offer layout, but in its description. Because each seller had their own template, every offer on Allegro looked different, and information was scattered in different places. And when some information could not be found, it was not clear whether it was missing or only difficult to find amidst the jumble of various information that sellers added in the template. All this required a lot of work from merchants, especially those who list several thousand offers on Allegro.

Examples of activities performed as part of the service:

- automation of changing old descriptions to new ones—a tool,
- tutorial—a website,

- communication plan including an interactive timetable, feedback tool, detailed description of requirements, FAQ, customer service training and others.

An important element was mutual communication, i.e., enabling users to submit their opinions about the product, and their active participation.

3.3.2. Planning the UX work in the agile development

The work of the entire offer area team is described in the previous chapter. However, it is worth taking a closer look at how the agile work of the research and design team fits into the agile management of the entire product development

To plan the UX work in an agile environment, it was necessary to take a step back and think about agility as an ability to respond gracefully to the changes existing in the environment, not simply as a series of rules and ceremonies. The UX team decided to split planning into big and small loops, which is shown in Figure 10. The 'BIG loop' referred to creating the whole service strategy and larger parts of the product (e.g. the group offer management, product communication and change management, offer page architecture), in contrast to the 'SMALL loop', which was based on testing, learning and improving smaller parts of the product (e.g. improving the usability of the selling form).

BIG loop—forming the product backlog and setting priorities

The whole product started with a BIG loop. The goal was to prepare a product backlog through designating strategy and its steps. Together with the Integration team, researchers and designers conducted sprint zero, which was called a Design sprint. To sprint, however, one should prepare, and the element of these preparations was to carry out appropriate research that would help in going through the 'Understand' stage (the Double Diamond model). At this stage, exploratory research was conducted. This kind of research was carried out for a problem that has not been studied more clearly, intended to establish priorities, develop operational definitions and improve the final research design.

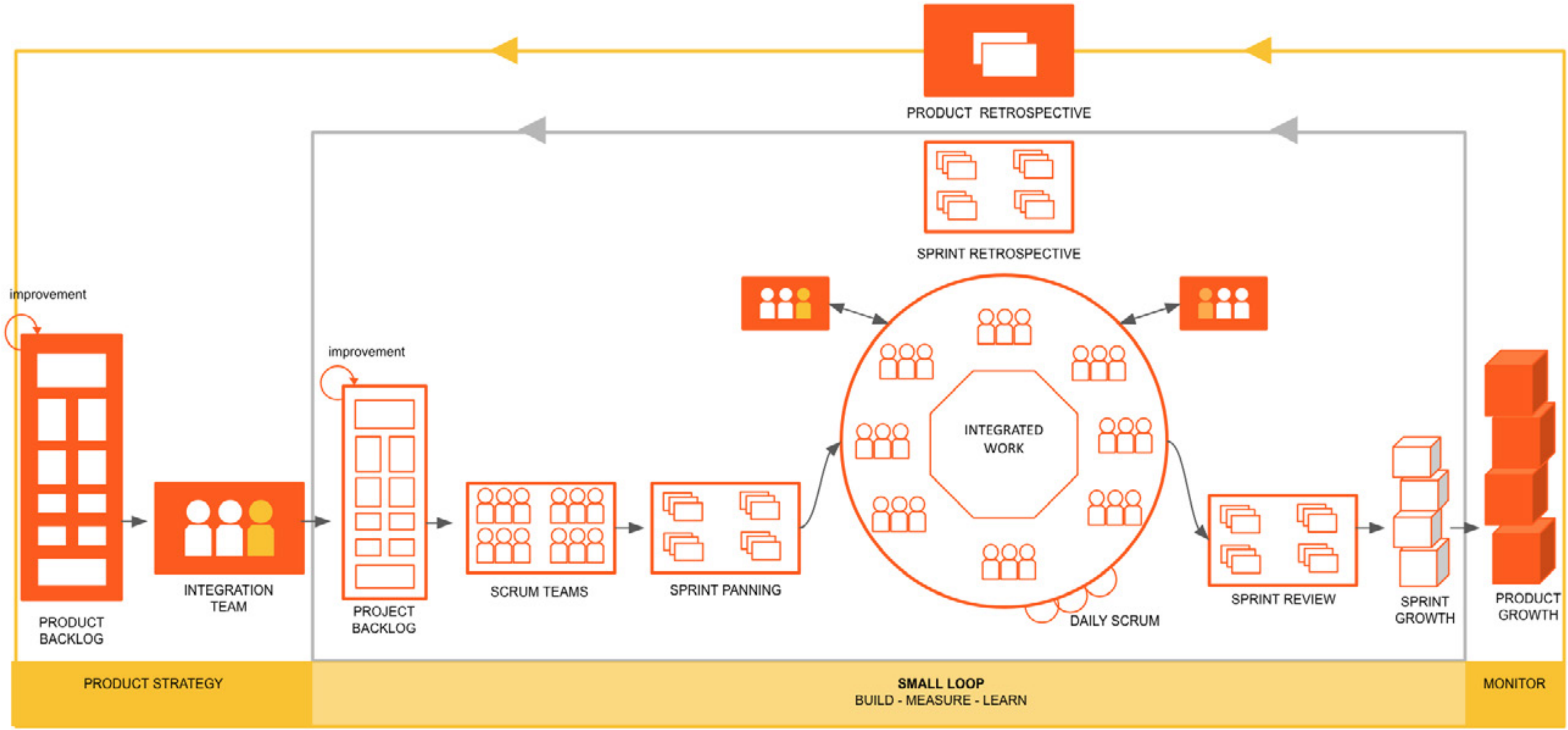

Figure 11. UX Research and the design process in agile development

Design sprint[5]

At Allegro, the original method presented by Jake Knapp, John Zeratsky and Braden Kowitz from GV is modified. What is essential and common is that:

- the sprint takes no longer than five days, so as not to spend months on strategic planning, but to quickly test the course of action and change it if it is not adequate,
- it utilises everyone who is involved in the product development (in the offer area it was the Integration team and designated people from the Commercial and other departments),
- It consists of five stages:
    1) understand—the Integration Team comes together to explore the problem from all angles: business, technological, user / customer experience. Here the results of exploratory research are presented,
    2) diverge—everyone generates ideas to solve a defined problem,
    3) decide—identify ideas that fit the customer and business expectations, some of them to be explored in more detail,
    4) prototype—build a prototype (e.g. the offer page),
    5) validate—test and discuss the prototype with a target group.

This activity was carried out at the beginning of the product development in the offer area and involved larger product elements. The results of this sprint formed the product backlog together with other requirements that were presented by a Development Manager.

SMALL loop—forming product backlog and planning sprints

In contrast to the BIG loop, the SMALL loop was more related to the rhythm of work of the agile teams. First of all, the UX specialists participated in the sprint planning and product backlog review. If something needed to be clarified at this stage, secondary research was carried out. This kind of research helped to clarify details of the product and each of its components. If the team already had had certain hypotheses about the product, then they tested them by conducting a series of experiments. During the sprint planning, the UX specialists determined how much time is needed to conduct research or

[5] Design sprint is a time-constrained, five-phase-process that uses design thinking to reduce the risk when bringing a new product, service or a feature to the market. It has been developed and popularised by J. Knapp, J. Zeratsky and B. Kowitz.

experiments and how much the team would be involved in it (e.g. how much time team members should spend on observing usability tests). Smaller topics took up to a few days, and larger about two weeks.

During the sprint or just before the next planning, the UX specialists presented to the team feedback from users and suggestions for improvements. Recommendations were taken into account in the upcoming sprint.

Conclusion

Over the past years the growth in e-commerce has transformed consumer spending and shopping habits. This has affected emerging and developing countries product pricing, lifestyle, consumer behaviour, and products and goods availability. Global e-commerce is projected to grow at a constant value, with the Compound Annual Growth Rate (CAGR) of 12% globally from 2015 to 2020. In contrast, store-based retailing, which continues to be the biggest channel by value, will grow by a CAGR of just 2% over the same time period (Bourlier & Gomez, 2016). Product development in such an environment requires from managers being agile and attentive to the changing needs of clients. Knowing this, Allegro continues to develop the platform and its unique service in accordance with the growing market of demands.

DISCUSSION QUESTIONS

1. Based on the history of product development at Allegro, evaluate the changes made over the years and indicate the possibilities for further growth. Is agile still the future? Take into account the impact on the end customer, corporate strategy, finance and marketing.
2. What impact did the incorporation of the design process in product development have on the business? Choose one company, which should transform from a business to an experience driven one, in which the customer comes first. Propose:
   a) a mission, vision and a strategy for the company transformation,
   b) identify risks and propose methods of their limitations,
   c) indicate the steps that need to be taken for such a change to take place (do not forget about every aspect such as changing the organisational culture and mindset).

4. Should Allegro start international business? Evaluate the potential and risk. If your answer is yes: In what business model? In which countries? Should operations, including product development, be launched in other countries? If your answer is no: How should Allegro further develop its business in the context of increasing competition on the PL market and customer demands?

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Marketing
Internationalisation
Inflation
Commerce
Company
Economic growth
Industry
Globalisation

ALVO MEDICAL LLC ON SELECTED ASIAN MARKETS

BY MAŁGORZATA BARTOSIK-PURGAT, BARBARA JANKOWSKA AND KRZYSZTOF WĄCHNICKI

1. History and portfolio of the company

ALVO MEDICAL is a Polish company established in 1993 by Tadeusz Olszewski who, together with his family, has been its owner since its beginning. The company's headquarters is located in the town of Smigiel near Poznan, where over 250 people work in the office and in the factory. During the first years of its business activities, the company produced cooking lines made of stainless steel, and since 2003 it has built its expertise and experience in providing solutions for operating theatres.

Since 2003 ALCO MEDICAL has been one of the Polish producers and providers of innovative, integrated solutions for hospitals and medical units, encompassing the equipment of operating theatres, surgical preparation rooms, treatment rooms, and many other hospital areas. In its portfolio, the company offers high-quality medical equipment such as modular walls, operating tables, medical furniture, integration systems, and surgical lights. ALVO MEDICAL has designed or equipped over 1,500 operating rooms in almost 60 countries over the past 15 years.

In its mission, ALVO MEDICAL highlights that they "exist to provide better healing conditions. For everybody. Everywhere in the world" (Alvo Medical). On the other hand, the company's values focus on human life. Each product manufactured by ALVO MEDICAL reflects the focus on reaching better clinical outcomes. ALVO modular, hygienic and integrated operating rooms are safe and friendly for their users, patients and the natural environment (www.alvo.pl).

ALVO MEDICAL'S business model is based on three key factors, which include:

- competences,
- customers and distribution channels,
- products.

The key competences of ALVO MEDICAL are, first and foremost, the sales of designs and the sales of products. The sales of designs can be divided into two main groups: 'turnkey' projects, and projects of limited range. In the case of turnkey projects, ALVO MEDICAL is responsible for the design, building, equipment, and integration of operating theatres—the company assembles modular walls, delivers its own products, assembles products delivered by other companies and integrates the functionality of all elements. In the projects of limited range, ALVO MEDICAL acts as a subcontractor employed by an entity responsible for creating an operating theatre. ALVO MEDICAL's role as a subcontractor most often comes down to assembling modular walls, providing operation tables and integrating all items of equipment. The second key competence of ALVO MEDICAL is the sales of products. In a situation when other entities are responsible for designing and assembling an operating room, the Polish company acts sometimes as a manufacturer and supplier of its own products, such as operation tables or medical furniture. Rich experience and its long industrial footprint has allowed ALVO MEDICAL to act also as a middleman and to deliver products from many renowned manufacturers to the construction site. In 2017 the sales of products made over a half of the company's revenue, which shows that it relies on comprehensive services, which allow to generate much higher added value.

The second key element in ALVO MEDICAL's business model is its customers and distribution channels. Most of the company's clients are entities from the healthcare sector—these are most often hospitals, but clients are also general contractors of the projects for which the company supplies specific equipment. ALVO MEDICAL reaches Polish and foreign clients through four basic channels: its own sales network in Poland, distributors, agents and strategic partners. Its own sales network consists of the head manager for Poland and four regional managers each of whom is responsible for their region (north, south, east, west). These managers are in a constant, direct contact with the clients, i.e. hospitals and other entities which provide health services. On the other hand, the distributors are used by ALVO MEDICAL outside the country. Leading multi-million projects on foreign markets is a challenge which requires thorough knowledge and understanding of particular markets and their characteristics, which is best recognised by local distributors. ALVO MEDICAL collaborates with experienced foreign distributors who know both the character of their markets as well as the industry sector, and who sell ALVO MEDICAL's products by using their expertise and knowledge of local markets. Another distribution channel of the Polish company is its agents.

In 2017 the company had its agents responsible for the Middle East region, Africa, and Kazakhstan. The role of agents is similar to the role of distributors, the difference is in the mode of cooperation—while the agents are employed and remunerated directly by ALVO MEDICAL, the distributors are independent entities which receive commission from sales. The last but not least channel and, at the same time, a manner of international activity, is strategic partnership. Since 2017 ALVO MEDICAL has cooperated with a German company, Dräger, which is one of the leading world suppliers of medical equipment, and which has its branches in over 50 countries. Dräger supplies mainly anaesthesia equipment, surgical lamps, and many other products complementary to those offered by ALVO MEDICAL. Due to this cooperation, the Polish company gains access to an extremely developed sales network, the consequence of which is an increase in the number of orders and acquisition of knowledge on foreign markets.

The third highlighted foundation of the business model of ALVO MEDICAL care is its products. The key products offered by the company are:

- modular walls,
- medical furniture (including e.g. operating tables),
- the Alvo Integra system.

The modular walls are constructions from rectangular glass or steel panels, which facilitate personalisation and customisation of the operating space in response to the client's needs by enabling the installation of a diverse range of equipment. The panels are resilient to corrosion, they ensure a sterile environment in the room and they are coated with silver ions which prevent the multiplication of bacteria. The modular cabinet system allows also for unlimited possibilities of using visual effects, starting from graphic images which can be 'printed' on the panel, ending with LED displays in the outer layer. Operating tables offered by ALVO MEDICAL are designed in a way that ensures the highest possible safety to patients and that create comfortable working conditions of the medical personnel, thanks to which the products have gained recognition in many world markets.

Another important product in the portfolio of the Polish company is its medical furniture, first and foremost its contactless and self-disinfecting surgical scrub sinks, tables and cabinets made of stainless steel and trolleys for the transport of medical devices.

The last-mentioned key product is the Alvo Integra system, which makes the company stand out from the competition and allows the integration of all assembled elements in the operating theatre. The system is based on an integrated IP network and allows the medical personnel to control all the medical devices present in the operating theatre with a touch screen mounted on the wall. Alvo Integra allows also for recording, processing, replaying, and sending video and audio from the installed devices, which makes it possible, among others, to consult the procedure in real time with the medical team present in another hospital or even another country. The key products in ALVO MEDICAL's offer are shown in Figure 1.

Figure 1. Modular walls, operating tables, medical furniture, Alvo Integra

Source: (Alvo Medical).

In 2017 modular cabinets systems had the biggest share in sales of products in general, Alvo Integra was in the second place, and the third was equally shared by medical furniture and operating tables (Alvo Medical).

ALVO MEDICAL is a company with a relatively high degree of internationalization, which can be attested by its sales data. From the beginning, the company has realised projects in almost 60 countries on different continents, and in 2016–2018 foreign sales considerably exceeded domestic sales. The decision on the geographic expansion of the company's activity and entering Asian markets had a significant influence on the increase of revenue from foreign sales. Some of the key countries in which ALVO MEDICAL develops its business activities are India, China and Indonesia. Due to their size, population, and socio-political factors, these countries are very attractive for medical companies, but significant impediments are the cultural differences, infrastructure, and even climate.

2. Analysis of the healthcare market in the region of South and East Asia

Products and items of hospital equipment belong to the healthcare market in a broad sense, which is considered as one of the biggest in terms of the value areas of business in the world.

Global expenses on healthcare in 2015 amounted to around 7 billion USD, and in 2020 they are expected to reach an impressive amount of 8.7 billion USD, which will consist of around 10.5% of the gross world product (Deloitte, 2018). The main factor which contributes to this increase is longer life expectancy, 72 years on average for all countries in the world, previously just 67 in 2010. It is estimated that in 2020 over 604,000,000 people in the world, that is around 8% of the population, will be over 65 years old (OECD, 2018). These figures make the healthcare market, and manufacture of the hospital equipment (which constitutes the healthcare market segment) along with it, rise dynamically and create chances for companies to achieve high revenue, especially due to the fact that such a fast growth in demand for medical care among people in the world requires many changes that increase the efficiency of the healthcare.

Manufacture of equipment for operating rooms is strongly diversified geographically. According to the report Operating Room Equipment Market Analysis and Segment Forecasts (2017), the biggest area in terms of value in 2019 was North America, with a share in the market of around 37.28%, which is mainly the result of the program for the modernisation of operating rooms, a rise of outpatient medical care units, and an increase in the number of surgeries. However, it is worthwhile to focus on South and East Asia, which took second place in terms of market share in 2016, and whose estimated average compound annual growth rate CAGR is 7.8%, which makes it the fastest growing market in the world. It is one of the reasons why in the next part of the paper the expansion of the Polish company Alvo LLC to the selected countries in those particular regions will be analysed.

The most important growth factors in the countries of South and East Asia are the improvement of heath care infrastructure, an ageing society, and growing investments of government bodies and institutions for health care (Grand View Research, 2017). An important factor is also so-called medical tourism, and countries of South and East Asia are ones of the most often chosen destinations.

2.1. Structural analysis of equipment for the operating theatres segment

In one of the models used for the measuring of competitive intensity in a given market segment, it is the result of the economic structure of the segment. According to this model, the condition of competition is the product of five basic elements, i.e. the threat of new entrants, the bargaining power of suppliers, the bargaining power of buyers, the threat of substitutes, and industry rivalry.

The first element is the threat of new entrants. In principle, a new entrant brings a new production capacity, new resources and an intent to gain a share of the market. In effect, prices on the market often fall, which causes a decrease in the profitability of other firms. The threat of new entrants to a given market segment depends on barriers to entry, which can include among others economy of scale, access to distribution channels, high initial costs, government policy, capital needs, or the diversification of products. In the case of the manufacture and sales of the equipment for operating rooms, the threat of new entrants is small due to the very cost-intensive character of this segment. Strict regulations regarding acceptance and certification of products effectively discourage new players from entering. Also a formation of an effective and developed distribution channel poses a significant challenge for new entrants, as the segment of operating equipment is relatively closed, and getting contacts takes a lot of time, work and patience, especially in countries with a strong relation culture (to which the group of countries South and East Asia belong), characterized by considerable reluctance and mistrust for doing business with new, foreign partners.

The second factor is the bargaining power of suppliers. Suppliers can use their bargaining power over buyers by increasing prices or decreasing the quality of sold products and services. In the case of the segment of equipment for operating rooms, the bargaining power of suppliers is moderate. They provide resources such as rubber, steel, metals, and aluminium as well as medical polymers. What is characteristic for this market segment is a high number of suppliers of the resources, which decreases their bargaining power. Yet another set of entities should be differentiated from the group of suppliers, which provide specialist devices, resources or software essential for patient monitoring equipment or operating robots. Suppliers of such highly specialized products have a much higher bargaining power from the other group, this is why the final assessment of this power is moderate.

Another analysed factor is the bargaining power of buyers. High bargaining power of buyers' manifests in pressure for a decrease of prices, an increase of quality and better service. A group of buyers is especially strong when it is concentrated or when it purchases very large amounts of products in comparison to the volume offered for sale. In the case of the segment of operating rooms equipment, this factor can be assessed as moderate. This is mainly a result of the fact that the number of companies which offer specialist products is relatively small. On the other hand, the number of distributors who can find successive markets for their firms is relatively big. A factor which increases the bargaining power of buyers is the possibility of the lease and easy resale of once purchased equipment to others.

The fourth element of the model is the threat of a substitute. Substitute products limit potential markets in a sector, e.g. by determining the threshold for prices, limiting at the same time a possibility of raising the prices by players in a given segment. The more attractive the substitutes in terms of quality, efficiency, and prices are, the more limited markets become. Identification of substitutes relies on finding other products, which have the same function as products of a given market. The segment of operating room equipment is characterized by a small threat of such products. In principle, the threat of substitutes from outside does not exist, and the only threat comes from within the sector itself—e.g. the possibility of using one endoscope in many different endoscopic procedures (Grand View Research, 2017).

The last element of the model is industry rivalry from within a sector. Competition between entities in a given market segment relies on the readiness to gain the best position, by an advertising war, price competition, or enlarged range of customer service, launching of new products, broadening of warranty or servicing etc. Rivalry appears when one or more competitors succumb to the pressure of a situation or perceive an occasion to increase their own competitive position. In principle, the competitive actions of one company from a sector affect other companies. They can be stimulated to commence actions which neutralize the activity of the rival or to retaliation. In each of these cases it means that companies from a given segment are dependent on / independent from one another and such a pattern of activities can lead to a situation when the initiating company and the whole sector find themselves in a better position, or worsen it. Rivalry within the sector with its equipment of operating rooms can be assessed as high, and that is why it will be described in more detail. This segment is relatively highly fragmented with a few strong, international corporations which offer their products, such as Koninklijke Philips N.V., Medtronic, Getinge AB, Stryker, Siemens Healthineers, KARL STORZ GmbH, GE Healthcare, Dräger, Hill-Rom. Manufacturers work hard to increase their market shares through strategies such as the development and improvement of existing products, or price competition which deepens the rivalry between present players.

2.2. Factors of surroundings which determine activities in the segment of operating room equipment

In order to prepare a strategic analysis which aims to take specific decisions concerning the activities of companies, a series of factors (elements of the surroundings) which can determine these activities is considered.

In the context of the segment of hospital rooms' equipment in the South-East Asia region (attention will focus mainly on India, Indonesia, and China), one of the first groups of factors are political factors, which relate to the political situation and legal regulations in the region. Undoubtedly, the strong point of the analysed market segment is the initiatives undertaken by governments of selected countries, which purpose is to improve the accessibility and quality of medical services. For example, a program National Health Mission has been realised in India since 2013, which is overseen by the Ministry of Health and Family Welfare. The main aim of this project is to improve the health situation of the citizens of India, and the actions which lead to it include among others an increase of medical units and improvement of services by the purchase of modern equipment. Also, since February 2018 the National Deworming program has been realised, which purpose is to ensure the high quality of children's health protection. The India Brand Equity Foundation (2018) estimates that over 322 million children make use of the program. Similar initiatives are implemented by the Chinese government—since the second decade of the 21st century, the health sector has undergone reforms based on the 'Four Beams' model, which refers to four key elements: providing equal access to the healthcare for citizens of towns and villages, ensuring high quality of medical services, ensuring necessary and basic pharmaceuticals, and ensuring medical insurance to all citizens (Typhoon Research, 2018). On the other hand, in Indonesia a project on Universal Health Coverage has been implemented since 2014, which consumes large financial efforts on hospital equipment among others (Frost & Sullivan, 2016).

The downsides of the political situation and legal regulations in analysed countries are first and foremost vague and complicated procedures of entering national markets by foreign medical firms, political instability, and low transparency of actions taken by decision-makers. On the other hand, the chances created by political factors are connected with strong sides—the implementation of healthcare programs should bring increased expenditures for healthcare, including hospital equipment. The main threats of a political and legal nature from the point of view of entrepreneurs who want to enter the described markets are difficulties in understanding and meeting of all the requirements posted by local law and the probability of a sudden, unexpected change of the political situation, which may negatively influence the activity of foreign entities in the medical sector (Indian Brand Equity Foundation, 2018; Frost & Sullivan, 2016; Typhoon Research, 2018).

Another group of factors determining the activity of companies from the segment of equipment for operating rooms is economic elements. Undoubtedly, the biggest advantage in the economic aspect is the growing expenses for healthcare, which boost the demand for operating room equipment. In 2010 these expenses in China constituted 4.46% of GDP, while in 2015 they reached 5.32%, i.e. 587 bln USD (World Health Organization, 2019). In India on the other hand, the compound annual growth rate in 2016–2022 is estimated at 22%, and in the last year of the analysis these expenses are to reach around 372 bln USD (Indian Brand Equity Foundation, 2018). A favourable situation exists also in Indonesia, where in 2008–2015 expenses for health care rose as much as 237% from 14,327 to 33,988 bln USD (World Health Organization, 2019). To the downsides of economic factors of the market segment of operating room equipment one can include first of all the high expenses' healthcare units have to spend on investments into products from this branch. It should also be highlighted that according to the report of Grand View Research (2017), expenses on operating equipment are less than 40% of total hospitals' expenses. Chances connected with economic factors stem mainly from rising expenses from year to year for healthcare, which should be reflected in growing investments on hospital equipment, including operating theatres. Among the threats stemming from the economic environment, increasing rivalry between the companies from the sector and price wars should also be mentioned. Grand View Research (2017) indicates that price wars between producers can be a serious factor which limits the increase of revenue and the development of the operating room equipment sector.

The third analysed group of factors is that of social aspects. Definitely, a strong point is a fact that 2.99 bln people live in India, China, and Indonesia in total, which constitutes around 39% of the world's population (World Bank, 2018). Such a high number of populations translates into the size of the demand for health services. To the downsides, one can include the fact that the countries struggle with a relatively high level of poverty and a limited access to healthcare for people, especially from deprived rural regions. However, at the beginning of the 21st century a relatively fast urbanisation process took place—in 2000–2015 the ratio of city dwellers to the population in total rose from 36% to 56% in China, from 42% to 54% in Indonesia, and from 27% to 33% in India (World Bank, 2018). Urbanisation can mean potential chances for the market segment of equipment for operating and procedure rooms—especially with the growing middle class with its unhealthy, urban lifestyle, which can affect a substantial increase for demand for health services. Increased awareness and the demand of the population for minimally invasive procedures, which can be performed by purchased modern equipment, is crucial as well. Longer life expectancy, which brings ageing of society and an increase in demand for health services, is another chance of an opening of new possibilities for companies of the analysed sector. Threats which stem from social factors seem to be small or very unlikely, and they include e.g. a possibility of the rise in popularity of traditional, folk methods of treatment (Indian Brand Equity Foundation, 2018; Grand View Research, 2017; Frost and Sullivan, 2016).

The last analysed group is technological factors. According to the discipline-specific report by Grand View Research (2017), the strongest point, which is at the same time an important market boosting factor, is a rising number of outpatient surgery centres. The centres answer to a growing demand of consumers for minimally invasive procedures, for which technologically advanced devices are necessary. The downside of technological factors is on the other hand, a high level of essential capital and investment expenses for research and development. Creating new and improving existing products is one of the main challenges which the companies from the analysed sector have to face. Constant exploration of new solutions is also a chance for market players—a ground-breaking invention or technology can improve the competitive position of a company in an unexpected way and boost market growth. To the threats of technological factors, one can include first and foremost the process of certification and permits, which can become very time-consuming and costly.

3. Strategies of entering the selected Asian markets

3.1. The Indian market

The Republic of India is the second largest country in terms of population in the world—around 1.3 bln people live in India (World Bank, 2018). Many firms which want to become an important player on the international market must consider and analyse ways of expansion into the Indian market, where the potential demand is very big in comparison to most of the countries in the world. The expansion into the Indian market depends on many external factors described in the previous section. It is affected also by internal factors of the companies connected among others with offered products, tangible and intangible assets, as well as the aim and the strategy of action of the company. In its mission, ALVO MEDICAL promises to create better healthcare conditions in the whole world, and thus development in the international markets is one of the principal decisions of the company's activity.

The Indian market has a large potential for ALVO MEDICAL, which has been emphasised in the previous parts of the case study. This potential is connected (from the point of view of ALVO MEDICAL) first, with a high number of people who require healthcare, and second, with a constant need of creating new clinics and retrofitting of the existing ones, which are often in a very bad condition. However, this market is very distant from Poland, both geographically and culturally.

ALVO MEDICAL was committed and determined to take the challenge and try themselves on the Indian market for years. However, ALVO MEDICAL management was aware that India was a demanding, specific and difficult market due to, among others, the above-mentioned cultural differences reflected in the Indian people's mentality, Indian workers' ways of work, and world-renowned bureaucracy. It was clear for ALVO MEDICAL's management that without previous experience in the market, the company would not be able to run a project in India. However, new possibilities opened when a contract was signed with a German company, Dräger, on strategic partnership at the beginning of 2017.

Dräger is one of the global leaders in the area of medical technology, specialising mainly in anaesthesia devices and medical gas. Dräger's portfolio for the most part is complementary to ALVO MEDICAL's products, which caused a mutual will of cooperation and a lack of reciprocal cannibalisation of the other company's offers. The joint actions of ALVO MEDICAL and Dräger allow to offer a complex service for designing, and providing equipment for not only singular rooms, but also entire surgery blocks. Agreement between the companies was reached on the central level, which is crucial especially from the Polish company's point of view. Because Dräger has its branches all over the world, the agreement on the central level allows ALVO MEDICAL to enter several new, foreign markets. Cooperation between ALVO MEDICAL and Dräger involves local support of the latter in the countries where it is present. What is more, the Polish company, on the basis of the contract, can use the local offices of the German company as distributors of ALVO's products. Cooperation between the two companies in most cases looks as follows

- ALVO MEDICAL: supplies complementary and compatible solutions to projects generated by Dräger
- Dräger: supplies the marketing and sales service of 'turnkey' projects which combine their own solutions with the solutions supplied by the Polish company.

When the strategic partnership between the firms entered into force, the expansion of ALVO MEDICAL onto the Indian market became real. The cooperation on the Indian market started in 2017 and at the beginning it pertained to providing wall cabinets and the equipment of a few operating rooms in a hospital in the town of Pune, 150 km south-east from Mumbai. It was ALVO MEDICAL's first contact with the Indian market, which was a test of sorts, and it was to answer the question whether the Polish company could manage to cope with difficulties of the implementation of projects on such a distant market. Realisation of the first contract went well and it was satisfying both for the Polish company, as well as the Indian branch of Dräger. The effect of this success was another contract for equipment and wall cabinets for a four-storey operating block with a postoperative care ward and transplantation wards in a new hospital building in Hyderabad (a 7 mln population city in south-central India). In this project, ALVO MEDICAL had to show almost all their design and technological possibilities. The task of the Polish company was to design many operating rooms and service rooms, as well as corridors with pass-through windows. Moreover, in a few operating theatres ALVO MEDICAL had to integrate and install their Alvo Integra system, which distinguishes it from the competition. What is more, the Polish company was to supply and assemble their modular, panel walls and ceiling, several stainless-steel doors (automatic and semi-automatic), fully automated and contactless surgical scrub sinks, as well as modular closets for a few dozen lamps, negatoscopes, clocks, and medical cabinets. Besides, ALVO MEDICAL was to service installed devices and organise workshops for local hospital employees in basic activities connected with the use of the equipment.

The realisation of the contract for supplying and assembling medical equipment started in the first quarter of 2017 and was to last 12 months. It was then when the first part of the equipment from Poland was sent by sea to India, and a month later the first team from ALVO MEDICAL arrived on the building site. Due to unexpected circumstances and problems, which are very hard to avoid in such big projects, works extended from the planned 12 months to 15 months, and finished in the second half of 2018. The biggest problem which the Polish company feared and which contributed to the delay was Indian bureaucracy. The delivery of boxes with clocks and the Alvo Integra system was withheld by custom clearance at an Indian port for almost 20 days, during which all the boxes with equipment were opened and searched one by one. However, after the clearance, the boxes were not sealed properly by Indian custom officers. What is more, the boxes were not placed under a roof which resulted in flooding of the electronics due to heavy rains characteristic of this season in India. Many elements and much equipment supplied by ALVO MEDICAL proved useless. Fortunately for the Polish company, the Indian investor took financial responsibility. Despite the delay caused by weather and human oversight, further realisation of the project was successful and all the engaged parties were satisfied with the cooperation. Moreover, the Polish company gained invaluable knowledge and experience in business activities in such a distant market. On the other side, the Indian investor received a well-finished, technologically advanced operating block.

Thanks to the realisation of these first contracts signed with the participation of the Dräger company, ALVO MEDICAL expanded its business network by a few Indian firms, with which it cooperated during the projects, as well as by other Indian medical units. Representatives of many Indian medical institutions visited the hospitals under construction with curiosity and acquainted themselves with the technology used by the two companies (ALVO MEDICAL and Dräger). In effect, another big contract was signed in 2019, this time for designing and equipping several rooms in a governmental hospital in Ahmedabad, the biggest city in the Indian state of Gujarat where around 8 mln people live.

ALVO MEDICAL emphasises that significant challenges connected with activities on the Indian market are first and foremost complicated and prolonged legal procedures (bureaucracy) and a long distance from the place of production. The second obstacle affects a long time of transport of products (especially by sea), and by implication a prolonged period of the realisation of contracts (which can constitute a key factor in the competition with Asian firms). There are cultural differences and consequent misunderstandings between Polish employees and the Indians. The situation with the flooding of the electronics supplied by the Polish company also shows that even the local weather, accompanied by the aforementioned bureaucracy and prolonged custom procedures, can be a threat and can result in damage of expensive and specialist devices. However, dealing with these challenges can bring measurable benefits in the form of a very absorptive market with a high demand for the products offered by ALVO MEDICAL.

3.2. The Indonesian market

Indonesia is an insular country populated by around 264 m people, which makes it the fourth biggest country in terms of population in the world (World Bank, 2018). Heated discussions on the Indonesian market of healthcare appeared in the world media in 2014, when the implementation of universal health coverage mentioned in sub-chapter 2.2, was initiated. The introduction of universal access to free healthcare requires big financial outlays from the government in order to improve the existing facilities and developing the new medical infrastructure which could rise to the ambitious challenge. These decisions made Indonesia an attractive market for companies from the medical market (both national and foreign entities).

The Malaysian company Benchmark Medical Equipment (BME), which similarly to German Dräger, specialises in medical gases—their supply, control, manoeuvring and technical support—became one of the beneficiaries of this situation in Indonesia. Along with the fast development of the situation on the Indonesian market, and also the planned development (mainly on foreign markets), the BME company was looking for partners with whom it could offer more complex services in Indonesia.

ALVO MEDICAL and BENCHMARK MEDICAL connected during Arab Health fairs in Dubai in 2017—one of the biggest industry fairs and medical conferences organised every year in the capital of the United Arab Emirates (usually around 3,500–4,000 exhibitors take part in the fairs). The contact evolved into cooperation during a project of designing modular wall cabinets in several rooms in one of the small, renovated hospitals in the Indonesian island of Bali. The general contractor of the project was the Malaysian BME, and the task of ALVO MEDICAL was to manufacture, supply and assemble several hundred wall and ceiling panels, as well as mounting a few dozen doors. From the financial point of view, this contract was not lucrative for ALVO MEDICAL. However, it allowed the company to gain invaluable experience and to make direct contacts in the Indonesian market, which could result in getting new, bigger contracts in the future. Moreover, the representatives of ALVO MEDICAL had also an occasion to meet other companies from the sector from the region which participated in the project (e.g. PT Medisave).

The contract on the Indonesian island of Bali went smoothly and successfully for the contractors which took part in its realisation, and to which the recommendation for ALVO MEDICAL on the cooperative firms' websites (Figure 2) can attest. The only problem for the Polish company was the eruption of the Agung volcano, which released a huge cloud of volcanic dust into the atmosphere. This paralysed flights over the island and at the same time prevented ALVO MEDICAL employees responsible for the instalment of the panels from travelling.

International forms of activity of ALVO MEDICAL on Asian markets can be a result of the specificity of the products and services, which made transactions in the exclusively export forms almost impossible—the level of advancement and specialisation of products is very high and their functionality often has a direct influence on people's health and lives. This is why ALVO MEDICAL makes every effort to directly supervise all regulations and procedures with the installation of the products.

An important element of the realisation of the Indonesian project was also the previously mentioned company PT Medisave, which has been operating on the Indonesian medical market for many years, and with which ALVO MEDICAL cooperated in Indonesia. Establishing positive relations and understanding mutual needs by both companies resulted in a creation of the Customer Experience Centre of ALVO MEDICAL. The Centre is stationed in the capital of Indonesia, Jakarta, and it allows customers, users, architects and designers to design (in cooperation with Polish experts) ergonomic operation blocks in conditions similar to real life. Surgical teams can also experience how to manage an operating block and patients' data effectively in a fully integrated environment thanks to Alvo Integra. This investment should result in other business partners in the business network of ALVO MEDICAL.

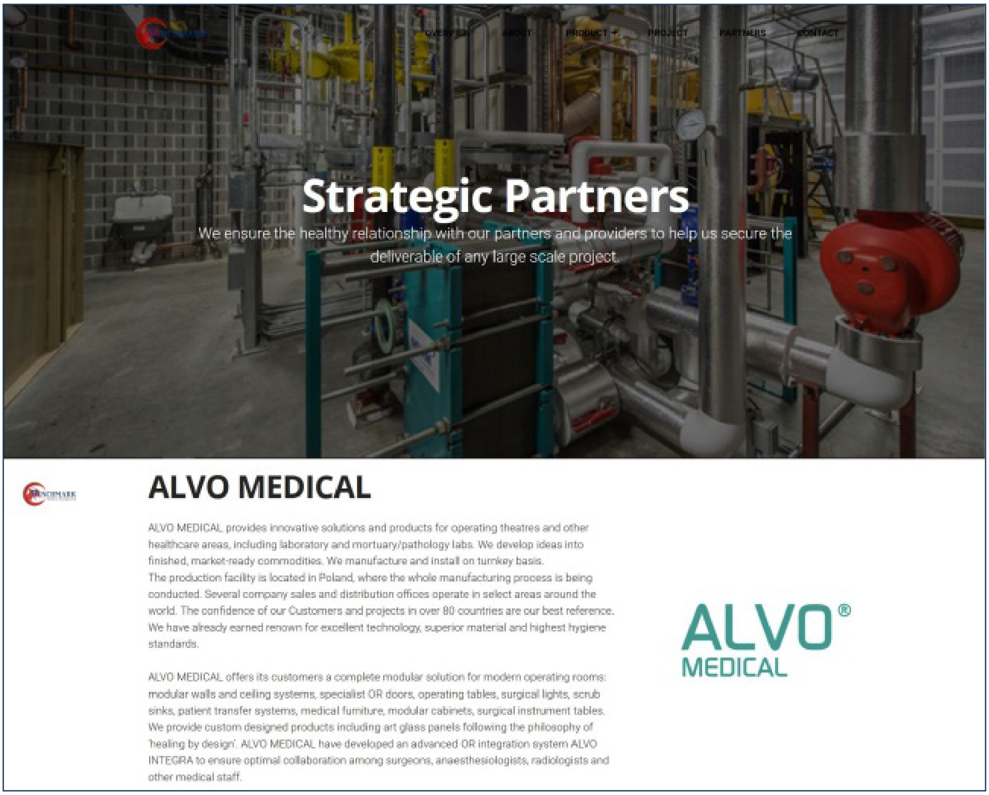

Figure 2. Recommendations for ALVO MEDICAL on the websites of Indonesian partners

Source: (www.benchmarkmedic.com; www.medisave.co.id/home).

Entering Indonesia allowed to attain invaluable experience and collect contacts on a big and quickly growing market, which may translate into other contracts for the Polish company. But even after the smooth realisation of the project in Bali, operating on the Indonesian market brings many challenges and threats, which are very similar to those in India. Once again, cultural differences and misunderstandings, geographic distance from the factory in Poland and a long and costly transport connected with this fact can become a problem. Organisation of transport within Indonesia, the biggest insular country in the world with more than 300,000 islands, can also pose a challenge.

3.3. The Chinese market

The People's Republic of China is the biggest country in terms of population in the world with a population over 1.42 bln people and the second biggest economy in terms of its nominal GDP, which in 2016 reached 11,199,145 bln USD (World Bank, 2018). Such a big number of people and severe environmental pollution in industrialised parts of the country translates into a huge demand for health services among the Chinese society. An attempt to answer these demands is mentioned in sub-chapter 2.2. the 'Four Beams' model, i.e. a comprehensive plan of improvement of the healthcare in the country, led by the government since the second decade of the 20th century. The effect of the health-promoting policies of the Chinese government is an annual increase of expenses on healthcare, which rose between 2010 and 2015 from 4.46% to 5.32% of GDP, which affected also a growth in the market of hospital equipment (World Bank, 2018; Grand View Research, 2017). China is one of the key markets for international companies acting in the medical sector. This is why the German company Dräger (a strategic partner of ALVO MEDICAL) also attempts to hold a strong position in China. It possesses one of its 50 foreign branches in Shanghai (Dräger Holding International GmbH, 2017).

The expansion of ALVO MEDICAL into the Chinese market went similarly to the expansion on the Indian market, that is, with the cooperation of the German strategic partner—Dräger company. After signing of the contract between the companies in 2017, ALVO MEDICAL started a long-term and costly procedure of the certification of its products in China, which is necessary in order to export medical equipment there. The procedure finished successfully and the company received its first contract from the Chinese Dräger branch. It concerned the manufacture and installation of several operating tables in the hospital in Beijing.

This contract was not very substantial from the point of view of finances for ALVO; however, it allowed to recognise and establish the first relations, as well as to gain the first experiences in the cooperation with the Chinese. A successful realisation of the project resulted in a new contract for ALVO MEDICAL, this time much bigger, in one of the hospitals in Shanghai. Thanks to the development of the cooperation with Dräger, ALVO MEDICAL opened another Customer Experience Centre in the Dräger's branch in Shanghai in the second half of 2018. In 2019 ALVO MEDICAL had ten such centres around the world, and their geographical location is shown in Figure 3.

The opening of the centre in Shanghai can become a key step towards a significant rise of Alvo in the Chinese market and neighbouring markets. The effect of the presence of the Polish company in this part of the world is among others the signing of a contract in 2019 for the design and equipment of the operating block in the hospital in Hong Kong and the installation of modular wall cabinets in a medical centre in Shanghai.

Figure 3. Customer Experience Centre of ALVO MEDICAL around the world

Source: (Alvo Medical).

Thanks to cooperation with Dräger, ALVO MEDICAL's business network is still growing and developing, which results in winning contracts on new markets and gaining invaluable experience. The example of expansion into the Chinese market deviates a bit from the Uppsala model due to the large geographic and cultural distance which separates Poland from China. On the other hand, a certain regularity, which implies a match with the mentioned model and which can be noticed in the described cases, is the fact that, as a rule, the first commission on new markets for ALVO MEDICAL was a relatively small contract which allowed the Polish company to experience a comfortable learning curve and to gain recognition of a new market. Only when the first, 'testing' contract finished successfully, did both parties decide to engage in bigger projects. It turned out that the biggest problem and challenge for Polish companies was collecting the required permits and certificates which made the export of the products to China possible, but the projects' realisation did not pose any serious problems for the company.

The expansion into foreign markets, successes and a fast growth of the company cause also a rise of capital needs necessary for investment in production capacities, which have to be improved in order to keep pace with the development of sales. Therefore, the owners of the company decided to run the process of capital raising by inviting an external investor to the company. Despite a presence on many foreign markets and very good references, ALVO MEDICAL is still in a marginal position in the world market, dominated by international corporations such as Getinge, Trumph Medical, or Dräger, which cooperates with the Polish company. The advantage of Alvo over these world giants is its comparable professionalism, connected with a much higher flexibility and customisation of its individual offer for a particular customer. It is especially crucial on the Asian markets and it is there, among others, that ALVO MEDICAL seeks its chances and place in the world hierarchy.

DISCUSSION QUESTIONS

1. What model is mentioned in reference to the assessment of competition intensity in the operating room equipment market segment in South-East Asia? Elaborate on this model using the information from the text in 2.1.1.
2. What methods of strategic analysis can be used for the characteristics of the foreign surroundings (of South-Eastern Asian markets) for companies for the operation room equipment sector with the use of information from 2.1.2? Use these methods for market assessment analysis.
3. What form of internationalisation was used by ALCO MEDICAL for its expansion to the Indian and Chinese markets? Indicate advantages and disadvantages of this form based on the example of ALVO MEDICAL.

4. What cultural differences may become a barrier to ALVO MEDICAL's business activity on the Indian market in the future?
5. What chances and threats for ALVO MEDICAL can entering the Indonesian market bring?
6. What methods of the acquisition of foreign partners were used, in particular before the initiation of business activities on the Indonesian market? What are the advantages and disadvantages of these methods?
7. How do you assess the possibilities of development of ALVO MEDICAL on foreign markets? Which markets according to you would be the most attractive for ALVO MEDICAL in its further foreign expansion?

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FOREIGN MARKET ENTRY AND GROWTH IN EMERGING MARKETS: THE CASE OF GUINNESS IN NIGERIA

BY BARBARA JANKOWSKA, MAŁGORZATA BARTOSIK-PURGAT, PETER VICTOR

Introduction

The assertion that the world is 'flat' (Friedman, 2005) and the concomitant influence of the elements of globalisation—trade, communication, technology (innovation) and transportation—have influenced the desire of businesses and brands to go across national borders through a market competitive push (Yang, 2002; Altbach & Knight, 2007; Nicolescu, 2009) for the control of a significant share of the international / foreign markets.

The decision by firms and businesses to internationalise is not an isolated decision existing on its own. Firms that internationalise into foreign markets often attempt to answer one critical question that borders on the selection of an appropriate foreign market entry mode that guarantees not just only internationalisation of their products and services, but their continued survival within the competitive global business environment. According to Pehrsson (2008), the entry mode or strategy is an institutional arrangement that pushes firms into bringing their products and services into a foreign market. The choice of a market entry mode is a huge decision for businesses as it has a significant and continuous impact on firms' overall international business practice, performance and survival (Chung & Enderwick, 2001).

Different foreign market entry modes and strategies exist for firms thinking of gaining a sizable share of the international market that exists for their products and services. According to existing research findings, the choice of these different entry modes are hugely dependent on a firm's level of control, availability of resources, willingness to take calculated risks, access to technology, reduced political risks, improved competitive positioning in the market, mutual benefits accrued to the internationalising firm and the host country, size of the host country's market, legal processes involved, proximity of the host country to the firm's country of origin, previous FDI experiences, perceived need to mimic competitors actions, and cultural differences, among other considerations (Albaum & Duerr, 2008; Bradley, 2005; Chung & Enderwick, 2001; Maskus & Yang, 2001; Ning, 2008; Root, 1994).

There is a plethora of market entry modes alternatives available to firms to choose from when thinking of doing business in foreign markets. These entry modes include: licensing, subsidiary ventures, franchising, contracting, foreign direct investment (FDI), sole ventures, joint ventures (Albaum & Duerr, 2008; Bradley, 2005; Faeth, 2009; Maskus, 1998; Ning, 2008; Root, 1994; Talay & Cavusgil, 2009). The decision to choose a suitable entry mode is always dicey for firms. According to Root (1994), the decision to choose a suitable entry mode can give a firm a competitive advantage, while the choice of a wrong entry mode can make a firm become what Osland, Taylor and Zou (2001) referred to as a 'Sinking Boat'.

1. Conceptual remarks

1.1. Internationalisation—what is it?

Domestic firms do not just wake up to find their products and services in the international markets. These products and services move across international borders through a concerted management effort called internationalisation. Internationalisation according to Grönroos (1999) is a firm's gradual increase of its international presence and involvement. It is a progressive effort at broadening the scope of a firm on an international scale. Defining internationalisation, McCabe (2001, p. 4) opined that the concept is 'more oriented towards bilateral and/or multilateral processes involving knowledge of specific countries, which leads to the development of business, educational, social and cultural relationships.

Internationalisation basically for a firm involves identifying global customers' needs and strategically and competitively satisfying these needs by coordinating marketing activities within constraining global environmental variables. Responses to international market opportunities are often pivoted on both conscious and unconscious management beliefs (Hollensen, 2011) on how businesses are co-ordinated within the global business space.

1.2. External determinants of firm's internationalisation

There exist many factors that largely operate within the international market space. These factors vary in scope and influence on both the domestic and international market scenes. According to Doole and Lowe (2008, p. 7), "the key difference between domestic marketing and marketing on the international scale is the multidimensionality and complexity of the many foreign country markets a company may operate in". These factors are known as macro environmental factors that are more or less uncontrollable environments. In this research work, these environmental factors are examined using Doole and Lowe's 'SLEPT' model (Figure 1).

Social / cultural environment

Culture is a complex term as regards its conceptualisation. According to Hofstede (1980), culture is the collective programming of the mind, which distinguishes the members of one human group from another. Taking into cognisance cultural diversity in international marketing is very important for firms. According to Hollensen (2011), culture serves as a source of difference which differs in complexity and management. Diversity in individual markets in relations to social conditions, religious beliefs, language and other elements of culture, plays a significant role in shaping international market customers' perception of goods and services available within their markets. According to Doole and Lowe (2008, p. 7), these cultural factors determine to a great extent consumers similarities and differences as regards their taste, which in the short or long run determines firms "potential for global branding and standardisation".

Population is also an important social factor that influences international expansion. It is projected that by 2025, 85% of the global population will be in the developing economies. According to Doole and Lowe (2008), over the next half a century, Africa's population is likely to triple, with China's population heading towards 1.5 bln and India's population towards 1.53 bln, while 17 of the world's mega cities of a 10 mln plus population will be in the emerging markets. This portends a significant positive implication for international marketing as these major cities will become major markets in themselves in the years to come (Table 1).

Table 1. 2019 Mega cities population

Cities	Country	2019 population
Tokyo	Japan	37,468,302
Delhi	India	28,513,682
Shanghai	China	25,582,138
Sao Paulo	Brazil	21,650,181
Mexico City	Mexico	21,580,827
Cairo	Egypt	20,076,002
Mumbai	India	19,979,955
Beijing	China	19,617,963
Lagos	Nigeria	13,463,421
Rio de Janeiro	Brazil	13,293,172

Source: (World Population Review, 2019).

Legal environment

Imagine a business operating without laws. This is better imagined than experienced. A firm with international presence does not only observe the laws of its home country, but also those of its host country and the large bodies of international laws that the domestic and international countries of the firm's operations signed into. According to Doole and Lowe (2008), firms' operations within the EU face a lot of directives in the form of laws that affect their markets across Europe. Furthermore, the authors identified that regulations on a product e.g. packaging, advertising, etc can have a significant effect on the product's acceptability in the market. Therefore, it is important for firms to have a full grasp of their legal environment as these constitute the 'rules of the game' for such firms.

The international market legal environment is complicated and exists in different dimensions compared to that of the domestic markets. According to Doole and Lowe (2008), the following are the laws international firms get involved in:

a) Local domestic law: these are laws operational in the host country. The hiring of legal experts familiar with each target market is one sure way of ensuring a smooth business operation with little or no legal hassles with the host country.
b) International law: these are laws that affect firms across borders. They include international conventions, agreements, patents, trademark

legislations and regional economic harmonisation laws, e.g. EU laws, AU treaties etc.

c) Domestic laws in the home country: these are laws that are operational in the home country of the internationalising organisation. They cover a wide range of business activities which include: production, advertising, market share, competition, export, quality control etc. it is a duty on the part of the organisation to comply with these laws.

Laws affect organisations (domestic or foreign) marketing mix in the areas of products, pricing, promotion and distribution. For example, in Germany, environmental laws mandate companies operating in the country to retrieve and properly dispose of their packaging wastes and also use packages that are easily recyclable in order to reduce environmental pollution. On the other hand, emerging markets do not have these laws, and where they exist, they are not strictly adhered to. Porous border laws, poor justice systems and corruption are still largely pervasive in emerging markets. Political instability, bureaucratic bottlenecks, slow judicial systems and administrative inefficiencies, as well as local contents laws are other legal barriers international organisations face in their host markets, especially in emerging economies. Nigeria and South Africa are still at loggerheads over the accusation of the illegal repatriation of profits levelled against South Africa's MTN by the Nigerian government. This act the Nigerian government claims contravened the Foreign Exchange (Monitoring and Miscellaneous Provisions) Act of 1995 and the Foreign Exchange Manual of 2006 currently operational in Nigeria.

Economic environment

It is pertinent for international organisations to be aware of the key economic indices of their home and host countries and how these indices impinge on the organisation's overall business successes. Firms should be aware of these economic policies indicators and projections of the markets they intend to enter so as to make strategic market mix assessments as regards the firm's profitability, how to satisfy market demands and also effectively deal with competition at a beneficial cost to the firm.

Countries of the world have different economic conditions measured by key economic indicators like the exchange rates, interest rates, GDP, GNI, purchasing power parity, GDP to debt ratio, per capita income etc. According to Doole and Lowe (2008), 75% of the world's human population is poor, with a per capita income of less than 3,470 USD, with developing economies having deficits in their GDP to debt ratios and annual budget performances that record less than 50% success. These economic statistics according to Doole and Lowe (2008, p. 12), "set particular challenges for companies operating in international markets in terms of seeking possible market opportunities, assessing the viability of potential markets as well as identifying sources of finance in markets where opportunities are identified but where there is not the capacity to pay for goods."

Political environment

Politics is a superstructure that shapes other structures. The political environment of the international market covers the national, regional and international political factors and actors that affect a company's business operations. President Trump's recognition of the opposition leader Juan Guaido in Venezuela made President Maduro demand that three United States diplomats leave the South American country and also to set up an economic blockade against American humanitarian aids on the Venezuelan-Columbian border, as he claimed that the US has picked a side in the country's current raging political crisis. This diplomatic fracas, if not well managed at its early stage, may snowball into trade disagreements between the two countries, which may eventually affect American multinationals doing business in the oil-rich Venezuelan market. This political element may have a huge effect on the international trade between both countries and other countries who take sides with either of them.

Political instability in host markets exposes foreign organisations to a wide range of risks. Political risk according to Doole and Lowe (2008, p. 16) "is a risk due to a sudden or gradual change in a local political environment that is disadvantageous or counterproductive to foreign firms and markets." The scholars further categorised government's actions that may constitute potential political risks for firms into three, namely:

a) Operational restrictions: these kinds of restrictions require foreign firms to perform specific legal obligations in the course of their business operations. These could be in the form of exchange control policies, employment policies, local contents policy, and environmental laws compliance among others.
b) Discriminatory restrictions: these kinds of restrictions are expressly against foreign firms and sometimes more directed at firms from a par-

ticular country or region. For example, the Nigerian government placed a restriction on the importation of some goods that can be produced locally to protect local producers of such goods and to save the country foreign exchange currencies used in importing those goods. Heavy taxes and tariffs and embargoes are also instrumental to discriminatory trade restrictions by governments in the host countries of foreign firms.

c) Physical action: these are government's direct restrictive interventions such as the physical confiscation of products, forceful takeover of business by the government in the event of a military coup, expropriation, nationalisation policies, etc. For example, during the 1967–1970 Nigerian-Biafran war, foreign oil workers who spied for and supported the Nigerian troops against the Biafran troops were arrested and their oil exploration sites in the then Mid-Western Nigeria were summarily shut down by the Biafran government.

Technological environment

Technology has turned the world into a global village. The impacts of technological improvements are evident in our everyday lives and in almost all aspects of our businesses, with millions of business transactions worth trillions of dollars being executed online daily. As far back as 2008, an estimated 1.2 bln people, representing about 17% of the global human population, had access to the Internet. In a similar vein, the United Nations estimate during the same period had it that global e-business was worth 10 trn USD, of which the majority was business-to-business (B2B) purchases (Doole & Lowe, 2008).

The Internet has greatly helped small and medium scale enterprises (SMEs) to boost their online business presence and also sped up the internationalisation of many. The cost of reaching out to (advertising) global customers is cheaper compared to physical contacts that require many agents and distributors to achieve it. This has caused more SMEs to carve a niche for themselves in the global business space. With the clicks of buttons, market researches, business deals, mass advertising, stocks and commodities trading, bank transfers and many more other business-related activities can easily be executed over the Internet. Social media platforms like WhatsApp, Facebook, Instagram and many more have also made SMEs presence online a reality at a reduced cost. This has made the internationalisation processes of these SMEs faster than previously envisaged.

The marketing of goods and services for companies on the Internet has far-reaching effects on companies. The Internet has availed global consumers a gamut of information to explore about products and services to select from the cheapest suppliers in the market. This will help in the standardisation of prices across markets which help consumers to make informed choices. The Internet also helps global firms to conduct market research and get feedback for products and services development.

Being present on the Internet is not a sure bet to gaining a sizable space within the international markets by firms. Although the Internet provides an environment for wide international market coverage, it requires proper strategic planning with regards to the cost and accuracy of information to achieve its information dissemination function. In the same vein, the Internet has become an avenue to mislead potential customers on the authenticity of a product or service. Cyber security is also a front-burner issue in the use of the Internet in business. Fraudulent transactions and identity theft are serious cyber issues for the 21st century global business. Affordability and an Internet presence in emerging markets, especially in Asia and Africa, also pose a great challenge to the use of the Internet within the business circles in these regions.

Technological advancements have seen to the development of sophisticated machineries and equipment. Automated machines that produce products at greater speed, reduced cost and more accurate precision are now springing up to displace labour. The man–machine ratio in production has become a critical issue in global production as more and more technological inventions now do the jobs of many men. This is a critical decision for globalising firms—more investment in men or in machines?

In developing economies like Nigeria, power supply remains a huge problem for firms operating in the country. With combined sources of power generation which include oil, gas, hydro and solar, Nigeria has the capacity to generate 12,522 Megawatts (MW) of electricity, but the country currently generates about 4000 MW which is far below the required megawatts for its economy. This is as a result of macroeconomic forces, the absence of creditworthy utilities and the lack of transparency on the part of the regulators. The absence of power is a disincentive to the application of technology in many parts of Africa as businesses incur more costs to be able to keep up with production. This is a key business decision for internationalising firms when considering which markets to enter.

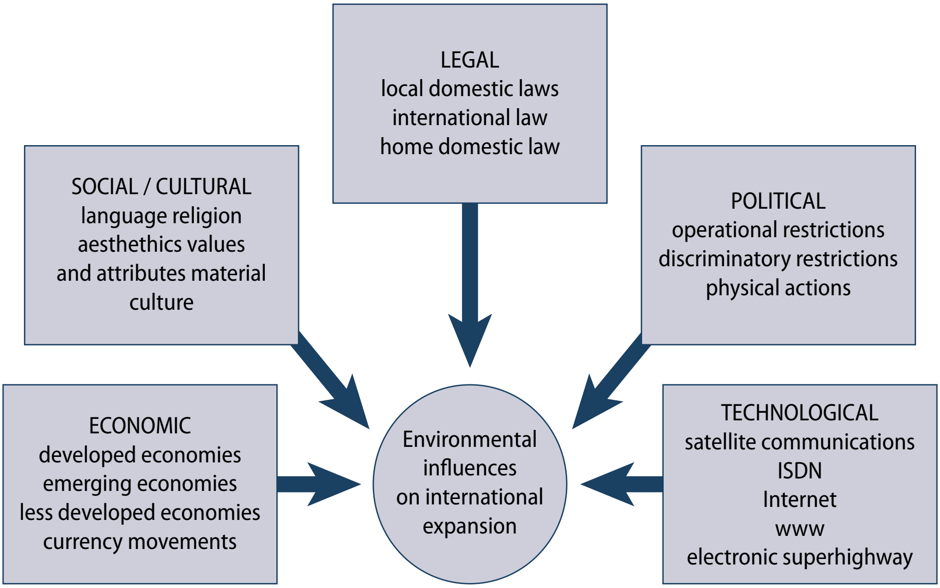

Figure 1. The 'SLEPT' environmental model

Source: (Doole and Lowe, 2008).

1.3. Modes of foreign market entry

There are a wide range of foreign market entry modes firms can choose from. According to Anderson (1997), entry modes are a set of institutional arrangements by firms for organising and conducting international business transactions. Choosing a foreign market entry mode is a fundamental decision for firms in connecting to the world through internationalisation. Internationalisation is an integral part of a firm's process of transferring goods and services across national borders; hence, it is imperative for the firm to choose an appropriate entry mode to minimise cost and at the same time maximise profits. There is a symbiotic relationship between an internationalising firm and its choice of market entry mode. Making the right entry mode choice, coupled with other strategic marketing mix decisions, plays a significant role in a firm's performance and survival in the global market. While some marketing mix elements (e.g. price) can be changed frequently in respect to market changes, entry decisions are far more reaching and difficult to change in the short run.

In selecting a potential market for global expansion, firms often adopt different approaches to choose their target market. In identifying a target market to choose from among a large pool of countries, a preliminary screening is conducted in order to eliminate market entry choice mistakes of wasting time and resources on countries with limited prospects. The procedure below describes a four-step approach which a company intending to internationalise can apply:

Step 1: Selection of indicators and collection of data

A company's global vision and mission serve as an important guide in the selection of key socio-economic and political factors with which the company assesses potential markets. For instance, the per capita purchasing power of potential customers in a potential market formed the basis on which Colgate-Palmolive premised its entry decisions (Tangney is bullish on L. America, 1993). The nature of the product, the economic position of the target market in international rankings, the population and possibility for joint-venture partnerships are also central to determining the selection of a potential market for collecting market entry decision data by a firm.

Step 2: Determination of the country indicator level of importance

After identifying key indicators as explained in step 1 above, it is important to do a comparative analysis of key countries indicators using a common method known as the 'Constant sum method'. This method allots 100 points to the set of indicators according to their level of importance vis-à-vis the company's goals. Hence, the higher the level of importance of an indicator is in achieving the organisation's goal, the higher the number of points such an indicator is assigned. The highest allocable points level is 100.

Step 3: Ranking potential markets

Based on the scores obtained in step 2 above, each potential market is ranked on a chosen scale (say 0–100 where 0 is largely unfavourable, 50 is averagely favourable and 100 is very favourable). The better a potential market does on the score sheet, the higher its ranking.

Step 4: Selection of potential market

At this stage, the country (market) with the highest overall score is termed as being the most attractive to enter by the firm.

Foreign market entry modes

Category one: Export modes

Notable global companies in Nigeria started off as exporting companies (e.g. Guinness). For fairly small businesses, exporting is often the first entry alternative to explore when going international. Internationalising companies that have plans to enter into international markets through exporting have three main exporting options to choose from: indirect exporting, co-operative exporting, and direct exporting. These are explained below:

a. Indirect exporting

This method involves the engagement of independent intermediaries by the internationalising firm within its domestic market to export into foreign markets. In this kind of arrangement, the internationalising firm does not have direct contact with the international market and its customers. Also, the marketing mix to sell the product abroad is planned and executed by the intermediary company. Hence, the level of control exerted by the main producing company over its product is low. The risk involvement of the internationalising firm is relatively low as risks are only on the exported quantity and not on the total quantity produced. On the part of the exporting intermediary company, market expertise is attained over time as the indirect exporters are professionals in their field. They can also do market research for the main internationalising company.

The major drawbacks of indirect exporting include the lack of adequate sales support, poor pricing decision and faulty distribution networks, as these intermediaries are most times fairly small with limited resources to handle vital business support services like warehousing, credit financing for customers, etc. Also, export intermediaries may have more than one product with different sales strengths to market in the foreign market at the same time. As a result, an exporting intermediary may focus more on the product that guarantees more profit to it, especially in the short-run, and give lesser attention to the other products. Indirect export is a relatively ideal entry mode for entering a doubtful market.

Hollensen (2011) and Cullen and Parboteeah (2010) identified the following types of indirect export intermediaries for internationalising firms:

- Export Commission House (ECH): This is a representative of foreign buyers who is located in the exporter's home country. It helps foreign buyers to identify potential sellers and negotiate favourable prices.

- Export Management Company (EMC): This is a professional intermediary company that specialises in marketing products for foreign companies out of the internationalising firm's home country.
- Export / import broker: This kind of company specialises in performing contractual functions between a buyer and seller of an internationalising company's product. The company does not handle products sold or bought.
- Export Trading Company (ETC): This is similar to the EMC, only the company lays claim to the product before exporting it.

b. Direct exporting

In this kind of arrangement, the internationalising firm sets up its own exporting department and sells its own product to the foreign market. It may use its own marketing platform or intermediaries / middlemen. The direct exporting mode is often adopted when international sales potentials are projected to be significantly substantial.

Hirsch (2010) and Stone and McCall (2004) identified the following forms of direct exporting:

- Own representative office: This is a firm that specifically markets the parent company's products based on the transferred rights and obligation from the parent company.
- Foreign agent: This firm acts on behalf of the exporter under the exporter's name.
- Foreign distributor: This firm acts on its own account without the parent company or exporter's name but with their transferred right to act.
- Own distribution network: This is the parent company's distribution network. It operates at the discretion of the parent company.

c. Cooperative exporting

This type of entry mode is often adopted by small and medium scale firms because of their financial and human resources constraints. There are two types of cooperative exporting:

(i) Export grouping (consortium): an export consortium is a conglomeration of companies that are into the foreign joint promotion of the product and services of their members. They are often micro, small or medium in size with formalised or loose co-operation among them. One of the advantages of export consortiums is the price stability of the product that they market since they are in the form of a cartel. More so, the consortium helps its members to spread the export cost among them as they are most times financially constrained.

(ii) Piggybacking: according to Hollensen (2011, p. 340), piggyback is an 'abbreviation for 'pick-a-back' i.e. 'choosing a back to ride on'. In this kind of entry mode, an export-inexperienced SME known as the rider takes advantage of a large company (the carrier) to enter a foreign market. According to Hollensen, the rider pays the carrier commission or the carrier outrightly buys the rider's product and serves as an independent distributor. This type of entry strategy is suitable for unrelated products companies that are not competitive with each other but are complementary in nature. A vivid example of a piggyback arrangement was the entry of Wrigley (the rider) into the Indian market using the 250,000 retail outlets of the carrier, Parrys (in 2008 Mars acquired Wrigley via a stock offer of around $23 bln).

A rider's ability to export without necessarily having a distribution system in a foreign market is a major plus for the rider. On the flipside, the rider may lose its control of the market as the carrier's size may crowd the rider out of the foreign market in the long run.

Category two: Contractual entry modes

These entry modes are materialised through contract agreements between a firm and foreign partner, mostly manufacturers. According to Hollensen (2011, p. 356), contractual entry modes also known as intermediate entry modes are "primarily vehicles for the transfer of knowledge and skills between partners in order to create foreign sales". The types of entry modes under the contractual / intermediate entry modes include:

a. Management contracting

This involves the contracting of the technical know-how of business operations. In this kind of arrangement, a foreign firm acquires the operational management services of a domestic firm. In order words, an exporting firm (foreign firm) provides management services for a company that is owned by the importer to conduct its operations in the foreign market. A criticism of this entry mode type is that the foreign firm providing the management service (know-how) controls the activities of the domestic firm right in the domestic firm's home market. On the flipside, the domestic firm's managers are open to gaining experience transfer from the foreign firm's managers while the contract lasts.

b. Turnkey operation

Turnkey operations involve an agreement between an internationalising firm and a contractor in the foreign market it wants to enter. In this kind of arrangement, the foreign firm pays the host country's contractor to design and construct new facilities and train personnel to man these facilities, after which the foreign firm buys off the facility for business operations. This kind of entry arrangement is often found in the construction sector.

The trustworthiness of the contractor is a very key backbone to making this kind of arrangement to work. Also, the high cost of the project and the financial risks involvement compared to other entry arrangements are major setbacks for this.

c. International subcontracting / contract manufacturing

In this kind of entry arrangement, a firm hires parts of its production process out of the country. This is done mainly to reduce the cost-labour cost and raw materials cost. SMEs are often times mostly involved in accepting these kinds of contracts from internationalising firms into their domestic markets. One major shortfall of the international subcontracting entry mode is that the SMEs that get these contracts are oftentimes financially constrained and may also not possess the capacity to meet up with large manufacturing subcontracting operations.

d. Licensing

This is a kind of contractual agreement between two firms—a domestic licensor and a foreign licensee. According to Cullen and Parboteeah (2010), the licensor offers the foreign company proprietary assets which may include valuable patents, technological know-how, a trademark or company name, while the licensee pays the licensor an agreed royalty or other form of compensation like a lump-sum pay-off.

e. Franchising

This entry arrangement involves selling business services (e.g. distribution) to small independent investors with working capital but not with business experience. In this kind of arrangement, the franchisor gives the franchisee the right to use the franchisor's name, trademarks or business model for an agreed period of time and fee.

Category three: Investment entry modes

This type of entry mode involves the physical presence of the internationalising firm in the foreign market by investing in foreign branches or subsidiaries. They are based on foreign direct investments (FDI). Czinkota and Ronkainen (2007) identified two types of investment entry modes:

a. Foreign branch

This is an establishment of a part of the internationalising company in a foreign market. It is entirely owned by the parent company; hence, it does not have a separate legal status of its own. It is subject to the control of the laws of the home country and host country. According to Hollensen (2011), the scope of operations of a branch is circumscribed within the mega operations of the parent company. By so doing, the operational scope of the branch is defined by the parent company. Branches are often used as early entry modes in internationalisation which may over time evolve into a subsidiary.

b. Subsidiary

A subsidiary is like a branch, but it is fairly larger and has a separate legal status guided principally by the laws of its host country. According to Hollensen (2011, p. 388), "a foreign subsidiary is a local company owned and operated by a foreign company under the laws of the host country."

Subsidiaries are in two forms based on the number of shares and resources commitment of the foreign parent company:

(i) Joint-venture subsidiary: This kind of entry mode involves two companies—a foreign and domestic company—with unequal interests and control. In this kind of arrangement, the foreign company owns significant control and interest, while the domestic firm's control and interest are largely minimal.

(ii) Wholly-owned subsidiary: In this kind of entry pattern, the parent company (the internationalising foreign firm) owns 100% control and interest in the business.

All foreign direct investments modes of entry mode are either Brownfield investments or Greenfield investments.

- Brownfield investments involve the acquisition of an existing investment by an internationalising firm. Root (1987) identified the following Brownfield investments types:

  Horizontal acquisition: the acquired and the acquiring firms have the same production line or market.

  Vertical acquisition: the acquired firm becomes a supplier or customer to the acquiring firm.

  Concentric acquisition: the acquiring and acquired firms have either the same technology or market, but not the two at the same time.

  Conglomerate acquisition: the acquired firm is in a different industry compared to the acquiring firm.
- Greenfield investments are those investments that require an internationalising firm to invest in an entirely new business from the beginning. It may involve the building of new plants and logistics operations by the internationalising company.

In Table 2 advantages and disadvantages of different modes of internationalisation are presented.

Table 2. Advantages and disadvantages of different modes of internationalisation

Mode	Characteristics	Advantages	Disadvantages
A. Exporting modes			
Indirect export	the sale of goods or services through the domestic intermediary	• low entry cost • low financial risk • entry difficulties are laid on the domestic intermediary • low staffing requirements • lack of marketing costs • the least complicated mode of internationalisation • relatively simple extension of sales markets	• low profitability of the transactions • full dependence on the domestic intermediary • lack of knowledge on the foreign market(s) • inability to gain international experience • the domestic intermediary can find a better provider • an intermediary may itself start the production in the country
Direct export	direct export through a foreign agent (as a foreign intermediary)	• low entry cost • moderate financial risk • the agent overcomes the difficulties of entry	• low profitability of the transactions • high dependence on • the foreign agent • inability to gain international experience
	direct export through a foreign distributor (as a foreign intermediary)	• relatively low staffing requirements • lack of marketing costs	• an agent can find a better provider • high transport costs • potential trade barriers
	direct export through a representative office	• physical presence on • foreign markets • direct contact with • foreign customer • the permanent possibility to respond to foreign market signals	• the relatively high costs of maintaining a representative office • high transport costs • potential trade barriers
	direct export through an own foreign distribution network	• physical presence on • foreign markets • very good direct contact • with foreign customers • full control over the sales process • relatively high profitability • compared with other • forms of exporting	• high entry cost • high cost of maintaining the own distribution network • time-consuming of building up the own distribution network

Mode	Characteristics	Advantages	Disadvantages
Coopera-tive export	export grouping piggybacking	• distribution of costs for partners • synergy effect	• dependency on the piggybacking export partner(s)
B. Contractual modes			
Manage-ment contracts	an exporter provides management services for a company that is owned by the importer	• low capital commitment • low risk • gaining experience on the foreign • market(s) by domestic managers • can be regarded as a 'substitute' form of foreign market entry	• relatively low profitability
Turnkey opera-tions	any complete construction of any industrial plant abroad	• potential higher profits • chance of a permanent presence on the foreign market(s) after the completion of the investment • ability to earn returns from technologies in countries where FDI is restricted	• require high costs • a form difficult to implement • high financial risks
Subcon-tracting	the foreign counter party shall have a domestic manufacturing company to execute a specific order (components or semi-finished products)	• low capital commitment • low risk	• relatively low profitability • inability to gain international experience • weak position of the exporter in negotiations with the consignee
Licensing	sales abroad of rights covered by a patent or design or any intellectual property to be used for commercial purposes	• low entry costs • low financial risk • ensuring a steady income • a strong presence in foreign markets by commercial brand and logo • the licensee knows the • local conditions • does not require a large commitment of staff	• the possibility to lose control over technologies and know-how • lack of control over the • maintenance of the quality • on the foreign market(s) • the threat of disloyalty • of the licensee • relatively low income (royalties) • compared to other forms • of internationalisation

Mode	Characteristics	Advantages	Disadvantages
Franchising	sales of the rights by the domestic franchisor to conduct commercial activity by a foreign franchisee	• low entry cost • the possibility of rapid foreign expansion • the possibility of a simple expansion of both the large and distant markets	• requires some control cost • sharing profits gained from • foreign markets between • the foreign franchisee(s) and • a domestic franchisor • requires appropriate qualifications of franchisees • the possibility of potential conflicts between the partners • the possibility of difficulties in maintaining uniform standards and quality • the possibility of franchisee's disloyalty
C. Investment modes			
Branch	the creation of an organisational unit of the parent company on a foreign market, which is an organisational and legal part of that company	• full control—holding • centralised control • relatively good image of the branch on the local market	• relatively complicated registration procedures
Joint venture subsidiary	the creation of a foreign subsidiary jointly controlled (minority and majority interests) by the parent company and a foreign partner	• synergy effect • a combination of knowledge of the exporter and a local partner • spreading the risk between the exporter and the partner • good image of such a company on the local market (politically acceptable)	• high entry cost • high risk • potential conflicts of interest of the exporter and the partner • complicated registration • procedures
Wholly-owned subsidiary	the creation of a foreign subsidiary wholly-owned (100%) by a parent company	• full control (holding centralised control) • good image of such a company on the local market • potentially the highest profitability	• high entry cost • high risk • complicated registration • procedures

Source: (Wach, 2012, p. 101–103).

1.4. The Uppsala model of internationalisation

This model of internationalisation has its roots in a Swedish research project at the University of Uppsala (Johanson & Vahlne, 1977), which was aimed at developing a suitable model of firms' choice of market and the entry mode to be adopted when thinking of internationalising its operations or product (Hollensen, 2011). According to Hollensen, this study was greatly impacted by the seminal work of Aharoni in 1966.

The Uppsala model was premised on the basic assumption that: (1) companies (Swedish manufacturing firms that the study initially focused on) tend to start their internationalisation in close-by countries and gradually penetrate the farther markets over time; (2) the internationalising company chooses an entry mode with less commitments like export at the start of their internationalisation, then entry modes with higher commitment levels like subsidiaries will be adopted after several years of exporting to the same market.

Market commitment is a very key decision for firms intending to internationalise. According to Hollensen (2011), market commitment has two factors which are: (1) the amount of resources committed and (2) the degree of the commitment. The amount of resources commitment is in relation to the investment size of the internationalising firm in the foreign market across broad areas like marketing, personnel administration, planning, and organising, among others. On the other hand, the degree of commitment has to do with the difficulty in finding an 'alternative use for the resources and transferring them to the alternative use' (Hollensen, 2011, p. 74).

The Uppsala model sees firms that internationalise as perfecting their learning curves with a gradual development based on incremental learning experiences into the foreign market over time. Root (1994) sees this internationalisation pattern as an 'international learning experience' for firms to protect their commitments (investments). According to Kwabo (2014), the basic assumptions of the Uppsala model give firms control over market risks and also ensure flexibility of a market exit in case export proves disastrous (Figure 2).

Just like every other academic theory, the Uppsala model has its criticisms and drawbacks. According to Reid (1983) and Turnbull (1987), the model is regarded as being too deterministic i.e. too rigid and immutable to change or reconstruct. Ignorance of individual foreign market uniqueness and interdependence as regards environmental factors is another criticism of the Uppsala model. According to Johanson and Mattson (1986), the model does not take into account interdependence of foreign markets as regards their uniqueness and differences, which form the powerhouse of strength or weakness for the internationalising firm.

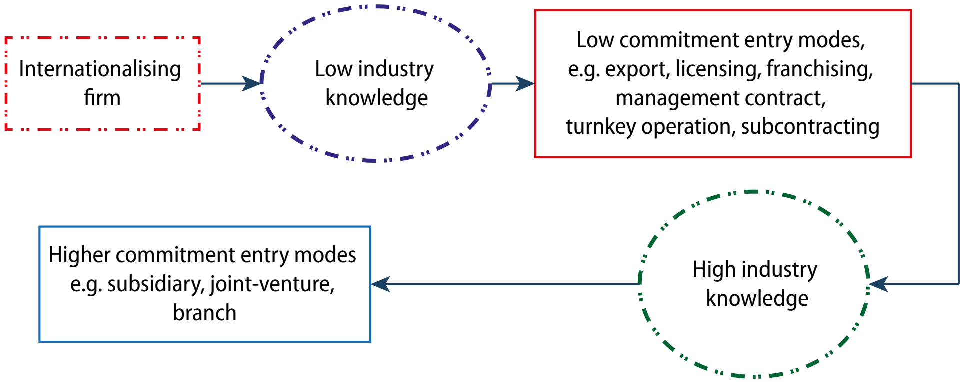

Figure 2. Internationalisation of the firm: An incremental (organic) approach

Source: Adapted from (Hollensen, 2011).

Hierarchical rigidity is another criticism of the Uppsala model. According to Hollensen (2011), the model does not recognise the fact that many internationalising firms 'leapfrog' exporting into foreign direct investment entry options and still come out successful. According to Hollensen, 'firms have lately seemed prone to 'leapfrog' stages in the establishment chain, entering 'distant' markets in terms of psychic distance at an early stage, and the pace of the internationalisation process generally seems to have speeded up' (p. 75).

2. The Guinness brand: Historical evolution and entry strategy into Nigeria

The Guinness brand originated from the brewery of Arthur Guinness at St. James's Gate, Dublin, Ireland in 1759. The brand is one of the leading, most successful beverages globally, with a presence in almost 180 countries of the world (Augusto & Co., 2014). In 1997 the company (Guinness) merged operations with Grand Metropolitan to form the Diageo Group—the parent company that produces the Guinness brands based out of London (Hollensen, 2011). Between 2007 and 2009, Diageo recorded a total net sale of £32,843,000 (www.diageo.com). Today, Diageo prides itself in the whisky, vodka, rum, liqueur, tequila, gin, spirits and beer market segments with sizable shares in these markets (www.diageo.com/en/our-brands/brand-explorer/). The Guinness brand major markets include Great Britain, Ireland, Nigeria, the United States, and Cameroon (www.diageo.com/en/our-brands/brand-profiles/guinness).

Guinness Nigeria's Lagos brewery plant became the first Guinness brewery outside the British Isles on the 30th of November 1963. Before this time, in the 19th century, Guinness Stout was imported into Nigeria from Dublin (Guinness Nigeria, 2018). The distribution of this brand within Nigeria was handled by Guinness Nigeria, which acted as a trading company established in 1950 for this purpose. In 1965, Guinness Nigeria became listed on the Nigerian Stock Exchange (NSE), making Nigeria the second largest market for Guinness worldwide (www.guinness-nigeria.com).

Due to the recency of Nigeria's independence in 1960, the country needed reasonable investments in virtually all sectors of its economy in order to grow after the exit of the British colonialists. The establishment of a subsidiary brewery plant in Lagos in 1963 and the subsequent steady growth of the Guinness Stout and Harp Lager spurred Guinness to build more breweries in Nigeria. In 1974 Guinness commissioned the Benin plant where the Harp Lager beer was produced. In 1978 the Benin brewery was expanded to produce the Guinness Stout. In 2004 Guinness Nigeria commissioned the Aba brewery in Abia state. At present, the company operates from the Ogba (Lagos), Benin (Edo) and Aba (Abia) breweries with a combined installed production capacity of 6 million hectolitres and about a 74 percent total utilisation capacity in the financial year ending 2015 (Augusto & Co., 2016) (see Figure 3).

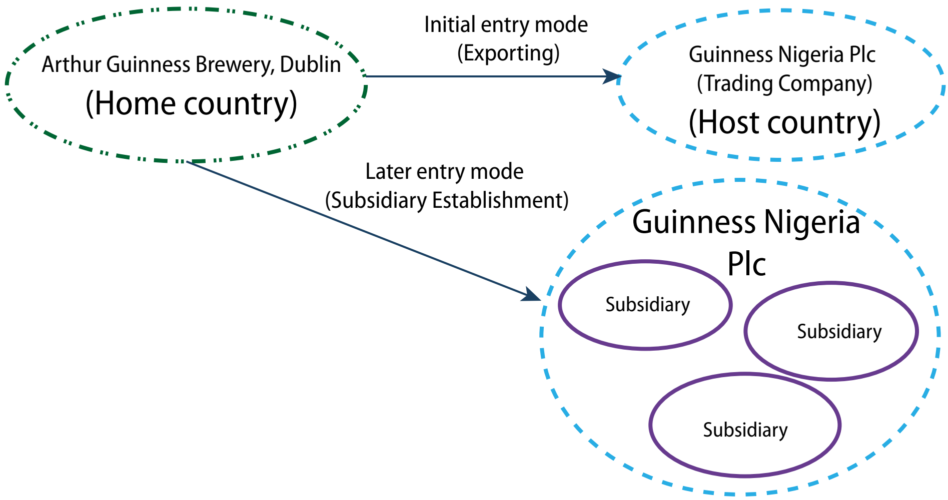

Figure 3. Guinness Nigeria entry modes into the Nigerian market

Source: Own study (on the basis of www.Guinness-nigeria.com).

Table 3. Guinness Nigeria breweries and their locations

Brewery	Location
Ogba (Lagos State)	Acme road, Industrial Estate, Ogba, Lagos state
Benin (Edo State)	Benin - Asaba road, Oregbeni Industrial Estate, Ikpoba Hill, Benin City, Edo state
Aba (Abia State)	Osisioma Industrial Layout, Aba, Abia state

Source: (Guinness Nigeria, 2018).

3. Guinness Nigeria: Market share, portfolio and brand values

Nigeria has a long history of brewing which dates back to the establishment of the Nigerian Breweries Limited in 1946 as the first brewer in the Nigerian brewery industry. According to Nwankwo and Anyanwu (2015), beer accounts for 96 percent of all local alcohol sales in Nigeria. The scholars further revealed that beer consumption in Nigeria between 2010 and 2015 witnessed an average growth rate of 10%, with a projected compounded annual growth rate (CAGR) of 13% by 2025 (Figure 4 and 5). This makes the brewery sector one of the fastest growing sectors in Nigeria's economy.

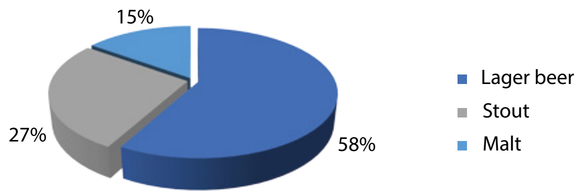

Figure 4. Total beverages consumption

Source: (Nwankwo & Anyanwu, 2015).

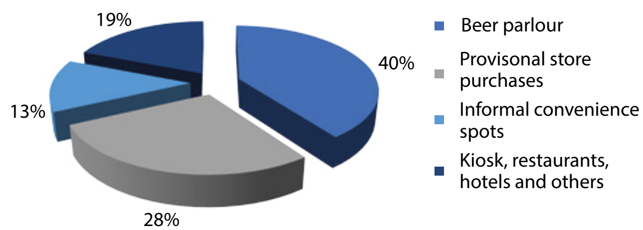

Figure 5. Beverages consumption channels

Source: (Nwankwo & Anyanwu, 2015).

Nigeria is the most populated country in Africa, with a significant sized population of youth. This group of young people forms a great percentage of the alcohol consuming population in Nigeria. According to Nigeria's 2016 population figure, there are 188.2 mln people in Nigeria, of which 108.59 mln, representing 57.70%, fall within the ages 15–64 years to form the largest chunk of the demography (Olanrewaju et al., 2018). This large youthful population accounts for over 80% of alcohol consumers, which provides opportunities for breweries in Nigeria to thrive (Table 5). This means that Nigeria's brewery space still remains largely underexploited, which creates room for further expansion (Nwankwo & Anyanwu, 2015).

Table 5. Nigeria's projected population (2012–2016)

Year	Projected figure
2012	170,157,060
2013	175,690,143
2014	181,403,148
2015	187,301,926
2016	193,392,517

Source: (National Bureau of Statistics, 2017).

Steady growth in Nigeria's GDP since 2010 has also contributed immensely to the growth of the beverages industry in recent times. Between 2010 and 2014, the average GDP growth rate in Nigeria was 5.84% per annum. This growth indicated a significant increase in the disposable income of Nigerians during this period. During the 2016 economic recession in Nigeria, the GDP contracted by −1.5%, which negatively affected the purchasing power of Nigerians (Figure 7). The recession was as a result of a significant drop in global oil prices, foreign currency shortages, an energy deficit and structural constraints in the nation's economy (Central Bank of Nigeria, 2016). This trend is reversing with a 0.83% growth in the nation's GDP in 2017. This will hopefully translate to significant sectoral improvements in the nation's economy later on.

Guinness Nigeria, a subsidiary of the Diageo Group controls 27% of the brewery market share in Nigeria (Ianree, 2016); second behind Heineken, which has a combined share (Nigerian Breweries and Consolidated Breweries) of 71% of the entire Nigerian beer market. Guinness tops the stout market by its net sales value (Nwankwo & Anyanwu, 2015).

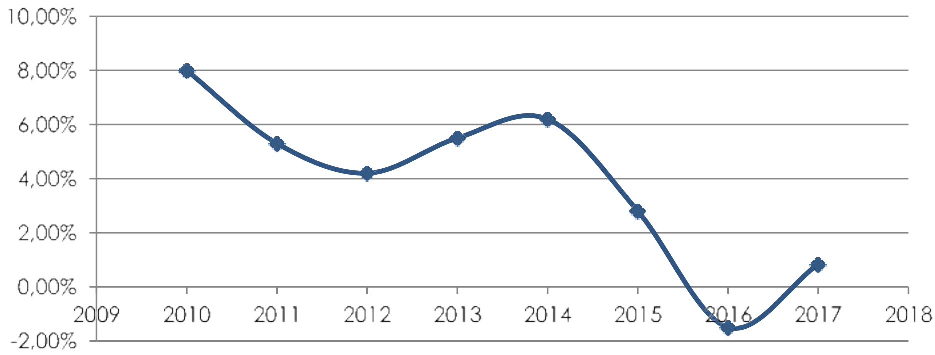

Figure 7. Nigeria's GDP growth rate at 2010 Constant Basic Prices (percentage points)

Source: (Central Bank of Nigeria, 2014, 2017).

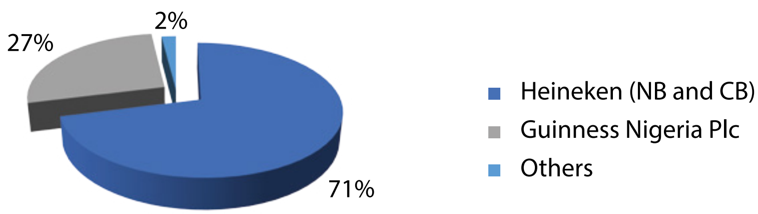

Figure 8. Nigerian beer market share (%)

Source: (Nwankwo & Anyanwu, 2015).

In the last couple of years, Guinness Nigeria has grown from a mere trading company in 1950 to "an iconic African company, renowned across the continent and internationally for our (its) high quality brands" in recent years (www.guinness-nigeria.com/our-business/). The company prides itself on being in the largest market in Africa. According to a former CEO of the company, Ndegwa Peter, "Nigeria is the largest single market within our Africa business... Guinness Nigeria plays a big part in this" (Business Year, 2017).

The brand portfolio of Guinness Nigeria cuts across both alcoholic and non-alcoholic segments, thereby making the company a unique one within its sector of operations (Table 6). According to Ndegwa Peter, "Guinness Nigeria is the only total beverage business which has spirits, beer, and soft drinks, giving it a bit more opportunity to serve customers" (Salako, 2018).

Table 6. Guinness Nigeria brands portfolio

Segment / Category	Brand
Scotch whisky	Johnnie Walker
Vodka	Smirnoff
Liqueur	Baileys
Gin	Gordon's Dry Gin
Local spirit	Mr Dowell's
Beer	Harp, Guinness, Satzenbrau, Orijin
Non-alcoholic	Dubic malt, Malta Guinness
Ready to drink	Orijin non-alcoholic zero

Source: (www.guinness-nigeria.com/our-brands/brand-explorer/#).

The production and marketing of many beverages across different segments of the beverage sector by Guinness Nigeria gives the company a competitive edge within the Nigerian and African markets. This helps the company to reach many consumers and also a berth in many markets, taking advantage of Nigeria's youthful population and strategic brand position in Africa. This drive by the company is embedded in its core operational brand values.

Table 7. Guinness Nigeria brand values

Purpose	celebrating life every day, everywhere
Vision	to be the best performing, most trusted and respected consumer products company in Nigeria
Core values	(i) being passionate about customers and consumers (ii) giving people freedom to succeed (iii) being proud of what we do and how we do it (iv) strive to be the best (v) value each other

Source: (www.guinness-nigeria.com/our-business/our-values/).

4. Guinness Nigeria: Survival in Nigeria based on the chosen mode of entry and business sustainability strategy

As established in Figure 14 above, Guinness Nigeria initially entered the Nigerian market with the export of the Guinness stout brand from Dublin to Nigeria in the 1950s. After Nigeria's independence, Guinness Nigeria commissioned its first subsidiary in Nigeria in 1963, which shifted the entry mode of Guinness Nigeria into Nigeria itself—from an exporting to a subsidiary establishment. Several factors are responsible for Guinness Nigeria's choice of these entry modes into Nigeria.

One important factor that contributed to the exportation of Guinness stout into Nigeria from Dublin in the 1950's and later subsidiary establishments in Nigeria from 1963 was the growth and expansion of the Nigerian economy in terms of trade volumes (imports and exports) and the rise in the nation's population figures. From 1914, Britain was Nigeria's colonial authority until 1960, when Nigeria gained independence. The colonial authority was in charge of the economic direction of her colony—Nigeria—at this time. During this period, there was tremendous growth in Nigeria's trade volumes, which portrayed the nation as a potential market for the Guinness brand. As at 1946, Nigeria's domestic exports and import volumes were 23.7 mln pounds and 19.8 mln pounds respectively. By 1960, the figures had grown drastically to 165.6 mln pounds and 215.9 mln pounds respectively with agriculture and related products forming the largest portion of the country's foreign trade with the United Kingdom, West Germany, the Netherlands and the United States (Federal Office of Statistics, 1963). In response to this astronomical trade volume growth, the volume of beer importation into Nigeria also grew from 461,000 gallons in 1946 to 7.2 mln gallons by 1960, thereby generating for the country a whopping 3.9 mln pounds in 1960 as against a mere 165,000 pounds in 1946 (Federal Office of Statistics, 1963). These positive trade figures translated into positivity for the country's GDP, which rose from 3.12 mln pounds in 1950 to 15.65 mln pounds in 1960. The beer and soft drinks sub-sector had a 911% increase within the same period (Federal Ministry of Economic Development, 1962).

In a significant close relationship to these positive trade statistics was the favourable exchange rate during Nigeria's pre-colonial and early post-colonial era. From the year 1960 to 1985, the Nigerian pound (which later changed to naira and kobo in 1973) enjoyed an almost equal exchange value parity to the British pound and the American dollar. According to Krause and Mishler (1991), the Nigerian pound was at parity with the British pound with a great deal of easy convertibility, even after the Nigerian pound was replaced with the naira in 1973. Theoretically, drawing from the Transactional Cost Analysis Model of Hollensen (2011), it was logically and economically reasonable to produce beer in Nigeria since the exchange rate between Nigeria and Britain around 1963 when the first Guinness brewery was commissioned in Nigeria was near equal. This makes the cost of producing both in Nigeria and Britain almost, if not better in Nigeria, at least the same, factoring the cost of importing from Britain. Hence, there was the need to shift beer production to Nigeria.

Another important factor that influenced the entry of Guinness into the Nigerian market was the significantly consistent and positive growth of Nigeria's population, which makes the country a market with positive potentials for internationalisation. In an attempt to qualify the human and material resources possessed by Nigeria, Adalemo and Baba (Eds.) as cited in Ozor (2004) referred to the country as a 'Giant in the Tropics'. According to the 1952/3 population census in Nigeria, the country's population was 30.42 mln people with a significant youthful population (Federal Office of Statistics, 1963). In another census a decade later, the figure had grown by almost 85% to 55.67 mln in 1963 (Federal Office of Statistics, 1963). By National Bureau of Statistics' 2017 population projection, Nigeria had 193.39 mln people, with over fifty percent of the population being the youth. This Nigerian population figure has a huge number of alcohol consumers, especially among the young people, thereby positively driving the demand for beer and other alcoholic drinks in Nigeria. According to Thompson (2014), Fergal Murray—a brew master—who worked at Guinness Nigeria, said that Nigerians see Guinness as their national beer; hence, "they wonder why Guinness is sold in Ireland. You can talk to Nigerians in Lagos who will tell you as many stories about their perfect pint as an Irishman will. They'll tell about how they've had the perfect bottle of foreign extra stout at a particular bar on their way home from work". This 'personalisation' of Guinness by Nigerians served as one huge catalyst for the establishment of subsidiaries in Nigeria by Guinness.

The attainment of independence by Nigeria is also an important factor Guinness must have considered before internationalising into Nigeria. By the late 1950's, countries like Ghana, Guinea and Morocco had gained independence, with that of other African powerhouses like Nigeria in the offing. On October 1st, 1960, Nigeria gained political independence from Britain. At this point, the country needed to capitalise on its human and material resources to take charge of the neonatal economy bequeathed to it by Britain in order to industrialise the country for its own economic advantage. Emphasising the need to develop the post-independent economy of Nigeria, the Central Planning Office of the Federal Government of Nigeria (1980, p. 136) retort that, "for a developing country of the size and potential of Nigeria, industrialisation is essential for rapid social and economic transformation". According to Ozor (2004), the industrialisation of Nigeria with its human and material resources will help 'in the diversification of the economy, boost the nation's foreign exchange earnings, and minimise the risk of over dependence on foreign trade and foreign domination and control, thereby helping to bolster the country's political independence and sovereignty' (p. 37–38). This localisation of Nigeria's industrialisation focus, pivoted on the country's manpower and material resources, lured international companies like Guinness to create subsidiaries in Nigeria as early as 1963—just three years after the nation's independence, in order to be a part of the industrialisation journey of the then nascent economic powerhouse—Nigeria.

4.1. Foreign market entry mode and business survival of Guinness Nigeria

In this part of the analysis, the survival of Guinness in Nigeria in terms of its chosen entry mode and business sustainability strategy is critically evaluated. Business survival within the context of internationalisation can be defined as the continued presence of a firm in a foreign (the host) market (Li, 1995). There exists a significant relationship between a firm's choice of entry strategy and the firm's survival in the international market. In the conceptual framing of Li (1995, p. 336) "these (entry) strategies differ both in expected riskiness and in the importance of various coordination costs".

Guinness Nigeria has a history of over fifty years of operation in Nigeria after its first subsidiary was commissioned there in 1963. The survival of Guinness Nigeria over these years can be hinged on the entry decision / strategy adopted by the firm in entering Nigeria and the sustainability strategy the company has adopted over the years. The adoption of the subsidiary mode of entry into the Nigerian market made the company an integral part of the Nigerian economic framework. To this end, Guinness' subsidiaries 'rise and fall' with Nigeria's economic realities. The establishment of subsidiaries in Nigeria by Guinness made Guinness Nigeria institutionalise itself within the independent Nigerian economic framework that needed industrial growth for her economic advancement.

In a similar vein, it can be said that the accumulation of economic and industry knowledge by Guinness during its initial exportation of Guinness Stout into Nigeria from Dublin made the company establish subsidiaries in strategic zones of Nigeria. Premising this assertion on the Uppsala internationalisation model, Johanson and Vahlne see internationalisation as a process of knowledge acquisition and incremental commitments. This accumulated industry knowledge and experiences can influence a company's strategic choices 'as part of an ongoing, dynamic process of incremental improvement in a firm's performance and survival' (Li, 1995, p. 334).

4.2. Guinness Nigeria business sustainability strategy: A critical element for survival within the Nigerian business environment

Product innovation and diversification strategy

Business sustainability strategies are critical to business survival. In Guinness Nigeria, product innovation and diversification are central to the achievement of organisational objectives. These strategies have always been focal points for Guinness Nigeria. According to Ndegwa, a former CEO of Guinness Nigeria, the company is 'considered and referenced as the innovation powerhouse' (Egwuatu, 2017). In 2014 in execution of Guinness Nigeria's innovation agenda, Orijin Bitters, Orijin Spirit Mixed drink, Masters Choice and Alvaro were launched. These brands have a significant infusion of African herbal extracts at reasonably low prices to appeal to the Nigerian consumers. This reduction in prices and the repackaging of Orijin Bitters into small units are innovative drivers that have, according to Ndegwa, helped Guinness Nigeria to "launch exciting extensions across a number of customer categories" (Egwuatu, 2017).

Still driven by the desire to innovate products and processes, Guinness Nigeria in 2016 commissioned the spirits production line at the Benin brewery to locally produce international standard whisky, VSOP, gin and vodka brands that were previously imported into Nigeria. The importation of these brands before their production in Nigeria cost the company and the Nigerian economy huge foreign exchange commitments. With the local production, Guinness Nigeria was able to innovatively save her foreign currency and also boost the naira. It also helps Guinness Nigeria in the area of fixing consumer-friendly prices of its products. According to Beverage Industry News (BIN, 2018), the expansion of the company's portfolio through local production in Nigeria 'offered a better price structure since having moved into the local production of spirit'.

In the area of technology adoption in production processes and industry competition enhancement within the Nigerian market space, Guinness Nigeria in May 2018 commissioned a PET (Polyethylene Terephthalate) production line at the Ogba brewery, which commenced the production of Dubic Malt, Orijin Zero, and Malta Guinness in PET bottles. This technological advancement has eliminated a lot of manual processes, and reduced human-related accidents in production processes thereby 'delivering consistency in quality and improving the global standards of brands' (BIN, 2018).

As regards raw materials sourcing, Guinness Nigeria has over the years put in efforts to localise the sourcing of its raw materials to about 70%. According to Ndegwa, the continued dependence of Nigeria's economy on oil will not help the nation, hence, he advocated for the localisation of production and the local sourcing of raw materials so that Nigeria could dominate the ECOWAS big markets. On sourcing raw materials locally, Ndegwa said, "we used to source about 40% locally, now we are sourcing about 75% of local materials like sorghum, glass, and packaging materials like labels and crown corks. This reduces our cost of doing business" (Salako, 2018). This initiative also creates jobs for Nigerians and significantly improves the naira.

Guinness Nigeria's sustainability strategy is pivoted and aligned with Diageo's global strategy, which is pivoted on three main pillars of (1) leadership in alcohol in society (2) building striving communities (3) reducing our environmental impact. This strategy provides a guide for Guinness Nigeria's framework and implementation road map for managing the company's social, economic and environmental footprints and also sets ambitious targets for business implementation and survival.

Leadership in alcohol in society

Alcohol is an important ingredient in the production of beers and spirits. This component has negative impacts on human health over a period of time or when misused or abused. In a bid to avoid this or reducing these negative impacts to the barest minimum, Guinness Nigeria is committed to a culture of responsible drinking through the promotion of the moderate consumption of alcohol-based beverages of the company among its loyal customers. According to Guinness Nigeria (2018, p. 18), moderate and responsible alcohol consumption is key because Guinness Nigeria aims to "celebrate the positive aspects of moderate alcohol consumption and to position our (Guinness) brands as a relevant and responsible choice for people who choose to drink". In partnership with the international Alliance for Responsible drinking, Guinness Nigeria's global alcohol commitment is to achieve the following:

a) reducing underage drinking;

b) straightening and expanding market codes of practice;
c) reducing drink driving;
d) providing consumer information and responsible product innovation;
e) enlisting the support of retailers to reduce harmful drinking (Guinness Nigeria, 2018, p. 18).

Building striving communities

Organisations do not exist in a vacuum. They interact with their environments as a part of an open system; hence, there is the need for organisations to give back to their communities. As a business sustenance strategy to ensure continued survival, Guinness Nigeria creates shared values among its stakeholders that include employees, host communities, suppliers, customers and consumers and the society at large. Initiatives at building striving communities by Guinness Nigeria include:

1. Implementation of programmes to build stakeholder capacity and also provide social amenities to communities.
2. Adherence to the United Nations Guiding Principles on Business and Human Rights at the work place to ensure respect for human rights and prevent occupational discrimination based on gender, age, race, political affiliation and marital status.
3. Designing and implementation of a sustainable supply chain commitment to ensure sustainable agriculture supplies of key raw materials with the aim of sourcing about 80% of Guinness Nigeria's production raw materials locally by 2020 using indigenous agricultural and technological processes.
4. Diversity and inclusion among members of staff in accordance with the United Nations Global Compact and United Nations Guiding Principles on Business and Human Rights provisions to avoid workplace partiality and discrimination.

Reducing our environmental impact

Beverages manufacturing firms like Guinness Nigeria use water and other resources of which end processes constitute environmental wastes. According to Guinness Nigeria (2018), the company is committed to minimising its environmental impacts across all operations and its supply chain. Guinness Nigeria's 2020 target as regards operations with respect to environmental impacts for continued survival in Nigeria are captured under the following headlines:

Water

a) reduction in water usage by 50% to cause an improvement in water use efficiency;
b) the return of 100% waste water from production operations to the environment safely;
c) replenish the amount of water used in production processes in water-stressed areas;
d) equip suppliers with tools to protect water resources in the most water-stressed locations.

Carbon

a) reduction of absolute greenhouse gas emission from plants by 50%;
b) installation of functional waste water treatment plants at production sites and the installation of gas generators to replace diesel generators;
c) ensuring that refrigeration equipment in trade are HFC-free in order to achieve a 30% reduction along the total supply chain.

Sustainable packaging

a) reduction in total packaging weight by 15%;
b) making packaging 100% recyclable or reusable;
c) increasing recyclable content by 45%;
d) sustainable sourcing of all paper and board packaging to ensure zero net deforestation.

Waste

a) eliminating material waste where possible;
b) reducing materials use;
c) finding agricultural uses for waste;
d) recycling packaging and other materials.

LEADERSHIP IN ALCOHOL IN SOCIETY	• Industry collaboration • Impactful programmes • Training
BUILDING THRIVING COMMUNITIES	• Our people • Communities • Supply chains
REDUCING OUR ENVIRONMENTAL IMPACT	• Waste • Packaging • Carbon • Water

Figure 9. Guinness Nigeria Sustainability Report 2017

Source: (Guinness Nigeria, 2018).

4.3. Challenges to Guinness Nigeria's continued survival in Nigeria

(a) Foreign exchange volatility

The naira is in a state of constant depreciation when compared to foreign currencies. In recent times, particularly between 2014 and 2018, the naira has depreciated by over 50% in its exchange rate compared to foreign currencies like the Euro, pound and dollar. This unfavourable financial exchange comparison does not favour a Nigerian-institutionalised company like Guinness that has a sizable chunk of its working capital denominated in Nigeria's local currency—the naira. The volatility of the naira to unmitigated depreciation negatively affects the operational abilities of Guinness Nigeria, thereby affecting the company's financial year statements, growth and continued survival within the Nigerian beverages sub-sector of the manufacturing sector.

(b) Parlous state of infrastructure in Nigeria

According to Guinness Nigeria's annual report and financial statements for 2018, critical production, processing. and distribution infrastructures like electricity, good roads, water, etc are largely lacking, which affects the cost production and lead time for products distribution negatively. For example, electricity generation, conversion and distribution still remain a huge challenge in Nigeria, thereby affecting the supply of power to industries for production. This makes production firms like Guinness reach out for alternative sources like diesel or gas for production, which ultimately increases the cost of production in both the short and long run. In the area of product distribution, road transportation remains the only reliable means for transporting and distributing products by Guinness across the length and breadth of Nigeria and even to neighbouring African countries. This means of transportation subjects' the timely distribution of products to logistics glitches, accidents, and delays among others, unlike other faster and safer means of transportation like rail or air.

(c) Unemployment

Unemployment remains a disturbing issue in Nigeria. According to the National Bureau of Statistics (NBS) report for the third quarter of 2018, unemployment and underemployment rates stood at a staggering and disturbing 43.3% (Nnorom & Adegbesan, 2018). This sad development affects the purchasing power of Guinness brands consumers, which translates to a significant fall in sales for the company. This negativity impacts negatively on the survival of Guinness in the Nigerian market space. In a similar vein, the reduced purchasing power of consumers make them shift preferences to cheaper and low-quality products that are in most cases substandard and harmful. In the end, Guinness' net sales become badly affected by these consumers' unfavourable choices. In response to this menace, Guinness Nigeria keeps rolling out products in sachets with cheaper prices in order to meet up with consumers' ability to pay for their loved brands, especially the gin brands.

(d) Inflation

According to the NBS Consumer Price Index (CPI), the inflation rate stood at 11.28% in November 2018 (Adegboyega, 2018). The CPI measures the average changes in the general level of prices of goods and services on a daily basis. Inflation affects the prices of goods and services and also the cost of production for Guinness Nigeria and other manufacturing firms in the Nigerian business space. Similarly, inflation affects consumers' purchasing power, thereby affecting net sale figures in the long run for Guinness Nigeria.

(e) Insecurity

Nigeria currently faces major security threats in the North Eastern part of the country, which negatively affects business operations in that part of the country's region. In the North generally, Boko-Haram insurgents and kidnappers wreak havoc on lives, businesses and properties, which makes existence in these parts of the country unconducive to business operations. In other parts of the country, insecurity challenges like robbery, kidnapping, herdsmen attacks, communal clashes and other pockets of violence erupt at intervals, thereby posing significant threats to business survival for Guinness Nigeria.

(f) Religious restrictions

Nigeria is visibly divided along religious lines of the predominantly Muslim North and the predominantly Christian south. Guinness Nigeria's breweries are all located within the predominant Christian south region without any presence in the Muslim prevalent North. Also, there is the general restriction of alcohol consumption in the north based on religious beliefs. This restrictive religious practice of 'no alcohol sale or consumption' in many northern states in Nigeria which is largely enforced with the serial seizure and destruction of alcoholic beverages by Hisbah—a religious police outfit in the Northern region of Nigeria—limits the scope of Guinness Nigeria brands penetration.

(g) Corruption and multiple taxation

Corruption remains a bane in Nigeria's general system. According to the Transparency International Corruption Perception Index for 2018, Nigeria ranked 144 out of 180 countries, with a score of 27 out of 100. This level of corruption is more predominant in the political circus, with a trickledown effect on the nation's economy and, by extension, the manufacturing sector. This monstrous element affects the ease of doing business among economic players like Guinness Nigeria.

In the area of taxation, there exist jurisdictional conflicts among the different tiers of government as regards the taxing powers of each level of government. This uncoordinated tax regime leads to taxing a tax base more than once by a taxing authority, thereby resulting in multiple taxation. This act is detrimental to business growth, development and survival for Guinness Nigeria.

(h) Competition

Guinness Nigeria faces stiff competition from other major players in the beverages sector. These competitors go to the extent of reducing their standards and prices to hurt Guinness brands in the market. In the same vein, there exists stiffer competition from unofficial local brewers, especially in rural areas and other low-income settlements. These brewers defy standard safety rules in processing their brands and also lack safe-consumption initiatives to ensure their consumers drink responsibly and stay healthy. This is a major challenge to responsible drinking and healthy competition.

DISCUSSION QUESTIONS

1. What was the initial entry mode of market entry / internationalisation adopted by Guinness into the Nigerian beverages industry? What were the important social and economic intricacies prevalent in Nigeria that Guinness had to face?
2. Do you think that Guinness could use different modes of entry into the Nigerian market than the chosen modes used by this company? (Please refer to Table 2).
3. How did Guinness change the entry strategy into the Nigerian market and why? What are the advantages and disadvantages of the chosen entry modes? Do you think that the Uppsala model of internationalisation may explain this change? What were the key determinants that facilitated the change?
4. Indicate external factors that motivated Guinness to expand in the Nigerian market?
5. Do you think that the sustainability strategy of Guinness in Nigeria contributed to its success in this market? Please characterise the key actions within the sustainability strategy of Guinness.
6. Bearing in mind that the Guinness subsidiaries were established in only a few locations in Nigeria and that the alcoholic drinks are allowed in only limited areas of this country, what would be your recommendation for Guinness? What may the company do to grow in this market?
7. Are the unemployment and inflation in Nigeria a threat for Guinness in Nigeria and how to cope with them?

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SOMETHING OUT OF NOTHING: THE CASE STUDY OF STARY BROWAR (OLD BREWERY) IN POZNAN, POLAND

by Anna Matysek-Jędrych

I visited that place on a sunny day and it seemed magical to me.
I was in the very centre of Poznan, but felt as if in a different world [...].
I sensed that place had a soul. From the beginning I knew, it should be given to artists.

Grażyna Kulczyk, Internal materials:
Kulczyk Foundations / Art Stations Foundation

Figure 1. A touch of magic: Hugger's brewery

Short introduction

Hugger's brewery in Poznan—a place where beer was brewed in the 19th century—was first a 'centre of ruin, of the homeless and the scrappies', a spot in the city avoided by all, just to become the city's showcase, its business, commercial and cultural centre, a few years later. How did this happen?

Looking at the photos (Figures 2 and 3), one cannot shake the feeling that such a transformation—from ruin into 'SOMETHING'—was almost impossible, or extremely difficult, to say the least. What was the origin of this special place? Where is the key to its undeniable business, financial and image success?

See a film on the Stary Browar, English
See the architecture of the Stary Browar, Polish
See a film on the construction of the Stary Browar, Polish
See a film on the Stary Browar, English

Figure 2. Hugger's brewery from outside (1998)

Figure 3. Hugger's brewery from inside (1998)

The origin

In December 1998 Fortis company, which belonged to Grażyna Kulczyk, bought what was left of the old brewery of the Hugger brothers. The original plan included revitalisation and opening up of the place for artists. This is how Grażyna Kulczyk recollects the beginnings of Stary Browar: "In the moment when I was buying the brewery, it was an impulse which I felt momentarily. I was standing in the brewery's courtyard and then I knew I had to do something wonderful with this place because it deserved it. It was an old building, which required exceptional care. The idea of what to install there was complicated. I was aware that this task would be very difficult."[6]

[6] G. Kulczyk, Internal materials: Kulczyk Foundations / Art Stations Foundations.

The first conception concerned only the revitalisation of the Słodownia[7] (the malt house), which was supposed to become an incubator hub for artists. Economic reasons, first and foremost, limited external funds for an insecure and non-standard investment, and made the owner look for alternative solutions. In particular, the investment had to be profitable and had to provide a steady cash flow. Among the possible solutions, three business functions which met the above-mentioned requirement were taken into account:

- residential function,
- office function,
- commercial function.

Table 1. Alternative business functions of Stary Browar

Business function	Argument for	Arguments against
Residential function	steady income	• unfavourable infrastructural and architectural conditions of the brewery • unstable situation on the real estate market in the moment of decision-making
Office function		• infrastructural and architectural conditions of most of the brewery's elements would be difficult to adapt for office functions • start of the construction of the Business Centre in a direct vicinity of the brewery
Commercial function		• a negative perception of a shopping centre connected with art—based on the experience from the Polish market of the time • an issue of the 'critical mass' which could ensure economic and financial effectiveness of the investment

Each of the possible business functions which could be used had its faults (see Table 1). However, in the case of the last of them—the commercial function—the faults seemed the easiest to decrease or even eliminate. There was one condition: the building of a shopping centre which would be, to speak plainly and a bit loftily, beautiful, whose climate and atmosphere make the customers feel the same magic which Grażyna Kulczyk felt while deciding on the purchase of the brewery. Therefore, the supposition that the commercial function of the object would connect smoothly with its cultural function (at a first glance, a bit less commercial) was made at the very beginning.

[7] The malt house was one of the Hugger's brewery's buildings, together with a bottling plant, a brewhouse, and a boiler house, with an area of 2000 square metres, allocated on four floors.

Revitalisation: From the Hugger's brewery to Stary Browar, stage I

The mission of Stary Browar is a great starting point for a discussion on the construction of this enterprise:

Creating a unique modern commercial centre in terms of offer and image, whose functions will satisfy the needs of big city's residents.

Looking at Stary Browar today, one can wonder to what degree such a mission influenced the course of events. One can also attempt to break the mission down to its individual pieces, from a solely business point of view. The keywords are first and foremost:

CREATING	UNIQUE	MODERN	COMMERCIAL	NEEDS

Figure 4. Keywords of the mission of building Stary Browar

These keywords (see Figure 4) seem to have a fundamental influence on the contemporary Stary Browar. Let us ask why?

Any project, especially a commercial one, should be preceded by a wide-ranging analysis of the initial situation. Such was conducted for Stary Browar. Four main areas of potential problems were defined:

- social problems: 48 tenants who had been living for years in properties located on the premises of the investment and low standard of living (the solution: construction of an apartment building in Poznan at Średnia Street, which provided better living conditions for tenants who would leave the premises and provide persuasion for the tenants to abandon their flats),
- economic and financial problems: low concentration of ownership titles to areas adjacent to the investment, a very bad condition of objects in direct vicinity to the area of Stary Browar, a gradual decline of the prestige of Półwiejska Street as a shopping promenade (the solution: a necessity to act on many fronts),
- legal problems: compulsory cooperation with the monument conservator, coexistence of historical and modern buildings erected in a later period, limitations imposed by land development plans,
- image problems: identification of the area by locals with social pathology, due to the entirely unexploited space in the centre of a big city (the solu-

tion: transformation of the area in a way which would restore aesthetics of the landscape and reversal of the perception of the space in the centre of Poznan).

During renovation, a few postulates were adopted which were later followed consistently during the whole process.

1. Only the materials which were already used in the old brewery, i.e. wood, brick, cast iron, steel, stone, and glass would be utilised. Therefore, it was decided to use those materials which do not undergo the process of ageing in a way which affects the aesthetics of a building,[8] and at the same time refer to the industrial architecture from the period when the Hugger's brewery were erected.
2. Everything which could be preserved from the old buildings, architecture, and even the interior, would be used during the construction of Stary Browar (see Figures 5 and 6).
3. Art and broadly defined culture would be inseparable elements of the enterprise and would be considered in every place where possible (see Figure 8).

Stage I of the realisation of the Stary Browar enterprise was supposed to be also the last because it was not certain whether it would be possible to purchase the plot which allowed for the expansion of Browar for the Passage. Thus, stage I had to be a unified whole, and this is what happened—Dziedziniec Sztuki (the Art Courtyard) has become the key and characteristic element—a place that was to include commercial function and art cohesively (to this day it has this function and still constitutes an original connecting element between the Atrium and the Passage).

While walking on the Dziedziniec Sztuki which opens towards a beautiful park, one can get an impression of being in the city (a conception of a 'city within the city' has been used). We can find here an original city hall, a villa which acts as a substitute for apartment houses, and a tower with a clock, where the original mechanism from 1912 was installed (made by Friedrich Weule's manufacture in Germany). Dziedziniec itself is 'non-economic' if understood directly, from the commercial point of view. The Atrium should be perceived in a similar way (see Figure 7). The Atrium which is built on an opera plan is the central point of the first part of Stary Browar.

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[8] An interesting fact is that in Stary Browar there are no materials typical for shopping centres built at the time, but also contemporarily now, so there are no plasterboards, granitogres, plexiglass, or light suspended ceilings.






Figure 5. The effects of the renovation (after / before renovation)

Figure 6. Found in the Hugger's brewery—adapted in Stary Browar

Understanding the functions which these 'non-economic' spaces have is made possible through, firstly, their observation (behaviour of customers in the specific places). Aleksandra Robakowska, art historian and a co-author of a book on the architecture of Poznan, expresses the sense of these spaces, understood from the commercial point of view: "The most thrilling thing about this place in Stary Browar [i.e. the Atrium] is the experience of space. While standing in the centre of the massive courtyard, I am amazed every time by the juxtaposition of its scale (what an extravagance in the time of the domination of commercial space) with a pleasant feeling of being inside an almost intimate building" (https://www.sukcespopoznansku.pl/media/isxou3is/07082018.pdf).

The key here is the phrase 'a pleasant feeling'. And the key question is: Why?

Figure 7. The Atrium, Stary Browar

The localisation of parking lots in the Atrium is also non-accidental and interesting. There emerged a necessity of taking into consideration the geology, i.e. an underground river which flows directly under the Atrium. But localisation of parking lots on upper levels has also other advantages, connected directly with the running costs of *Stary Browar* (especially, it ensures a proper ventilation system and safety).

The expansion of Stary Browar: Aims and effects, stage II

The erection of the second part of Stary Browar, i.e. the Passage began in 2005. In contrast to the Atrium part, the area which was bought was deprived of housing, it was rectangular and had a perfect size from the point of view of the functionality of the new part. The extension itself also possessed business purposes, which could be defined as follows:

- to become the key retail player in the city—to achieve the critical mass,
- to supply space in response to the retailers' demand for Stary Browar,
- to diversify the retail offer and add brands of inadequate presence in the first stage of Stary Browar (multimedia, sport and leisure, kids care and kids' fashion, home decoration),
- to achieve a competitive advantage over the shopping centres in Poznan in terms of size, diversity, quality and uniqueness of offer.

Table 2. Tangible results of Stary Browar's extension

Item	Stage I (till 2006)	After extension (March–December 2007)	Change (%)
Average monthly number of visitors	813 020	1 206 866	48.44
Average daily number of visitors	26 800	40 900	52.61
Highest monthly number of visitors	1 109 188 Dec. 2006	1 530 714 Dec. 2007	38.00
Monthly average turnover	6 077 240 EUR	11 786 675 EUR	93.94
Average monthly number of transactions	479 703	790 605	64.81
Average monthly number of customer / visitor ratio (%)	61	66	8.19

Table 3. Financial profile (before: 2004–2006 and after the extension: 2007, in EUR)

Item	2004	2005	2006	2007
Income on sales	11 408 992	11 008 910	11 526 534	20 468 157
Total costs (excluding depreciation)	4 824 646	4 740 318	4 608 807	8 919 062
EBIDTA	6 584 346	6 268 592	6 917 727	11 549 094
Depreciation	2 202 775	2 381 460	2 404 980	4 221 139
EBIT	4 381 571	3 887 132	4 512 747	7 327 955

Time is money—a few words on the schedule of the works

December 1998: the purchase of the Hugger's brewery by the Fortis company (the deadline for realisation of the investment was established then for 2003, but as it would turn out later, this deadline was established very imprecisely).
1999–2002: the cleaning of the area and giving it to theatres, which staged the plays *Coriolanus* by W. Shakespeare, *Carmen* by G. Bizet, *Macbeth* and *Rigoletto* by G. Verdi among others (*Macbeth* was transmitted live by the Polish television).

Table 4. Stary Browar: schedule

Stages	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Purchase of the brewery / land										
Realisation of mission										
Design										
Realisation of project										
Putting to use						Nov. 5th				March 11th

Comment:
Stage I—grey
Stage II—dark blue

January 2002: opening of tender procedure to find contractors for the stage I of construction of Stary Browar.

April 2002: replanting trees growing on Półwiejska Street (two plants) and alongside the ramps leading to the production hall. The beginning of one of the biggest operations involving the replanting of mature trees in the history of Poznan.

June 2002: 'breaking ground', beginning of the construction of the slurry walls and the ceremony of burying the 'Construction Act' underneath the building of Stary Browar.

March 2003: beginning of the construction of the Ratusz Sztuki and the clock tower.

May 2003: ceremony of the completion of the construction work on Stary Browar.

July 2003: the beginning of the revitalisation of the Słodownia, Warzelnia and Susznia buildings.

September 2003: installation of the footbridge connecting the Fortis offices with the Atrium building.

November 2003: the grand opening of the Centrum Handlu i Sztuki Stary Browar.

2004: the purchase of land for the prospective construction of the second part of Stary Browar.

March 2005: the Department of Urban Planning and Architecture issues its decision on the extension of the new part of Stary Browar—the Pasaż.

May 2005: stage II of the construction of Stary Browar begins (cleaning of the area).

June 2005: 'breaking ground' on the construction of stage II of Stary Browar (the Pasaż).

April 2006: 'Stage II of the construction of Stary Browar, Open Day'—a trip round the building site for journalists and residents.

August 2006: start of the renovation works of the Prokuratura (the Military Court), which after revitalisation and connection with the Susznia and the Pasaż, would shortly become a five-star hotel Blow Up Hall[5050].

February 2007: beginning of the 'glass work' construction in the roofing of the Dziedziniec (the element which connects the first and the second stage of Stary Browar).

March 2007: ceremonial opening of the second part of Stary Browar—the Pasaż.

Commerce—but of what?

When the decision on the construction of Stary Browar as a shopping centre was made, many other shopping malls were already existing or were being built in Poznan. Therefore, the key strategic question concerned the form of realisation of the commercial function of the new building. The decision on the selection of lessees was taken extremely carefully, all the arguments for and against were considered, and the length of the leasehold of space and flexibility of business activity that is connected with it was analysed.

The most important rules which were applied during the planning of the commercial space were as follows:

- commerce is to be integrated (a customer will find everything in one place),
- next to well-known brands which can be found in other shopping centres (such as Zara, H&M, Carry, Smyk, Adidas, Nike and others), there would be so called exclusive brands in Stary Browar (Stary Browar as the only exhibition space in Poznan, and in regard to some brands also in Poland),
- customers' needs would be analysed on an ongoing basis, and the structure would be adapted to the observed trends (influence on the term of lease),
- very restrictive in terms of the aesthetics conditions of lease.

Table 5. The structure of the commercial space according to the retail category (before the extension of the Pasaż, 2004)

Retail category	Square metres	%	Number of shops
Ready to wear	9 907.06	35.57	36
Beauty, health, accessories	1 443.83	5.04	16
Food & beverages	5 352.35	18.68	19
Home	3 355.60	11.71	5
Hobby, gifts, special retail	2 467.91	8.61	9
Culture, art, entertainment	1 826.45	6.37	5
Service	1 347.16	4.70	11
Other	2 966.63	10.31	4

Table 6. The structure of the commercial space according to the retail category (after the extension of the Pasaż, 2007)

Retail category	Square metres	%	Number of shops
Ready to wear	21 256.29	39.45	83
Beauty, health, accessories	2 789.91	5.18	28
Food & beverages	9 398.55	17.44	38

Retail category	Square metres	%	Number of shops
Home	4 665.00	8.66	10
Hobby, gifts, special retail	5 242.58	10.07	28
Culture, art, entertainment	5 611.21	10.41	7
Service	1 778.17	3.30	16
Other	2 954.63	5.49	4

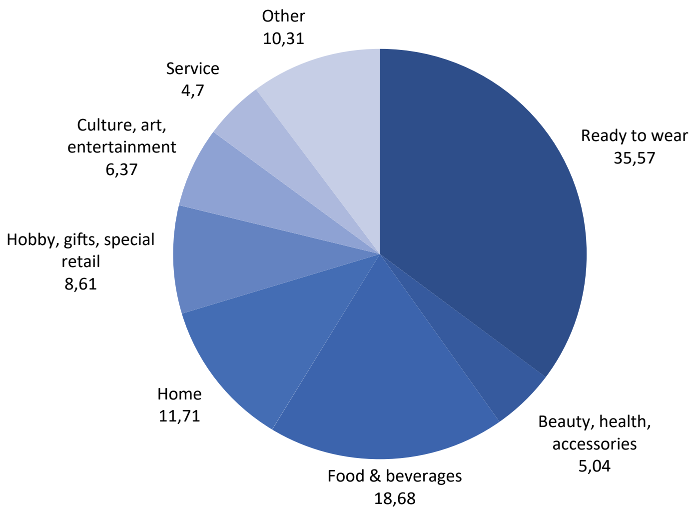


Figure 8. The structure of commercial space (before the extension of the Pasaż, 2004)

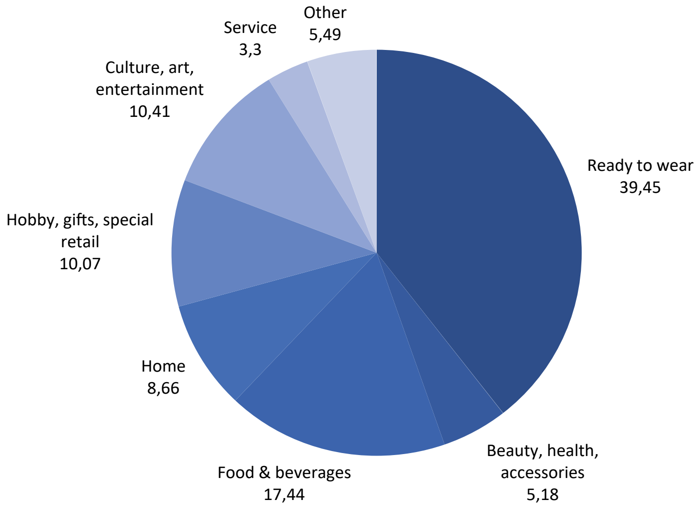
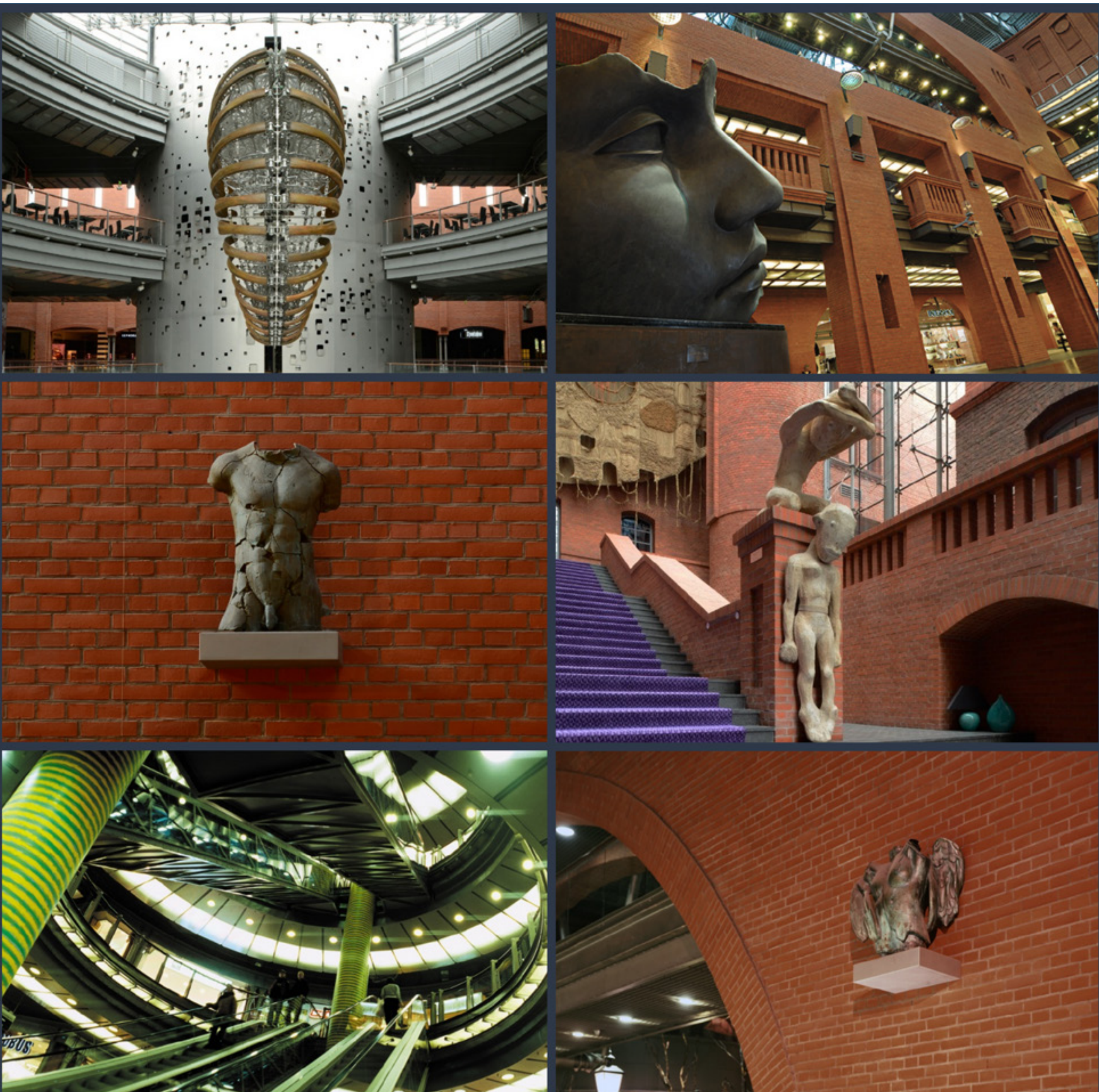


Figure 9. The structure of commercial space (after the extension of the Pasaż, 2007)

Philosophy 50–50 the key to success?

The 50–50 idea constitutes the philosophic grounds for all projects realised by Grażyna Kulczyk. This idea implies that art consists of 50% of each endeavour, while the other 50% has a commercial character and is the result of each enterprise (i.e. the commercial function in the case of Stary Browar).

Figure 10. Art at your fingertips in Stary Browar



The effects of revitalisation: The city of Poznan's perspective

It is worthwhile to consider the case study on Stary Browar in a broader context, from the perspective of the city, the region, and its residents. We should take into account:

- the number of customers who visit Stary Browar each day (it is estimated that on average of over 1,5 mln customers visit Stary Browar each month),
- the number of companies, brands, which decided to run their business activity in Stary Browar,
- the number of awards which Stary Browar has won in competitions around the world, in Europe and Poland (*),
- aesthetic concerns connected with the look of the Centrum Stary Browar
- without any doubt, Stary Browar should be called the city's showcase.

Box 1

(*) Awards which Stary Browar has won are, among others:

Best Medium Shopping Center of the World (ICSC Awards)
Best Medium Shopping Center of Europe (ICSC)
Ad Creators Club Awards
ICSC Solal Marketing Awards, Silver
Tom Commercial Investments in Urban Area
National Geographic 'The New Seven Wonders of Poland'
Award for supporting Start-Ups
Fashion Excellence Awards
Top Hotel Award
Summer in the city KTR prize
The Best Investment—REFE Eagles
The Icon of Polish Architecture title

But Stary Browar has influenced the city in other aspects, too. First and foremost, the spatial order in the very centre of Poznan improved. The attractive property which Stary Browar undoubtedly is, attracted other investments which are being located in its vicinity (»check current map of the city on Google Maps https://www.google.com/maps/@52.4009389,16.9251639,17.13z). All the above-mentioned actions affected the change of the organisation of the city centre.

Stary Browar can also be perceived in the perspective of a tourist attraction, as a citygenic element (if we take into consideration the park next to it) and finally as an icon of modern architecture and an example of the excellent possibilities offered by revitalisation.

Blow-up Hall5050: 'Ordinary-non ordinary' hotel in the centre of Poznan

The separation of the hotel as a functionally distinct part of Stary Browar was already an element in the first revitalisation concept. A combination of events (which was mainly the opportunity of the purchase of the second part of the plot) and the analysis of the market situation (i.e. lack of the possibility of cooperation with a brand hotel chain without the consequences of losing independence and full control over the investment) caused that the hotel was finally placed only in the building of an old Military Court (built by the Prussian government in 1878–1880).

Only the outer walls remained from the old Military Court, and at the same time one level down was added to enlarge the floor space of the hotel.

Area

- total: 1,602.2 sq. m (including: the object: 942.8 sq. m; the restaurant: 203.2 sq. m; the bar: 117.2 sq. m),
- usable: 1,383.3 sq. m (including: the object: 785.2 sq. m; the restaurant: 177.8 sq. m; the bar: 81.3 sq. m).

Schedule of works

- the project: July 2007,
- the realisation: December 2008.

Authors

- Jacek B. Bal,
- Maciek Chorążak,
- Marcin Neuman,
- Szczepan Dejnek,
- Hanna Leśniak.

Box 2

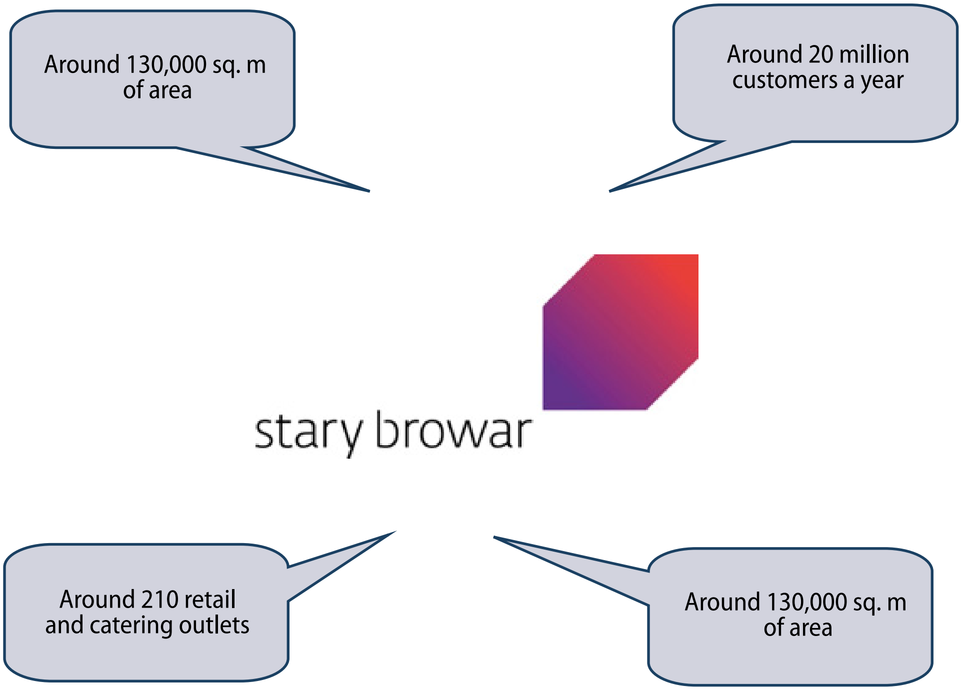
Works of art collected in the Blow-up Hall5050 include among others:

Photographs (including large format):
- Vanessa Beecroft 'VB 43.019' and 'VB 52.100'
- Spencer Tunick 'San Sebastian 1'
- Mariko Mori 'Tea Ceremony'
- Patrick Tourneboeuf 'Archives nationales #9'
- Maurycy Gomulicki 'Cream Pie'
- Michael Najjar 'Silver Arrow'

Sculptures:
- Sylwester Ambroziak 'Bez tytułu'

Other:
- tapestry by Piotr Uklański 'Untitled'
- painting by Piotr Uklański 'Czerwony karzel'
- installation by Sebastian Hempel 'Irrlichhter'

In conclusion: These figures are impressive



DISCUSSION QUESTIONS

1. What are Stary Browar's sources of success? List them in their chronological order, and then arrange them from the most important to the least important. Compare your ranking of success factors with those made by other course participants.
2. The business impact of the decision on extending Stary Browar—assess it in the financial, marketing, and strategic aspects.
3. Find a building in another city, region, or a country that is currently in a state of advanced decay and propose its revitalisation in such a way that ensures economic success.
   i. Propose a mission, vision, and strategic aims of the revitalisation.
   ii. Identify risks and propose methods of their limitations.
   iii. Propose a detailed schedule of works.

Agile Business

Economics

B2B Demand

Customer Leadership Development

Corruption Revenue

Emerging market

Offshoring Knowledge

HRM B2C Production

Ecommerce Emerging markets

Network

Expansion Finance Pricing Innovation CEO Firm

Management COST

Ethics Marketing

Internationalisation Inflation Commerce

Company Economic growth

Industry Globalisation

BRENTIX: AN INDUSTRY CHALLENGE IN A GLOBALISED WORLD

BY KATARZYNA MROCZEK-DĄBROWSKA

It was a hot summer afternoon. Mike, and the CEO of the Brentix company attended the Board meeting to discuss their strategy for the next few months. The meeting took hours and they were still nowhere near making their final decision. Mike's mind was overloading; he drifted back to another meeting some five years earlier—the same venue, mostly the same Board members and a similar question in mind—what would they do next? But at that time, they were enthusiastic about the future—about expanding their brand, conquering new markets and seizing opportunities. Now, they were facing a more urging dilemma—what would they do to survive?

Brentix started off as a family company. It was Mike's grandfather and father who had launched the firm in the back of their garage in the early 1990s. The idea came naturally—Mike's aunt was expecting her first baby and getting anything in a post-Soviet market still posed a challenge. After a long time when everyone had experienced an acute shortage of essentially everything, the market was finally liberalised, causing industries and companies to emerge. And so did Brentix: a new baby pram producer. At that time the baby care industry in Poland had been unexplored and created quite an opportunity for newcomers. The few pram models available on the market came from abroad and were too expensive to sell well. This pushed Mike's family to give it a try and to offer a product that would be price sensible and at the same time solid enough to be rooted in the market.

The first few years were tough but at the same time productive, as the industry—along with many other industries—was flourishing. Unlike many other producers, Brentix was not an assembly; they made most of the pram components on their own, bending the metal parts, riveting the body parts and trimming the material. Mike still remembered his father making supply deliveries once a week. Although they started off with only family members as their employees, in a short time they needed more hands for their production. In the early years they had 20 people working at what was their first manufacturing hall, developed in the back of their yard. What turned out to be more challenging was getting the products to sell. Mike would still smile at the thought of his grandfather packing the pram in the back of his lorry, driving through the south of Poland—from one city to another—and showing the product to potential customers. No one does business like this anymore, but back then... it worked!

Looking back almost 30 years, Mike wondered how they had managed to become one of the most recognisable pram producers in the industry, who employed hundreds of workers. Sure, when launching their activities, they had the advantage of being the market's first comer. Well, they were not exactly the first to appear in the market but only a few other companies had survived their first years and Brentix had established its position among them. In the 1990s they were selling mostly in central and southern Poland through a contact network initiated by Mike's grandfather. With time the industry started to change. New competitors launched their businesses just at their doorsteps. They intended to use Brentix's network to facilitate their appearance in the market. Most of them failed, but a few managed to seize some market share for themselves. After the transformation period, the industry covered more than 150 pram producers—but now remains about 70% less of them.

The industry development path was essential for Brentix. The 1990s brought a time when the industry was growing rapidly (Figure 1). The market was vast; the demand on the local market big enough for the new and existing players to have their share and be satisfied. Also, the market was price sensitive, which did not allow for foreign-owned companies to have much of a say. The market grew annually approximately by 7%, which was an extremely high value, especially since the industry was not a high-tech one. The manufacturers cared about economies of scale which enabled them to decrease the production costs per pram. This was a truly emerging market.

The 2000s brought a significant change in the industry life cycle phase—which started slowly altering from a growth stage to the maturity stage. The profitability rate decreased from ca. 9% to ca. 5%. The market growth rate was still impressive since it oscillated at the level of 4–5%. The number of industry members started decreasing and companies turned to searching for a competitive advantage in areas other than cost efficiency. The industry was now classified as a medium-high tech one and the product innovations started playing a vital role in the sales process. The market became much less price sensitive since the society's wealth had increased significantly. An important moment for the economy and the industry as well was the accession to the European Union (2004), which opened up new possibilities.

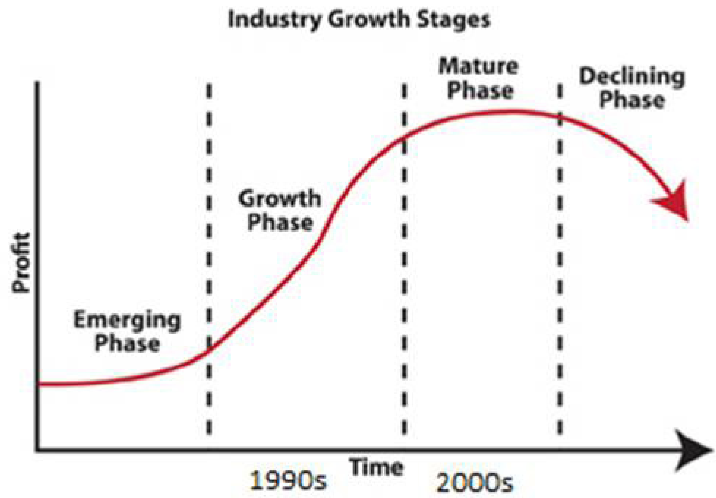


Figure 1. Industry life cycle curve

Table 1. Growth and maturity stages: A comparison

Criteria	Growth stage	Maturity stage
Industry growth	rapid growth after market liberalisation; average 7% increase per year	still significant growth which accumulated to a ca. 4–5% increase per year
Industry profitability	ca. 9%	ca. 5%
Competitors	numerous new entrants after 1989; majority of them family-owned, private capital companies	beginning of market concentration; majority of family-owned private capital companies
New entrants	numerous but mainly local	new entries by foreign-owned capital
Customers	price sensitive	moderately price sensitive; searching for unique, technology-advanced products of high quality
Suppliers	scarce and local	concentrated and international
Technology	standard technology in use by all producers	one of the determinants of the company's competitive advantage

One of the game changers was the appearance of foreign-owned capital. There were 6 companies that opened their subsidiaries in Poland and two more that entered the market by exporting their products through a wholesale network. The local market ceased to be enough—not necessarily for the companies to survive, but to expand. Brentix, along with other industry members, started to think about expanding abroad. The first attempt was made in the Czech Republic and then in Slovakia—which was a natural choice bearing in mind the relative similarity of these countries. Much more effort had to be made to reach Germany, which remained a more developed country: the sales network was harder to reach and the customers were more demanding. Brentix, however, made it through. They were quickly known for their unique, patent protected solutions for body parts and an ability to customise their products to their client's demands. And, notwithstanding this, they were still much more price sensible than their foreign competitors. In a short time, they were able to reach Russia, the Baltic countries, Ukraine, and most importantly—the Scandinavian countries. Their competitors followed suit in Europe, but also decided to expand further to North America and some to Asia (Figure 2).

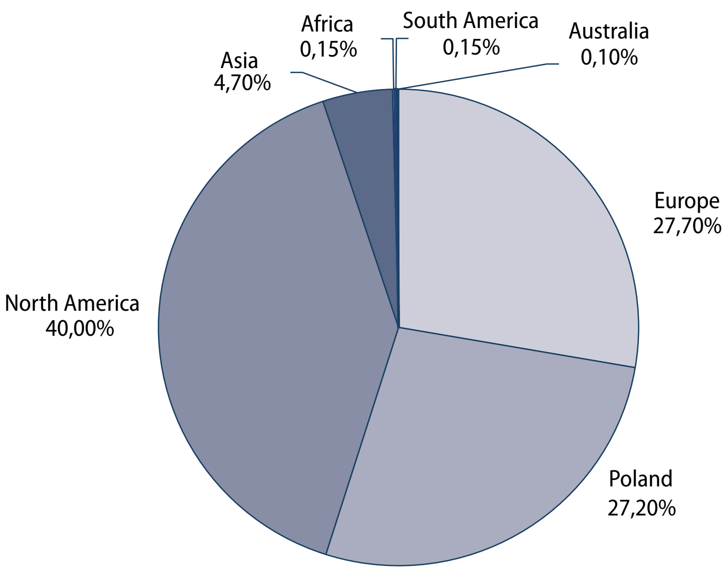


Figure 2. Geographical expansion of main industry players (average for 2000–2015)

Mike remembered that they were satisfied with how the business had developed. They exported to most of the countries, but in some they managed to tie up non-equity partnerships, which enabled them to penetrate the markets more thoroughly. Their shares in foreign destinations were not impressive—just about 1–2% of the overall market value, but this was enough to grow steadily. An exception remained the Scandinavian countries, which generated about 50% of their foreign sales and where they were quite a distinguishable brand.

Types of prams and strollers available on the market

Prams: dedicated to the newborns, since they allow for a flat recline. Not practical for babies more than approximately 6 months old (for the ones that are able to sit upright) due to limited reclining positions.

Strollers: also known as buggies or push chairs. Dedicated to independent sitters. They have a multiple reclining position and are much lighter than traditional prams. These include:

- standard strollers – front-facing, rear-facing or reversible, and with additional features;
- lightweight strollers – mostly front-facing strollers, easily transportable and with lesser features;
- jogging strollers – strollers dedicated to active parents;
- double strollers – strollers dedicated to twins;
- travel systems – strollers combined with car seats and/or child carriers.

Brentix offered all types of prams and strollers except for the jogging ones. They were known for their adaptation to the local market. This proved essential when entering the Scandinavian markets. The seats in the stroller and the pram needed to be 20% longer than in the standard versions available in other European locations. Also, the waist belt and the guardrail required strengthening in order to comply with the safety requirements. The colours dedicated to the Scandinavian countries covered various shades of grey and the fabric itself needed to be extra thick. They were so familiar with the local market needs that soon they became there one of the leading sellers. The situation seemed promising enough that at the Board meeting five years ago they had decided to expand not only geographically but also product-wise.

Now, sitting in another Board meeting, Mike wondered whether they had been overoptimistic. It had seemed a natural thing entering into the travel system sector. This meant that they had to expand their portfolio with the child car seats. This, however, was easier said than done. By then, they had ensured that other child carriers (Recaro, Maxi Cosi, Kiddy, Cybex, etc.) were transferable to their prams' and strollers' frames. They used special adapters that were available free of charge and convinced hesitant customers to purchase their products. Manufacturing the child carriers meant a whole new venture.

Tom, the CFO of Brentix presented the basic numbers for the expansion. Their balance sheet, profit and loss account, as well as major global ratios seemed for them stable enough to consider a portfolio enlargement (Tables 2, 3 and 4). But were they?

Table 2. Balance sheet through 5 consecutive years before product expansion (euro)

	2011	2010	2009	2008	2007
Assets					
Fixed assets	504 323	516 584	453 223	449 061	420 693
• intangible fixed assets	10 177	15 899	0	243	19 249
• tangible fixed assets	384 687	456 775	341 927	323 634	302 408
• other fixed assets	109 458	43 911	111 297	125 184	99 036
Current assets	4 967 464	6 123 051	8 467 557	6 466 865	4 999 216
• stock	3 570 061	4 844 587	5 332 011	1 716 912	1 618 329
• debtors	885 618	1 057 143	2 559 336	4 619 675	3 335 136
• other current assets	511 786	221 321	576 210	130 279	45 752
Cash & cash equivalent	510 203	218 798	575 479	130 279	45 752
TOTAL ASSETS	5 471 786	6 639 383	8 920 780	6 915 926	5 419 909
Liabilities & equity					
Shareholders' funds	1 852 198	2 334 345	1 239 363	758 624	498 248
• capital	226 154	252 362	12 177	12 130	13 949
• other shareholders funds	1 626 044	2 081 984	1 227 186	746 494	484 299
Non-current liabilities	89 557	74 447	304 178	243	27 060
• long term debt	0	0	0	0	0
• other non-current liabilities	89 557	74 447	304 178	243	27 060
* Provisions	89 557	74 447	304 178	243	27 060
Current liabilities	3 530 032	4 230 591	7 377 239	6 157 059	4 894 601
• loans	0	0	0	0	1 709 553
• creditors	1 053 650	3 044 239	2 362 558	5 954 727	2 866 738
• other current liabilities	2 476 382	1 186 352	5 014 681	202 332	318 309
TOTAL SHAREH. FUNDS & LIAB.	5 471 786	6 639 383	8 920 780	6 915 926	5 419 909
Memo lines					
Working capital	3 402 029	2 857 491	5 528 789	381 859	2 086 726
Net current assets	1 437 432	1 892 460	1 090 318	309 806	104 615

Table 3. Profit and loss account through 5 consecutive years before product expansion (euro)

	2011	2010	2009	2008	2007
Profit & loss account					
Turnover	27 321 391	20 270 699	12 019 552	11 012 061	12 154 624
• sales	27 315 737	20 098 588	11 999 581	10 947 043	12 141 233
Operating P/L	1 454 620	897 398	425 947	953 193	511 360
• financial revenue	n.a.	196 590	221 376	29 355	289 854
• financial expenses	92 271	86 055	52 361	566 239	82 297
Financial P/L	–92 271	110 534	169 015	–536 884	207 557
P/L before tax	1 362 349	1 007 933	594 962	416 309	718 916
Taxation	267 314	197 599	117 385	90 734	24 271
P/L after tax	1 095 036	810 333	477 577	325 575	694 646
• extr. and other revenue	0	0	0	0	0
• extr. and other expenses	0	0	0	0	0
Extr. and other P/L	1 095 036	810 333	477 577	325 575	694 646
Net income	1 095 036	810 333	477 577	325 575	694 646
Memo lines					
Material costs	22 184 085	16 209 443	9 412 969	8 245 642	9 748 751
Costs of employees	1 273 245	1 113 924	707 720	606 026	531 725
Depreciation & Amortisation	101 317	83 784	63 563	73 752	66 954
Interest paid	64 001	35 835	29 225	41 243	82 297
Cash flow	1 196 353	894 117	541 140	399 327	761 599
Added value	2 800 912	2 241 476	1 395 470	1 137 330	1 399 892
EBITDA	1 555 937	981 182	489 510	1 026 945	578 313

Table 4. Global ratios through 5 consecutive years before product expansion (euro)

	2011	2010	2009	2008	2007
Profitability ratios					
ROE using P/L before tax (%)	73.55	43.18	48.01	54.88	144.29
ROCE using P/L before tax (%)	73.46	43.33	40.44	60.29	152.52
ROA using P/L before tax (%)	24.90	15.18	6.67	6.02	13.26
ROE using Net income (%)	59.12	34.71	38.53	42.92	139.42
ROCE using Net income (%)	59.69	35.13	32.83	48.34	147.90
ROA using Net income (%)	20.01	12.21	5.35	4.71	12.82
Profit margin (%)	4.99	4.97	4.95	3.78	5.92
EBITDA Margin (%)	5.70	4.84	4.07	9.33	4.76

	2011	2010	2009	2008	2007
EBIT Margin (%)	5.32	4.43	3.54	8.66	4.21
Cash flow / Operating revenue (%)	4.38	4.41	4.50	3.63	6.27
Operational ratios					
Net assets turnover (x)	14.07	8.42	7.79	14.51	23.14
Interest cover (x)	22.73	25.04	14.58	23.11	6.21
Stock turnover (x)	7.65	4.18	2.25	6.41	7.51
Collection period (days)	12	19	77	151	99
Credit period (days)	14	54	71	195	85
Structure ratios					
Current ratio (x)	1.41	1.45	1.15	1.05	1.02
Liquidity ratio (x)	0.40	0.30	0.43	0.77	0.69
Shareholders liquidity ratio (x)	20.68	31.36	4.07	n.s.	18.41
Solvency ratio (Asset based) (%)	33.85	35.16	13.89	10.97	9.19
Solvency ratio (Liability based) (%)	51.17	54.22	16.14	12.32	10.12
Gearing (%)	4.84	3.19	24.54	0.03	348.54

As Brentix had been growing thorough the years, new technology investments in the pram industry were spread over time and thus were not burdensome. However, entering a whole new sector required additional funds since the costs were significant. Tom felt that their only real option was to take out a long-term loan to launch the basic operations. In the first two years Brentix would focus on baby carriers and rear facing carriers (fitted using ISOFIX anchor points). The loan of 5.5 mln euro would be granted for six years, with the annual rate based on WIBOR. The effective interest rate would be around 9%. Unlike the pram and stroller production, the company would have to buy some ready-made body parts from the market.

Types of standard child car seats available on the market

Child's weight	Group	Seats
0 kg to 10 kg	0	lie-flat or 'lateral' baby carrier, rear-facing baby carrier, or rear-facing baby seat using a harness
0 kg to 13 kg	0+	rear-facing baby carrier or rear-facing baby seat using a harness
9 kg to 18 kg	1	rear- or forward-facing baby seat using a harness or safety shield
15 kg to 25 kg	2	rear- or forward-facing child car seat (high-backed booster seat or booster cushion) using a seat belt, harness or safety shield

Source: www.gov.uk

The new product line also meant changes for the company structure. After a long and quite fierce discussion, the Board agreed that there should be a whole division dedicated to the car seats. They agreed to start small, with separate production as well as sales and market research departments. In the case of other activities, the already existing departments would provide suitable services. The new products of course had to comply with the EU regulations on safety. That, however, did not seem to be a problem since Brentix had to comply with similar standards for their other products.

Most of the Board members seemed to be in favour of the new venture. Brentix presumed to launch the new portfolio item in Poland, but was willing to start sales in foreign markets within six months. Adam, the foreign operations manager was one of the few investment's opponents. Mike remembered him saying that to make such a decision they had much too little information on particular markets. He also said that their brand recognition was not strong enough to assume such optimistic sales in the first place. The Board aimed to reach similar market shares as with prams and great hopes were placed especially with the Scandinavian markets (Figure 3).

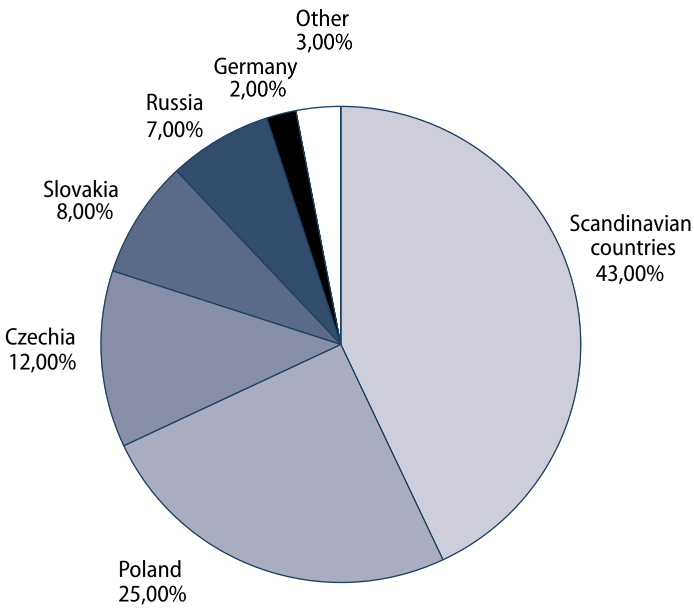


Figure 3. Brentix's car seats sales turnover—by countries (expectancy for the first 2 years)

After a few months debate, they finally reached an agreement to launch the new investment. They were granted the loan and started the product development. As planned, they started with the baby carriers. The project was both on budget and on schedule, with only minor bumps on the way. Brentix chose Kielce fairs—one of the major industry events—to present their product to the market. During the trade fairs the new product did not get as much attention as it had been hoped for. Mike remembered hearing that it was "just as many others". He knew that it would require a special effort to embed in the distribution chain. He wasn't naïve not to know that retailers had benefits from selling particular products to the end customers. He only hoped that the Scandinavian markets would be keener to try the car seats out.

The first half a year from launching the product to the market brought moderate success. Brentix hoped to make an annual turnover of ca. 5 mln euros in the Polish market and they managed to reach 1.9 mln euros within the first six months. They hoped that the foreign sales would speed the process up. The neighbouring countries—the Czech Republic and Slovakia—exhibited a cautious interest and accounted in total for 10% of Brentix's car seats sales. Neither Germany nor Russia made spectacular sales. The Scandinavian markets, however, especially with Sweden in the lead did show an interest. They had naturally expected customisation, as in the case of the prams. Brentix was happy to comply.

In the first year of exporting, the Scandinavian markets accounted for 80% of the car seat sales. This was not a breakdown of sales Brentix hoped for, but they were satisfied enough. They managed to get the product to the European market and were now competing with even global brands such as Recaro or Maxi Cosi. This was until the disaster happened the year after. The reason Brentix was so focused on manufacturing most of the prams' parts in-house was the quality control. They had suppliers they had been working with for decades and they were willing to pay more to ensure a high quality. When their competitors were cost-cutting by outsourcing their primary activities, Brentix only agreed to do so with their supporting activities retaining all control over the development, production, sales and distribution process. Mike wondered now, why they had not insisted on that with the car seats as well. In the third year of the project one of the plastic parts of the baby carriers started to snap, causing the carriers to fall out of their base. This happened mostly in the case of a crash. In one of the accidents, a baby was gravely injured due to this defect. This caused the company not only a lawsuit but also a cost to their reputation.

The Scandinavian markets are extremely sensitive to safety issues. The defect and the bad press around the accident caused their main distributor to break the contract and as a consequence Brentix lost almost all the market. It has not helped that following Recaro's steps (which once experienced a similar problem) they offered to test and replace all the car seats free of charge. They were not a global brand. What worked with Recaro, did not work with Brentix. The bad press did not reach other foreign markets—they still maintained sales in other European locations. But they did not manage to improve their position in those markets and the sales turnover remained marginal.

Their finances were not yet in a terrible condition. The pram and stroller sales remained steady and they have managed to pay back half of their loan (Tables 5, 6 and 7).

Table 5. Balance sheet through 5 consecutive years after product expansion (euro)

	2016	2015	2014	2013	2012
Assets					
Fixed assets	5 493 121	7 035 559	6 551 409	6 588 389	6 714 542
• intangible fixed assets	143 914	22 368	31 000	6 500	9 781
• tangible fixed assets	5 232 305	6 912 652	6 419 660	6 479 815	6 627 003
• other fixed assets	116 902	100 539	100 749	102 074	77 758
Current assets	8 718 041	6 548 891	7 516 403	4 767 995	7 596 809
• stock	4 649 624	3 540 505	4 591 150	3 801 903	5 526 441
• debtors	3 842 432	2 654 500	2 077 221	508 685	1 296 945
• other current assets	125 985	181 770	424 133	232 315	394 169
* Cash & cash equivalent	100 000	172 116	423 899	225 092	379 254
TOTAL ASSETS	18 597 793	16 073 668	15 480 053	12 058 737	14 165 859
Liabilities & equity					
Shareholders' funds	2 991 330	3 057 832	2 274 727	1 939 888	2 394 115
• capital	226 994	235 453	234 847	240 741	244 522
• other shareholders funds	2 764 336	2 822 378	2 039 880	1 699 147	2 149 593
Non-current liabilities	1 377 136	2 430 877	3 339 623	4 251 496	4 890 982
• long term debt	895 000	1 962 325	2 876 505	3 856 200	4 600 000
• other non-current liabilities	241 068	234 276	231 559	197 648	145 491
* Provisions	241 068	234 276	231 559	197 648	145 491
Current liabilities	9 842 696	8 095 741	8 453 462	5 165 000	7 026 254
• loans	1 067 325	914 180	979 695	743 800	900 000
• creditors	2 543 697	3 110 338	3 239 478	1 503 906	2 027 821
• other current liabilities	7 298 999	4 071 223	4 234 289	2 917 294	4 098 433
TOTAL SHAREH. FUNDS & LIAB.	14 211 162	13 584 450	14 067 812	11 356 384	14 311 351

	2016	2015	2014	2013	2012
Memo lines					
Working capital	5 948 359	3 084 667	3 428 893	2 806 682	4 795 565
Net current assets	–1 124 655	–1 546 850	–937 059	-397 005	570 555

Table 6. Profit and loss account through 5 consecutive years after product expansion (euro)

	2016	2015	2014	2013	2012
Profit & loss account					
Operating revenue (Turnover)	25 379 521	27 887 127	38 213 125	26 934 778	22 277 663
• sales	25 295 312	27 729 075	37 939 764	26 505 056	22 150 267
Operating P/L [=EBIT]	1 283 930	1 487 520	1 885 274	1 425 906	1 003 763
• financial revenue	n.a.	n.a.	74 874	n.a.	120 060
• financial expenses	83 988	121 886	45 207	128 555	15 160
Financial P/L	–83 988	–121 886	29 667	–128 555	104 900
P/L before tax	1 199 942	1 365 635	1 914 942	1 297 351	1 108 663
Taxation	281 123	278 763	384 260	270 111	219 336
P/L after tax	918 819	1 086 871	1 530 682	1 027 240	889 326
• extr. and other revenue	0	0	0	0	0
• extr. and other expenses	0	0	0	0	0
Extr. and other P/L	918 819	1 086 871	1 530 682	1 027 240	889 326
P/L for period [=Net income]	918 819	1 086 871	1 530 682	1 027 240	889 326
Memo lines					
Material costs	21 914 434	21 417 565	30 321 909	20 306 949	16 518 926
Costs of employees	2 002 716	1 827 344	2 190 657	1 568 184	1 500 631
Depreciation & Amortisation	313 252	244 710	287 724	233 759	160 406
Interest paid	56 976	12 447	45 207	20 463	15 160
Cash flow	1 232 071	1 331 582	1 818 406	1 260 999	1 049 733
Added value	3 572 886	3 450 135	4 438 530	3 119 757	2 784 861
EBITDA	1 597 182	1 732 231	2 172 998	1 659 666	1 164 169

Table 7. Global ratios through 5 consecutive years after product expansion (euro)

	2016	2015	2014	2013	2012
Profitability ratios					
ROE using P/L before tax (%)	40.11	44.66	84.18	66.88	46.31
ROCE using P/L before tax (%)	28.77	25.11	34.91	21.28	15.43
ROA using P/L before tax (%)	6.45	8.50	12.37	10.76	7.83

	2016	2015	2014	2013	2012
ROE using Net income (%)	30.72	35.54	67.29	52.95	37.15
ROCE using Net income (%)	22.34	20.03	28.07	16.92	12.42
ROA using Net income (%)	4.94	6.76	9.89	8.52	6.28
Profit margin (%)	4.73	4.90	5.01	4.82	4.98
EBITDA Margin (%)	6.29	6.21	5.69	6.16	5.23
EBIT Margin (%)	5.06	5.33	4.93	5.29	4.51
Cash flow / Operating revenue (%)	4.85	4.77	4.76	4.68	4.71
Operational ratios					
Net assets turnover (x)	5.81	5.08	6.81	4.35	3.06
Interest cover (x)	22.53	119.51	41.70	69.68	66.21
Stock turnover (x)	5.46	7.88	8.32	7.08	4.03
Collection period (days)	55	34	20	7	21
Credit period (days)	36	40	31	20	33
Structure ratios					
Current ratio (x)	0.89	0.81	0.89	0.92	1.08
Liquidity ratio (x)	0.41	0.37	0.35	0.19	0.29
Shareholders liquidity ratio (x)	2.17	1.26	0.68	0.46	0.49
Solvency ratio (Asset based) (%)	16.08	19.02	14.69	16.09	16.90
Solvency ratio (Liability based) (%)	26.66	29.05	19.29	20.60	20.09
Gearing (%)	81.72	109.39	189.88	257.50	241.88

Mike knew that the company was not yet on the verge of bankruptcy. They still were strong in the pram and stroller sales, but the company also knew it was high time to make some important decisions. If they let things roll the way they did, Brentix would soon face some serious issues. There were a couple of things to consider.

The first thing to consider was the issue of the car seats. The loan itself was not problematic, the company turnover was enough to repay it and sales in prams made up for the cash needed. They had to admit, however, that the investment had not paid off. Looking at their balance sheet, Mike realised that they had too much stock and their debtors' liabilities were growing. They only struggled with the car seats; the other products did not cause similar worries. On the other hand, the market and demand for these products was growing. The baby care industry was a specific one—although in the locations Brentix was present in, it showed signs of maturity, Mike could not imagine it ever going into decline. Babies kept being born and they needed special care. And their parents were determined to spend as much as needed to give their children all the best. And that was a promise of gold. But would Brentix—given their history—be able to deliver? Or would their tainted reputation haunt them off the markets? Adam insisted that the Scandinavian markets were off the table and they needed to search for an alternative if they were to keep the existing portfolio. Tom on the other hand claimed that they needed to come up with a plan as they had maybe six more months until things started to get ugly. They either acted on it or prepared for a rough ride.

The Board meeting was not productive. They could not reach a consensus as most of the Board members were struggling to admit that they had failed. Admitting defeat was never easy, but if life had taught Mike one thing, it was never to wait but always to act. The news spread quickly—and the rumours had it that some of his top employees were considering quitting their jobs. This would only add to his troubles. He had set up a working group under Tom's leadership to prepare actions they might take. He did not want to get involved himself—he was afraid he would be overemotional. He would, however, make a rational decision based on the team's inquiries and faced the Board to convince them to come along with him.

Tom's working group presented Mike with three different possibilities:

- leaving the car seat sector except for baby carriers, which could be offered as a joint travel system with the pram and stroller as a set,
- rebranding by forming a joint venture with Andex—another pram manufacturer willing to enter the car seat sector, but in a partnership,
- refocusing and entering South America countries with the existing portfolio.

Option 1: Leaving the car seat sector

Assets recovery

- The asset investment could be recovered by selling the technology lines and machines. The initial market screening showed two companies willing to make the purchase. Rough estimations assume recovery of 45%–50% of the initial investment.
- About 20% of the existing asset would be needed for future production of baby carriers.

Pricing
- Lowering the profit margin on the baby carriers and of the whole set to the 3.9% in the first year to boost sales in the Polish market.
- Lowering the profit margin on the baby carriers and of the whole set to the 4.2% in the first year to boost sales in the foreign markets.

Product
- Redesigning the baby carriers in terms of the external features to avoid association with the former portfolio.
- No major investment into carriers mechanism and system required (cost avoidance).

Estimated financial impact
- Initial loss of ca. 2.5–3 mln euro due to drop of car seats sales and unsold asset retainment.
- Employee training costs and company structure adjustments: ca. 0.1–0.2 mln euro.
- Estimated increase in the first year sales of travel system (pram + stroller + baby carrier) in the Polish market by 20%.
- Estimated increase in the first year sales of travel system (pram + stroller + baby carrier) in the foreign markets by 15%.
- Additional first year turnover (on baby carriers only, but sold in set): ca. 2–2.5 mln euro.

Option 2: Rebranding and forming a joint venture

Assets
- The asset investment could be maintained and would constitute Brentix's input for the new venture.

Joint venture
- Brentix maintains control with 55% of the new company's shares.
- Brentix focuses on design, production and innovation.
- Andex uses their network to establish sales points both in Poland and in foreign destinations.
- Most sales are expected from the Balkan countries where Andex has had a strong position.
- Production located in Poland, initially at Brentix, with time to be moved to a separate location.

Product and pricing
- Redesigning the baby carriers and car seats in terms of the external features to avoid association with Brentix's portfolio.
- No major investment into carriers mechanism and system required (cost avoidance).
- Major changes in the car seats to maximise safety.
- New brand targeted on the mid-income market segment.

Estimated financial impact
- Initial cash outflow—asset transfer and joint venture establishment (including capital investment of Brentix): ca. 6 mln euro.
- Estimated turnover from sales in both Polish and foreign markets in the first year: ca. 3-4 mln euro.
- Estimated average net profit margin: 4.5% on baby carriers and 6.8% on car seats.
- Estimated IRR in 10-year perspective: ca. 7.82%.

Option 3: Entering South America with the existing portfolio

Company structure and assets
- No major changes in company structure or assets needed.
- Establishment of a department dedicated to market research and distribution in South America.

Market research—market potential and legal restrictions
- Initial market reports indicate much potential for the baby care industry which is in the growth stage in South America.
- Lower safety requirements compared to Europe in terms of prams, strollers and car seats.
- Growing mid and high-income segments which prefer foreign-originated products (both European and American).
- Product customisation required—change in materials used due to climate conditions.

Sales and distribution
- Initially focus set on Argentina and Brasil.
- Distribution via an existing network—the Nenna whole and retail seller—with sales points in all major cities.
- Customer service (including claims and repair) handled by the local service points according to the agreement with Nenna.

Estimated financial impact
- No initial cash outflow needed except for establishment of the new department.
- Estimated additional turnover from sales in South America in the first year: ca. 2-3 mln euro.
- Estimated net profit margin in South America: ca. 6%-7% on prams and strollers and 5%-6% on car seats.

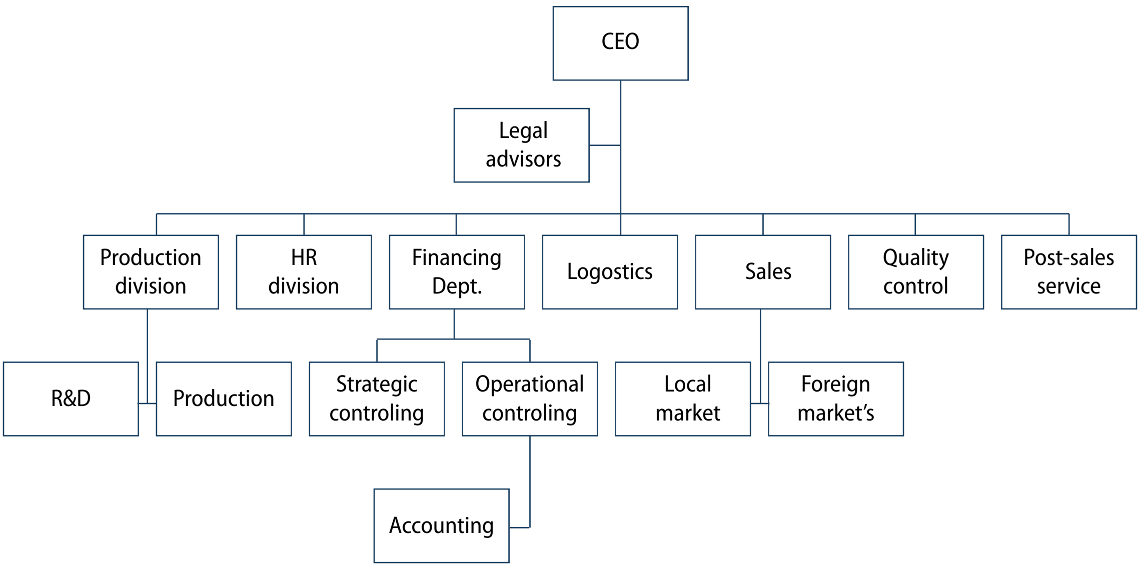
Now Miked faced the challenge which of the options—if any—would be most suitable for their situation. He realised that strategy is as much an art as it is a science. It needs to account for employees, the market and the company. As a result, there is rarely a single correct answer to business problems; models and analysis can be helpful here, but only if applied properly. Either way, he had to come up with some plan to get the Board to act. Otherwise, they could soon find themselves in serious trouble.

DISCUSSION QUESTIONS

1. Analyse the current industry attractiveness by applying tools known to you suitable for the industry perspective. How rapidly does the situation change?

2. Indicate what constitutes (if anything at all) Brentix's competitive advantage in the European market. What can you say about its resources and capabilities?
3. If you were in Mike's shoes, what strategy for the future would you propose? Focus on:
   - drafting a plan for the next two years (take into consideration financial constraints);
   - the current international macroeconomic perspective and forecasts that might influence your decision;
   - the industry trends;
   - long-term and short-term opportunities and threats for the company.
4. Prepare your strategy as a draft document that you would present during the Board meeting to convince the shareholders to follow your plan.

Appendix. Brentix's structure

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Management
COST
Ethics
Marketing
Internationalisation
Inflation
Commerce
Company
Economic growth
Industry
Globalisation

CHINA AND USA: TRADE WAR IN THE CASE OF HUAWEI

BY PIOTR BUBROWSKI

Introduction

When the first wave of America's 25% tariffs on 34 bln USD worth of Chinese goods took effect on 6 July 2018, China in return imposed 25% tariffs on the same amount of American goods. A second round of 25% tariffs on an additional 16 bln USD of Chinese exports went into effect on 23 August 2018. In retaliation, China immediately imposed 25% tariffs on 16 bln USD of US exports. The third round started on 24 September 2018, when President Donald Trump started levying 10% tariffs on another 200 bln USD in Chinese goods. In retaliation, China imposed tariffs, with rates ranging from 5% to 10%, on an additional 60 bln USD worth of American goods, effective on the same day. The US threatened that the tariff rate on these goods would increase to 25% by 1 January 2019, unless the two countries reached a deal. Mr. Trump had warned that even more could be on the way. He said that if China retaliated, then Washington would impose fresh tariffs on 267 bln USD worth of Chinese products. In fact, China did retaliate. If Trump went ahead with that round of import tariffs, it would mean virtually all of China's exports to the US would be subject to duties. Then, in the G20 Meeting at Buenos Aires, Argentina, on 30 November and 1 December 2018, Xi Jinping and Donald Trump agreed to stop the escalation of the tariff war, and give themselves three months to talk so as to reach a deal to stop the escalation permanently.

In fact, the Trump administration's challenge to China goes beyond initiating a trade war. It has sought to limit Chinese direct investment into the US based on national security reasons through the action of the Committee on Foreign Investment in the United States (CFIUS). CFIUS is an inter-agency committee of the US government that reviews the national security implications of foreign investments in US companies or operations. The US President has personally accused the Chinese telecommunications equipment and mobile phone maker Huawei of posing national security threats to Western countries without providing any evidence to support his claim. Huawei is widely recognised as the company that could become the world leader in providing 5G technology to mobile devices in the future. The US is also challenging China's territorial claims in the South China Sea by having its warships sailing within the territorial waters of islands over which China claims sovereignty. Vice President Mike Pence of the US was extremely critical of China's 'Belt and Road Initiative' (BRI), characterising it as a 'dangerous debt diplomacy China has been engaging in in the region' in the APEC Meeting in Papua New Guinea. Again, the evidence was scant, but the rhetoric was powerful. The fact that the president and vice-president of the US badmouth a rival without providing solid evidence was very unusual. It has gone beyond self-defence. All these actions of the US, taken together, reveal how an incumbent economic, political and military power tries to suppress the rise of an emerging rival.

The reasons for the fear of China by the US are manifold. Roughly speaking, they include the hidden subsidies that China provides to state-owned enterprises through cheap and easy credits from the state-owned banks, the large trade deficit that China has with the US, the forced technology transfers by American firms to China, the lack of enforcement of intellectual property rights protection by China, China's military build-up and economic expansion through the BRI, the fear of American firms' dependency on Chinese suppliers, and so on. Some of these fears are justified and some of them are not.

However, for the time being, let us focus only on the trade war. First, we look at some trade statistics to get an idea of the size of the trade imbalance between the US and China compared with the total trade value in each country, the global trade value, and the GDP of each country. The trade figures that are listed in the following tables are for trade in goods and services, not just trade in goods. Such statistics are available relatively late. For this reason, we only have data for 2016. It should be noted that sometimes when some government officials cited the trade imbalance between the US and China, they did not specify clearly whether they were referring to trade in goods and services or just trade in goods. In fact, the American side often just cites an imbalance in trade in goods only. As a result, they almost certainly over-state the trade imbalance, as the US exports more services to China than it imports services from China (see Tables 1–4).

Table 1. Annual US trade deficit with China (bln of USD)

	2012	2013	2014	2015	2016	2017	2018	2019
Exports	110.5	121.7	123.7	115.8	115.5	129.9	120.3	106.6
Imports	425.6	440.4	468.4	483.2	462.5	505.6	539.5	452.2
Balance	–315.1	–318.6	–344.8	–367.3	–346.9	–375.6	–419.2	–345.6

Source: (US Census Bureau, 2020).

Table 2. US trade deficit with China (2019): features

	US imports from China	US exports to China
Value	452.2 bln USD	106.6 bln USD
	TOP 3 products	
Type	Computers Cell phones Apparel and footwear	Commercial aircraft Soybeans Semiconductors

Source: (US Census Bureau 2020).

Table 3. Annual China trade surplus with the US (bln of USD)

	2012	2013	2014	2015	2016	2017	2018	2019
Exports	351.9	368.3	396.1	409.6	388.6	429.7	478.4	417.8
Imports	127.8	145.9	159.0	148.7	132.4	153.9	155.1	122.3
Balance	224.1	222.4	237.1	260.9	256.2	275.8	323.3	295.5

Source: (Census and Statistics Department of the Hong Kong Special Administrative Region, 2020).

Table 4. The top five exporting countries in 2019

Country	Exports (US$ bln)	% of global exports
China (mainland)	2,498	12.82
U.S.A.	1,645	8.44
Germany	1,486	7.63
Netherlands	721	3.70
Japan	705	3.62

Source: (US Census Bureau, 2020).

Trade war—definition

How do we construct a workable, empirical definition of a trade war? This task is surprisingly difficult when our reference period, the past few decades, was a time when tariffs fell by, on average, over 5 percentage points (ppt) globally. As such, we will use a somewhat loose definition, based on the length and breadth of tariff increases, without taking a hard stand on the parameterisation. Conceptually, at least, a trade war lies at the intersection of high frequency and broad tariff innovations. Using the high frequency excludes the low frequency trends in tariffs, those driven by policy that are permanent features of specific trading relationships, to focus on deviations from those long-term trends. Looking at broad changes serves to exclude idiosyncratic innovations in tariffs. After these exclusions, what remains is a concept of trade war that entails dramatic and broad escalations in trade barriers.

Another reason it is difficult to define a trade war is that for most observers in the U.S., a mental model of a trade war hearkens back almost 100 years. Successive waves of tariffs in 1922 (the Fordney-McCumber Tariff) and 1930 (the Smoot-Hawley Tariff Act) raised the average U.S. tariff by import value to a peak of 19.8% in 1933. For the product categories to which tariffs were applied, the average peak rate was 59.1% in 1932.

In recent decades, increases of this size in applied tariffs were not only unusual for the U.S. but quite rare in all of global trade. The closest today, in size terms, are confined to specific agricultural products or are targeted, WTO-sanctioned responses to dumping or other unfair trade practices. For instance, U.S. anti-dumping tariff margins on Chinese flat-rolled steel are currently more than 250% and for corrosion-resistant steel products are about 200%. The same forces that keep most countries from erecting trade barriers in the first place are effective at keeping the proliferation of such large applied tariffs in check.

Huawei company description

Huawei as a telecommunication company was started in 1987 by its founder Ren Zhengfei, ultimately becoming a private company owned by its employees in the industrial area of Shenzen, China. Ren in his early career worked in the military's civil engineering group and became the Director of its Information Engineering Academy reaching the position of Colonel. This military experience was quite common in the conscript Red Army of his generation and it is a connection that has caught the attention of foreign observers and is regularly used to link Huawei to the Chinese military. While in the military, Ren worked on building bridges and civil constructions but ironically not telecommunications. In the 1980s he left this employment while China began moving to a more market-oriented economy and globalising its economy. With a limited amount of financial investment of $4,000 Ren established his now famous company Huawei. His initial activities included selling basic telecommunications equipment and switchboards to regionally-based local authorities (Lord, 2012). Ren was hugely influential in the company, although he only held 1.3 per cent of the shares.

Huawei found its riches in the Special Economic Zone of Shenzhen, one of China's initial experiments with capitalism and the open market. Throughout the 1990s Huawei grew its commercial business across China and towards the end of the 1990s started to export its products outside China. In the early years Huawei engaged in reverse engineering in the telecommunications technology race by copying Cisco, Fujitsu and others. However, Huawei soon moved on and began to innovate itself, plunging profits into research and development and thus developing its own products (Wesley, 2011). As early as 2005 Huawei's global sales outperformed its internal China sales, making it one of the few telecommunication multinational firms in China. This strong international presence continued, in which two-thirds of Huawei's business was outside of China, placing Huawei in 2012 as the world's largest telecoms vendor by revenue (Lord 2012). By July 2010, Huawei had made it to the Fortune 500 list with annual sales of 2.18 bln USD (Wesley, 2011, p. 40). In 2013 Huawei's forecast of total sales is expected to reach 6 bln USD.

In just over 10 years, with its 146,000 employees globally, Huawei established 22 regional offices and over 100 subsidiaries around the world. It has 17 research institutions in the US, India, Sweden, Russia and China. It also has 36 training centres around the world catering for all local staff training. By 2010 it had taken out a staggering 20,000 patents for its new technologies, mostly in the telecommunications field (Wesley, 2011). Unlike many of China's state-controlled monopolies, Huawei is a globalised company with more than 70% of its sales coming from outside China. With such a performance it became regarded as one of the country's most innovative companies.

The global management consulting firm McKinsey & Company predicts that China's urban population will hit the one billion mark by 2030, and will have 221 cities with over one million inhabitants by 2025 compared to 35 in Europe. Vast cities require complex communication networks and Huawei has continued to grow at an astounding rate by expanding on and servicing this need.

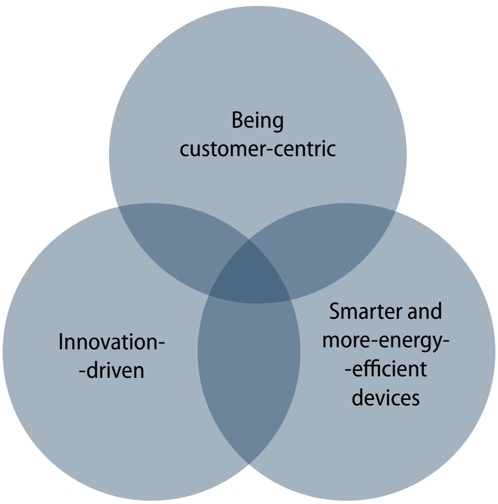

Figure 1. Huawei's brand philosophy

Today, Huawei's products and solutions are deployed in over 170 countries, and serve more than one third of the global population. Huawei is the third-biggest global manufacturer of routers, switches and other telecommunications equipment by market share after Alcatel-Lucent and Cisco, and the brand recently joined in the ultra-competitive smartphone race.

For many observers, Huawei has seemingly come out of nowhere to become one of the world's most dominant technology brands. Primarily a business-to-business company (B2B), its biggest gains have been outside of the public eye. Major customers include telephone and internet operators, which use Huawei's expertise to provide services to customers under their brand name, not Huawei's brand. It also lacked worldwide fame due to its Chinese origins. With up to one-fifth of the world's population within its own Chinese borders, Huawei has been able to grow while still remaining relatively isolated.

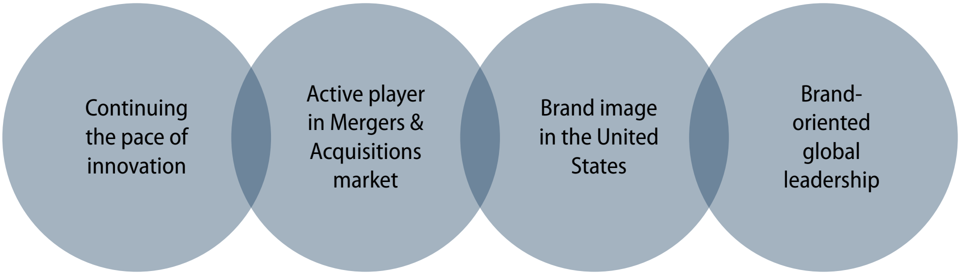

Figure 2. Huawei challenges—the future

History of conflict: Is there proof?

In short, nobody knows, and those alleging that the company either does or does not, have clear motives behind their claims. But it should be noted that the accusations go back years: long before the election of US President Trump and the increasingly aggressive trade war.

"Since 2007, Huawei has fallen victim to a nonstop onslaught of false allegations from Western media" a copy of the Huawei-commissioned book *Huawei: Leadership, Culture, and Connectivity*, given to DCD by Huawei states.

One of the earliest allegations came from the RAND Corporation in 2005, which said Huawei had 'clear ties to the Chinese military' as part of a wider report titled *A New Direction for China's Defence Industry*. 2012 saw the first major accusation levied by the US government, with a House of Representatives report claiming Huawei posed a 'national security threat' to America. The report again covered the murky ownership structure of Huawei, and the alleged ties to the state. The authors claimed they received 'internal Huawei documentation from former Huawei employees showing that Huawei provides special network services to an entity the employee believes to be an elite cyber-warfare unit within the [People's Liberation Army].

"The documents appear authentic and official Huawei material, and the former employee stated that he received the material as a Huawei employee.

These documents suggest once again that Huawei officials may not have been forthcoming when describing the company's R&D or other activities on behalf of the PLA." The document was never shared, and has not been independently verified. This was followed in 2013 by comments by General Michael Hayden, former director of the CIA and NSA, who claimed that Huawei had shared with the Chinese state intimate and extensive knowledge of foreign telecommunications systems it is involved with. Two years later, the FBI that said that Huawei's growth could give the Chinese intelligence services access to US business communications, adding "China makes no secret that its cyber warfare strategy is predicated on controlling global communications network infrastructure."

Throughout all of this, the US government was, ironically, spying on Huawei. Documents released by whistle-blower Edward Snowden, and published by Der Spiegel, detail 'Shotgiant'—the NSA's secret intelligence offensive against Huawei. The agency succeeded in infiltrating the company's network, noting: "We currently have good access and so much data that we don't know what to do with it." The NSA said in a document: "Huawei's widespread infrastructure will provide the PRC (People's Republic of China) with SIGINT [signals intelligence] capabilities" and added that the threat posed by Huawei is 'unique.' It also said that "the intelligence community structures are not suited for handling issues that combine economic, counterintelligence, military influence and telecommunications infrastructure from one entity." None of the documents released by Snowden, however, appear to show evidence to back any of the claims. In fact, last year, president of the German Federal Office for Information Security (BSI), Arne Schönbohm, told Der Spiegel that there is "currently no reliable evidence" of Huawei posing a risk. Rotating Huawei chairman Ken Hu said last year: "If you have proof and evidence, it should be made public, maybe not to the general public, not to Huawei. But at the very least, it should be made known to telecom operators, because it's telecom operators who are going to buy from Huawei."

"So the question I want to ask is for a company with a $100 billion in revenue, with businesses in 170 countries, with the fact that we've provided leading products to most telecom operators around the world, we serve hundreds of Fortune 500 companies, we also serve hundreds of millions of consumers around the world—you say Huawei is a cybersecurity risk without any proof. On what grounds?"

Chinese media and trade war

The Chinese government's censorship machinery has been working at full pace to control the discussion about the ongoing trade war from reaching its people. In July 2018, the directive issued to the media houses was to avoid any major mentioning of trade war in their news headlines. As reported by one Chinese official, the government directive was, "When you report a fall in the stock market index or a weakening in the yuan's exchange rate, you can't use 'trade war' in your headline".

In addition to this, China has also reduced the mentioning of the idea of Made in China 2025. The Chinese government had issued a propaganda directive that asked the Chinese media to not report or refer to Made in China 2025, a step that Beijing hopes will help it in improving ties with the United States as well as Europe.

The Chinese media has also been printing articles supporting the Chinese stand on the trade war and highlighting the strength and resilience of the Chinese side. In an article published in the China Daily, the author argued that the United States has mistaken the commitment of China to safeguard its core interests. Beijing was not going to give in to the American pressure and stated that the situation was because Washington had misjudged the Chinese achievements in the last 40 years of reforms and opening up. It further argued that the only way the China–US relations can grow is by cooperation

Conclusions

China continues to be omnipresent throughout the globe in all walks of life. This is occurring with its companies as they challenge the global status quo, especially with the US. While China and the US have engaged in 'strategic mistrust' the economic, political and competing nature of these national powers is what has created this 'mistrust' with neither side backing down. At bottom, China continues to assert its position of being 'neither capitalist nor socialist', an assertion which will have limited traction in the long term despite views to the contrary in China. At the same time this economic power is peppered by the presence of public and private companies like Huawei, which not only are the embodiment of this 'dual system' but are also using this status to its advantage.

While the perception is that many Chinese products are not of high quality, the presence of firms such as Huawei can be value added, innovative and quality based. China wishes to replicate the case of Japan, which in the 1970s and 1980s was known for poor quality production but over time with strong innovative investment overturned this reality and perception, eventually producing quality goods and services. China's desire to present itself as a responsible member of the international community may well be an honorable intention and ambition as President Xi so presented at Davos in early 2018. However, its competitors, and rival nations may not be listening as intently as he would like.

Huawei knows that entering and performing well in the US is key to Huawei's future. At the same time, it is one of the more difficult objectives given the political sensitivities and especially during the Trump Presidency. In some ways, overcoming the concern over the 'security threat' is a lost cause for Huawei from the word go mostly because the distrust towards Huawei is ideological as well as being commercial. Protectionist measures wherever and in whatever ways they are launched are unlikely to win in the longer term. Moreover, there is little consensus on their use across many segments of society. There are those that demand that China restore 'human rights' and a fully integrated market economy without State involvement. Those that are seeking for this to occur, in which China was no longer a 'socialist' centrally planned economy, might well be waiting for a long time. Huawei's acceptance as a leader in the telecommunications field may eventually come, though much of this will depend on the extent that some western nations are able to separate the ideology from the commercial when it comes to China. This is not an easy task.

DISCUSSION QUESTIONS

1. What are the reasons why the trade war between the United States and China focused on Huawei?
2. What methods of conflict resolution can you propose?
3. Write scenarios for the future, taking into account economic, political, social and cultural factors (consider optimistic, pessimistic and most probable scenarios)?

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Inflation
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NEARSHORING IN SOFTWARE ENGINEERING FROM CENTRAL EUROPE: CASE STUDY ON THE CHALLENGES OF RAPID GROWTH

BY LESZEK TASIEMSKI

Introduction

Living in a Global Village, supercharged by technology and the Internet, people and companies can benefit from optimising sourcing of different goods and services. We can spend holidays in a place where it's warm and inexpensive, and our clothes and electronics are produced in places where the process is very cheap.

A similar trend is well settled within the IT and software development industry. This industry operates on bits of information, there's no need to transfer physical objects in the process of adding business value, and therefore it's especially prone to sourcing from the most optimal place on the planet—as long as that place is connected to the Internet and has human talent available. This opportunity has been exploited for many years already, pretty much from the moment the Internet became prevalent, meaning the late nineties.

The first wave was fuelled by big companies, who already had a global footprint and could easily assess the potential of different parts of the world. A good example is India, where cities like Bangalore quickly became specialised in such services. The cost was very low, though the quality varied depending on the partner and the level of engagement from the customer. Offshoring meant a large distance between the customer and the technicians and usually also significant time zone differences which made it challenging to communicate.

- Outsourcing: the process of using an external service provider for a process that used to be within the company.
- Offshoring: outsourcing to another country, typically very cheap and very far away.

- Nearshoring: outsourcing to a neighbouring country, usually not that cheap as offshoring.

There were some prevalent shortcomings to the offshoring approach—that will be discussed later—and companies started to look for an alternative. Especially smaller ones that couldn't afford mistakes and at the same time didn't have resources to train the offshoring partner and maintain proper level of communication started looking. These companies started to look for outsourcing partners as well, also abroad, but in neighbouring countries. It appears that there can be significant differences in the cost of, e.g., software development, just 45 minutes of flight away. In such cases the time difference is either minimal or non-existent and it is way more convenient to meet in person.

What is the difference between offshoring and nearshoring—where to draw the line? The widely accepted border is 5 hours of flight. Usually offshoring is on a different continent, while nearshoring happens within the same continent.

Why IT and software development?

IT and software development is a perfect candidate for off- and near-shoring. Due to the high quality and reliability of the Internet globally, it is technically feasible to work on parts of the technology stack remotely and even simultaneously, if needed.

In contrast to services that are subject to outsourcing, like cleaning services or facility security—that require physical presence and therefore need to be provided locally—software development can be done from a cheap location, without any limitations.

Quality of the service remains the differentiator.

What are the risks of offshoring?

1. Quality. Depending on the vendor, quality is usually lower than in the country of origin. To some extent a slight decrease in quality and performance is expected and anticipated while offshoring.
2. Communication. Offshoring often means distant time zones, and often there's also the problem of a different culture or difficult to understand accent.
3. Legal compliance and geopolitical risk. Items like GDPR, export control, etc. may come into play.

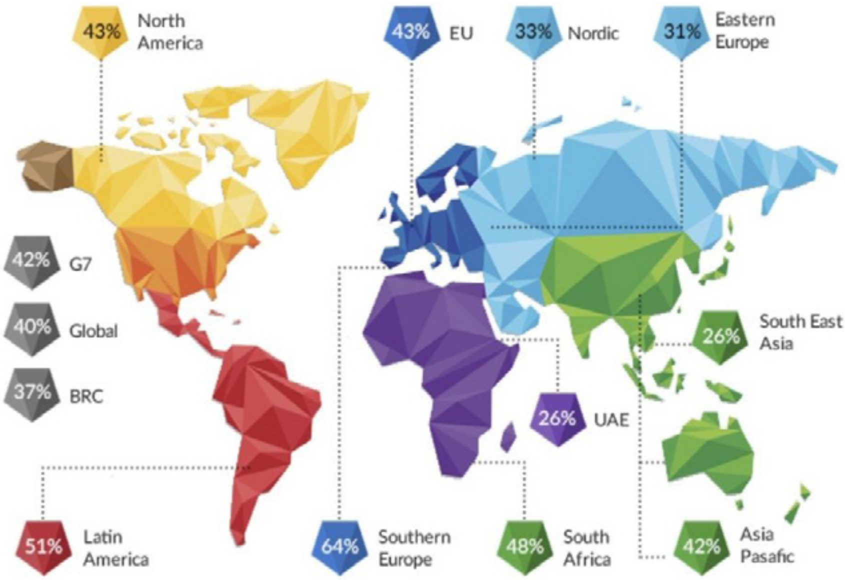


Figure 1. Who is offshoring?

Source: (https://goo.gl/Gz1Hzd).

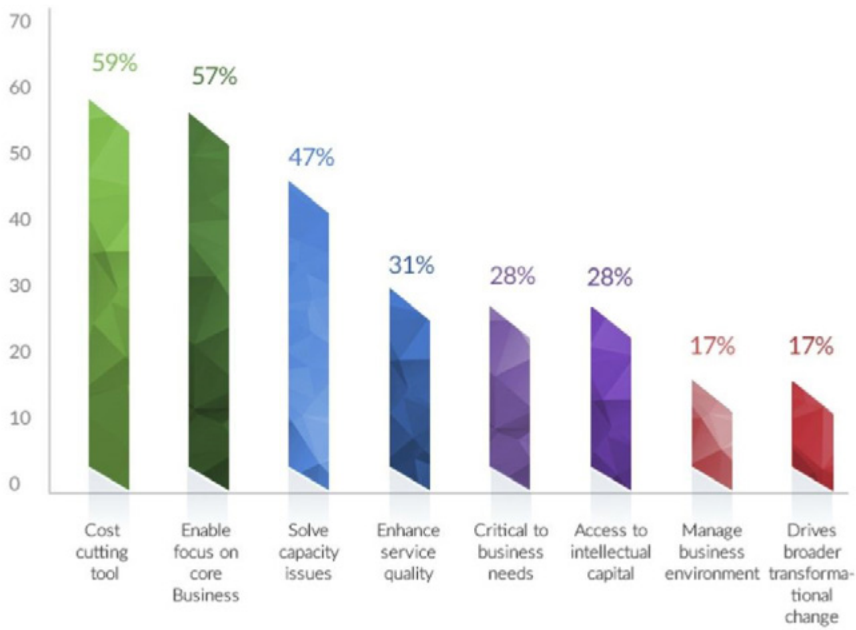


Figure 2. What is the driver for offshoring?

Source: (https://goo.gl/UOU81m).

Nearshoring as an option

Offshoring has been practiced for many years by industry giants like IBM (https://www.nytimes.com/2017/09/28/technology/ibm-india.html). Both the benefits and shortcomings were well understood and became widely known in the industry. There was a need for a third option. To be able to still outsource, but to a country with a better proximity, both in terms of physical and cultural distance.

After years of struggling, it became clear that especially in the area of software development, which for most outsourcing companies is the core business, live contact, being able to meet physically or discuss issues without worrying about the time zone, became very differentiating.

In this regard, especially for Scandinavia, outsourcing to countries like Ukraine, Poland, Czech Republic or Romania became a viable option and a hope to resolve the pains of offshoring while still keeping the benefits, at least to some extent.

The term nearshoring was coined to underline the proximity. Both in physical and cultural meaning.

This case study is about nearshoring from Scandinavia to Poland and challenges in managing the rapid growth. One of the pioneering companies in this field is described.

Beginnings

A company was founded by two, self-employed, students of Computer Science in early 2006. The office was an arranged garage and the initial capital was a very modest sum of 20,000 PLN. Most of this sum was spent on arranging an office and purchasing the basic technical equipment.

The owners also applied for the funds available from the European Union, within one of the programs targeting supporting entrepreneurship within students of Polish universities. The funds were granted, which meant an opportunity to buy more sophisticated network equipment, a server, specialised tools and also to pay mandatory social insurance in the first year, which released cash flow pressure from the owners in the difficult beginnings.

The total granted sum was in the magnitude of 40,000 PLN.

The first two years

The beginnings were very hard. Two inexperienced engineers, without a network, marketing or social skills. The scope of operations was very broad, from IT maintenance, to web development, to hosting services, to computer network setup, to hardware selling. The company was too small and too fragile to specialise and to be strategic. The lack of marketing or sales skills of the owners resulted in very random and very opportunistic deals.

Still, in this time there were some successes on the account. The company managed to attract three customers for ongoing IT support, which provided a solid revenue base. This barely allowed to stay afloat and cover costs, but all additional deals, like web development, generated a very modest profit.

Table 1 presents some financial metrics from the first two years of running the company.

Table 1. Financial performance in 2006 and 2007

Year	2006	2007
Revenue	41.650 PLN	86.300 PLN
Cost	43.000 PLN	62.500 PLN
EBIT	–1.350 PLN	23.800 PLN
# of employees*	2	2

* In this kind of business, the owners' salary is not included in the cost, so it is the profit that is the personal income of the owners to be shared among them. The first two years were very slim.

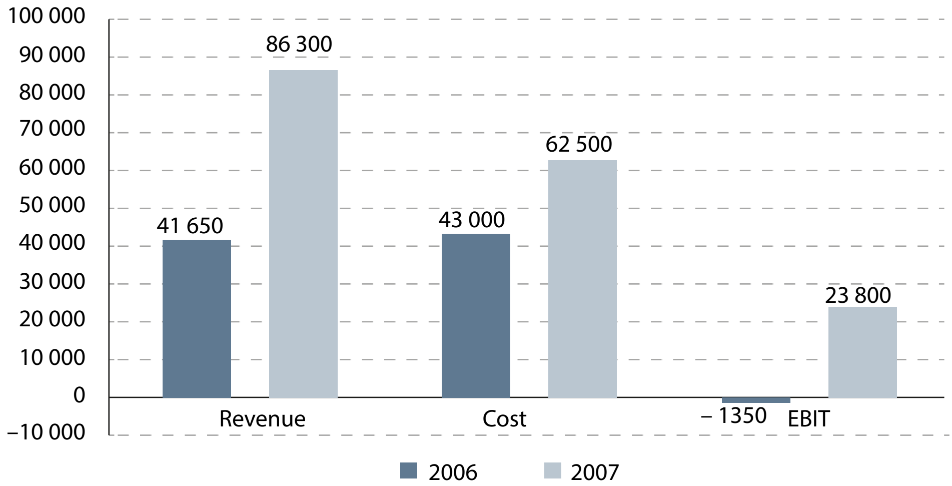


Figure 3. Financial performance in 2006 and 2007

What is important to mention, the company managed to operate without debt and the external financing from the European Union grant was not to be repaid, unless it would be misused.

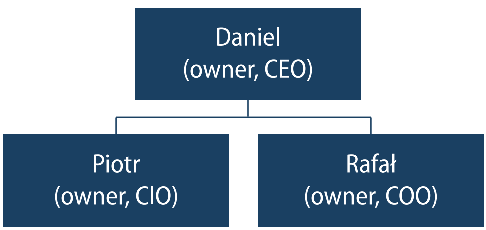
Partially due to business immaturity, partially due to risk avoidance, the owners didn't even consider an option of external financing to accelerate the growth. All the growth was purely organic. Probably, if that risk was taken, the company would have taken off much faster than it did in reality. Extra financing could have been used for example in marketing or sales.

2008–2010 period—transformation

The company changed its legal form, transforming into a limited liability entity (sp. z o.o.) and a new partner joined the company from Denmark. The company had a base capital of 90,000 PLN and the new partner became the majority owner (51% of shares). In this way, the company not only changed its legal form (much safer for the owners) but also gained capital and went international by having a business development representative in Denmark. On the financial side, the owners are now finally employed by the newly formed business unit, meaning they get regular salaries and don't need to rely on dividends.

The company structure before the transformation:

The new Danish partner also assumed the position of the CEO of the company while the old Polish partners were named CTO and COO, even though both were doing hands-on coding and interchanging all the business administration duties:



After the transformation, the new partner, the majority owner, was supposed to engage his contacts in the Nordic countries to attract the software development deals to the company while the partners in Poland were responsible for the delivery. Finally, the company had a real international network power and also the Polish partners were now relieved from sales activities and could focus on the delivery and expanding of their capacity in Poland.

The goal was to find long-lasting partnerships, not one-off projects. The business model was basing on a popular form of 'body shopping', which means that the customer was paying for the availability of engineers in a given period and not paying for the outcome or the hours billed.

Such a model required less sales efforts, provided stable and predictable revenue, but also allowed to build a deeper relationship with the customer. The essence of nearshoring.

Table 2 presents selected financial performance ratios during the transformation period.

Table 2. Financial performance during the transformation period (2008–2010)

Year	2008	2009	2010
Revenue	282.000 PLN	455.500 PLN	578.000 PLN
Cost	240.000 PLN	380.500 PLN	492.000 PLN
EBIT	42.000 PLN	75.000 PLN	86.000 PLN
# of employees	4	6	8
% of revenue from nearshoring deals	60	94	100

Figure 4 presents the financial performance of the company in the years 2006 to 2010.

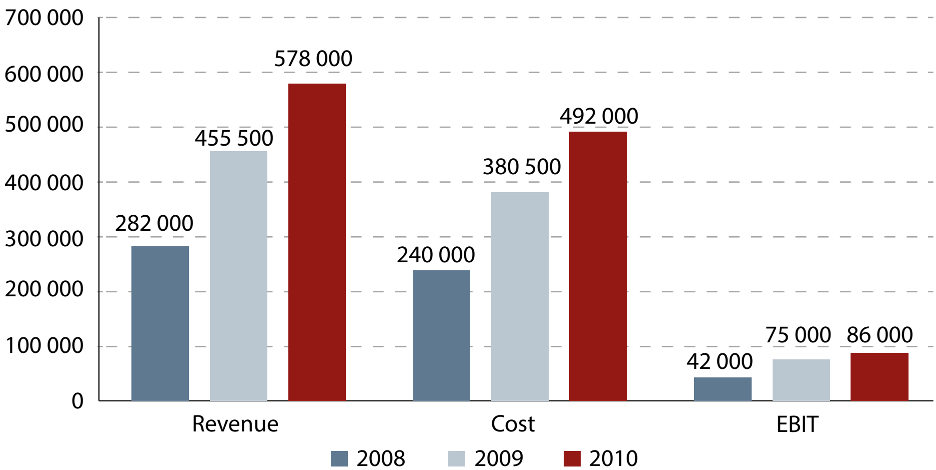


Figure 4. Financial performance in 2008, 2009 and 2010

Beginnings as a nearshoring software provider

After the transformation, the new Danish partner almost immediately came up with the first prospect. It was a customer who provided solutions based on software for managing shift work in companies. It was a small, but dynamically developing Danish high-tech start-up company.

The customer had currently a software development team in Bangalore, India, and was dissatisfied with the quality and speed of the deliverables. He also couldn't easily communicate with them due to the time zone difference and physical distance. He travelled to Bangalore himself once and admitted it was partially his fault to not be able to build a good relationship with the offshoring partner. Because of the size of the business (it was still a tech start-up) the CEO was still doing many things himself, from defining and supervising the product creation process to sales and marketing activities. Because of this, he couldn't spend enough time on visiting the partner in India.

The customer had a dynamically growing business, with international expansion opportunities, yet he struggled to deliver new features on time and the platform was defective and unstable. Some of the deals were endangered because promised functionalities were significantly delayed.

The customer was evaluating various options:

1. To hire software developers locally, in Denmark. He would gain all the benefits of co-location, but at a much higher cost and would face the scarce availability of talent locally.
2. To switch from offshoring to nearshoring (this term barely existed at ths time, back then). The cost would stay relatively low—but higher than in India, the proximity would be better, and therefore contact would be easier. He considered Romania, Ukraine and Poland as the source/s of such a service.

After a period of 'Proof of Concept' work, the customer decided to engage with a company from Poland and to move all the development from Bangalore there. This was the first win for the company in the new business setup and also the first customer who moved from offshoring to the nearshoring type of cooperation.

First nearshoring deals

1. 2008, a company delivering a service for management of shift workers (2 to 5 people), Danish customer, moved development from Bangalore, India.
2. 2008, a company delivering solutions based on image recognition (1 person), a Danish customer, a tech start-up, whose owner wrote the

first version of a code wanted to hand it over for further development and focus on growing the business.

3. 2009, a company working on security scanning solutions (2 people), another Danish customer, with their own software engineers wanted to expand and looked at nearshoring as a way of flexibly strengthening of their own development power.

The company also started growing in its headcount. Figure 5 presents the manpower growth in the years 2006–2010.

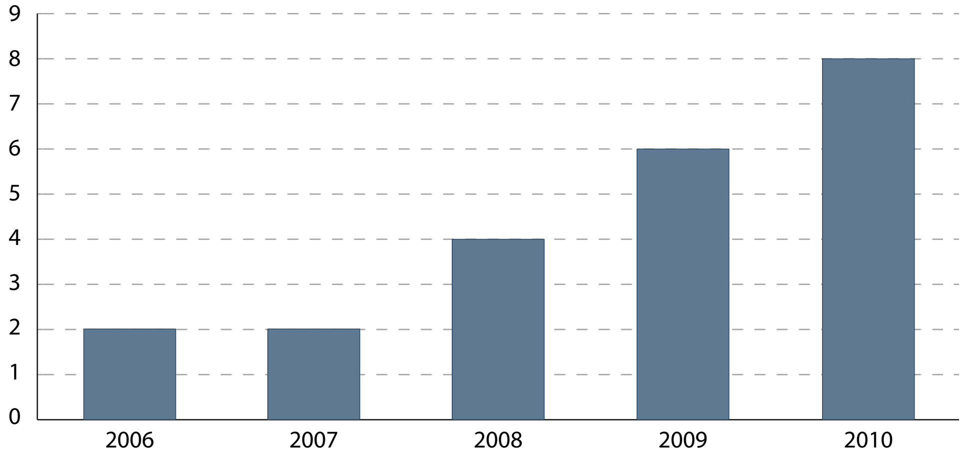


Figure 5. Number of employees 2006–2010

The years of hyper growth

The first deals after the transformation were a proof of the new business model working. New customers were happy and the stable revenue stream provided the company with stability and financial security. The partner in Denmark expanded his network and kept getting new customers, while the two partners in Poland made sure that there was enough capacity to deliver the work ordered.

Soon, the company started growing. In Poland that meant new office space and more and more aggressive recruitments of software engineers. In Denmark, Daniel, the local partner, recruited Jens, who assumed the role of Head of Sales. The year 2011 was still a year of modest headcount growth, from 8 to 12, but in 2012 the headcount more than doubled, to 25, and in 2013 there was another almost double-up when the company employed 46 people.

Recruitment and salary pressure

The rapid growth in the software development area was not easy to achieve. The 2010's were already a period of the 'war for talent' in the tech industry and definitely in the employee's marketplace. Software engineers tended to be very demanding, both when it comes to compensation but also picky about the companies or technologies to work with. Piotr and Rafał were personally engaged in all the recruitment activities and it took up a significant portion of their time. They had Team Leaders in the organisation already, essentially, one Team Leader per project or per customer, but they wanted TL's to stay focused on the project work and also wanted to make sure only 'the right talent' joined the ranks. Because of the market pull for the skilled technicians, there was a significant salary pressure. Basically, the contemporary average engineer expected a 10%—20% salary increase every year to stay with the current employee. The company had no option but to satisfy those requirements, but this also meant that initially the very lucrative gap between the cost of producing software in Poland and the price it was sold abroad started shrinking and meant increasing the prices to the customers, to which they always reacted negatively. This wasn't a big problem because the company was in the rapid growth mode and most of the projects were new customers. They were simply offered higher prices from the word go. Even the increased prices were still very attractive, especially when backed up with a solid performance, which was always the case with Piotr and Rafał's organisation.

The financial performance of the company was stellar, and there were even companies approaching the partners with acquisition offers. All such offers were rejected, Daniel, Rafał and Piotr were committed to growing the business organically and not to selling it yet.

Both revenue and profits were growing. The business was in a very healthy condition (see Table 3).

Table 3. Financial performance in the period of rapid growth

Year	2011	2012	2013
Revenue	945.000 PLN	1.990.000 PLN	3.680.000 PLN
Cost	780.000 PLN	1.780.000 PLN	3.450.000 PLN
EBIT	165.000 PLN	210.000 PLN	230.000 PLN
# of employees	12	25	46
% of revenue from nearshoring deals	100	100	100

The management challenges of the hyper growth

In 2014 and 2015 rapid growth not only continued but even accelerated. The company continued growing in headcount and revenue, also consistently increasing its profit.

At the same time, it became obvious that the owners couldn't keep up with the pace of the growth and also that their skill level and experience in managing such a big and still growing business was inadequate. What was worse, Piotr and Rafał were completely unaware of the source of the problem, they just felt more and more overwhelmed by the amount of work and growing amount of problems. They were young entrepreneurs, used to working hard and committed to the business. Still, their core area of expertise was software engineering, and all the other areas, such as HR, finance management, facilities, office and travel admin' were just an unnecessary burden. None of the Polish partners were trained in business administration and it was only Daniel, the Danish partner and CEO, who pointed out that the Polish office needs more structure and division of duties.

From 2011 they employed an office assistant taking care of the facilities and most of the paperwork and from the very beginning there was an external company taking care of the payroll and accounting. However, after 2014, when the company grew to over 50 employees, it became obvious that this was not nearly enough and the company was slowly falling into chaos.

To make things even worse, there were the first problems with quality. Some customers were complaining about defective and delayed deliverables. Piotr and Rafał used to supervise the work personally and provided quality assurance over all the deliverables. This obviously didn't scale and—understandably—the engineers, used to business owners controlling the quality, also didn't care about it too much and didn't take ownership—they were never given that degree of freedom, and now the company paid the cost of such an approach. Also, because of problems with matching the demand from the customers, more and more junior engineers were hired and no one had time to properly train them before giving them customer work. This also resulted in defects.

Office facilities were on a very minimal level, and there were basically no benefits for the employees. Simply, there was no one who would have time to focus on this. For Piotr and Rafał it was not important, but most of the companies operating in the software engineering sector on the Polish market and competing for the same talent could offer significantly more, both when it comes to comfortable offices and non-salary benefits for the employees.

This meant that keeping the most senior engineers was more and more difficult. Many of them left the company and were replaced by less experienced colleagues. In some cases, Piotr and Rafał had to lead individual projects personally because of the shortage of experienced staff and pressing deadlines.

Despite the issues, the financial situation still looked very positive in 2014 and 2015 (see Table 4).

Table 4. Financial performance in hyper growth years (2014 and 2015)

Year	2014	2015
Revenue	6.130.000 PLN	11.850.000 PLN
Cost	5.930.000 PLN	11.240.000 PLN
EBIT	200.000 PLN	610.000 PLN
# of employees	70	121
% of revenue from nearshoring deals	100	100

It was obvious that if the company kept going without significant changes to the management course, it would eventually face a financial hit as well.

The owners neglected the need of supporting roles like the IT service desk, finance, administration, HR, project management and employer marketing. Of course, with its size close to 100 employees in the beginning of 2015 there were dedicated people handling admin, IT and HR (the administrative part, not talent management), but these functions were done at a bare minimum level. In 2014 employees were exposing their frustration, while 2015 was more like a time of chaos. For example, the company had to change their office twice to accommodate the growth in 2013 and in the beginning of 2015, and the whole move was made during the weekends and employees (software engineers) were made responsible for moving their equipment between locations, which caused waves of frustration.

Piotr and Rafał, lacking professional education in business administration and also surprised by the rapid growth, didn't see the challenges coming early enough and had huge problems with delegation and giving real responsibility to other employees. This is a typical problem in companies managed by long term owners and usually the best solution is to hire a professional managing director. Such a solution was suggested by Daniel, the CEO, to Piotr and Rafał, but they consistently procrastinated over such an initiative as it was seen by both of them as undermining their position and power in the organisation. The situation seemed like a dead end, because also Piotr and Rafał felt overworked, exhausted and frustrated. They both were balancing on the edge of burnout and this reflected on the relations both between the partners businesswise but also in their private life. Both Polish partners were married, with small children, and both of these marriages were currently in crisis.

To make things more complicated, the competition already had caught the nearshoring wave and were aggressively entering the market. The market was still growing, but there were many players, out of which several from Poland were fighting for the same customers. This meant price pressure, combined with ongoing salary pressure from the engineering team.

DISCUSSION QUESTIONS

1. How could things ever have gone so far? The company is in crisis, despite a very well progressing business and very smart people being the owners.
2. Is this situation typical? Does every dynamically growing company need to go through 'growth pains'?
3. What could the partners have done to reinforce the market position as one of the pioneers of nearshoring in Poland? What can they possibly do now, when things have already gone far and the competition is very visible?
4. How would you structure the company in order to make it function properly and allow further growth? Which functions are essential?
5. How to ensure quality in a rapidly growing company? When is the right moment to establish processes and rigorously enforce them?
6. What would be the best method to enforce bonds between the company and the customers? What could be done to make sure that the customers will say NO when another company from Poland knocks on their door offering a 20% lower price?
7. Would it be best for the company if all three owners moved away from the daily operations and stayed in the role of the owners / supervisory board while letting externally hired managers run the business?
8. What could be done to attract and retain the best engineering talent on the market while not competing with salaries to get them? What other factors could be an even stronger motivator than money?
9. Retrospectively, looking at the 9 years of the company history, which of the discussed steps would be best to apply at which moment?
10. Is hyper growth always good? What are the opportunities and what are the risks of running a company in such a market situation?

11. What steps could be made by the management to assess and reduce the risks of this business?
12. Will the company survive the next 3 years?

Appendix

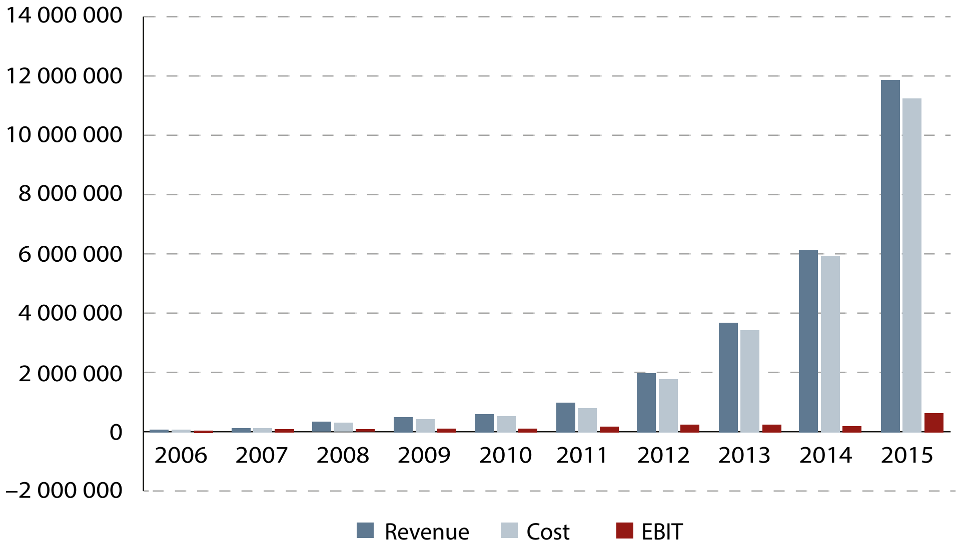


Figure 6. Financial performance in years 2006–2015

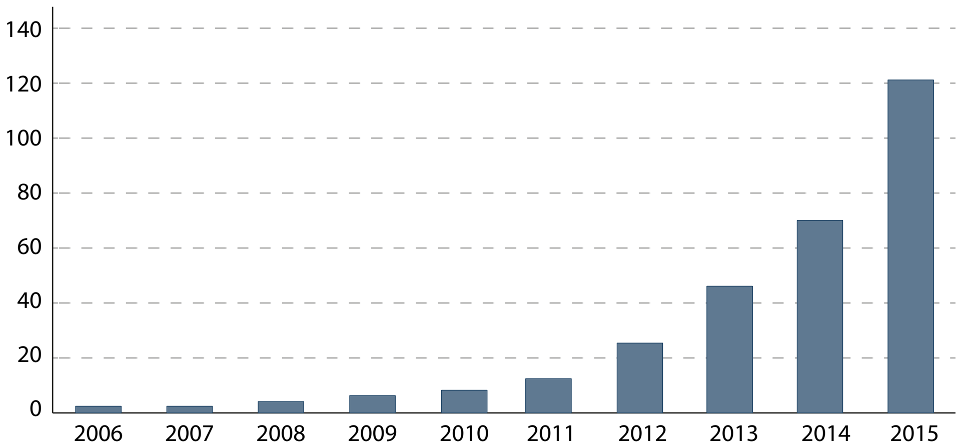


Figure 7. Number of employees: 2006–2015

A NOTE ON DATA-DRIVEN B2B PRICING TRANSFORMATIONS IN EMERGING MARKETS

BY JACEK WALLUSCH

Introduction

The term price appears 2,455 times in Hal Varian's *Intermediate Microeconomics* (2010). For 787 pages of text, it makes an average of approximately 3 mentions per page. It is a quite impressive score, considering the fact that price and pricing often remain a terra incognita for the vast majority of students, academics, and practitioners. The aim of this chapter is to describe how pricing transformation is performed, and how data science can support this process. I focus on some generic problems particular to emerging markets—how pricing is affected by market structure, macroeconomic instability, persistent inflation or foreign exchange rate fluctuations. I also identify sales and profitability growth opportunities driven by pricing.

The remainder of this chapter is as follows. In the opening section I briefly characterise prices and pricing strategies. I describe the pricing concepts mostly by using the B2C examples—I do not imagine the reader would tolerate examples for electric circuit-protection devices at such an early stage of the chapter. The second section deals with an important aspect of pricing transformation, namely the co-operation between the local pricing team and the data experts. In the following sections I focus on list price and net price positioning. Additionally, I present a section on the impact of forex fluctuations on the pricing process. The last section concludes.

1. Why does price matter? Introductory remarks

Pricing is an important, albeit often underestimated, element of marketing strategies. If a product is priced too high, profitability increases at the expense of the sales volume. If a product is too cheap, the sales volume increases at the expense of profitability. Whoever has successfully run a business or, for that matter, has passed microeconomics, would consider this statement a cliché. Yet this cliché may have rather sinister consequences for business.

So what is price? And how does it affect a business? Price expresses the amount of money one needs to pay in order to acquire goods or services. But there is much more to it than just a number. The New Palgrave Dictionary of Economics defines market price via value, which by the way is a very fashionable approach amongst the pricing experts world-wide. Price is therefore a measure of value. Take for instance sport memorabilia. A Harlequins fan would buy a replica shirt for £59.95. Their logotype embroidered on the shirt is of a great value to all Harlequins supporters, which is more than we can say about the fans of other English rugby teams. If a product offers an increasing value to customers, the price may and possibly will increase.

Let's assume for a moment that a Harlequins shirt indeed offers more value. Interestingly enough, a price increase will be the most effective profit leverage. A new price, say £65.95, will be accepted by the same number of fans, and with the unchanged cost the profit will increase by 12%. Still assuming that the old price was below the actual value of a shirt offered to Harlequins supporters, we could expect the demand to rise. A similar shift in sales results in a 10% increase of profit. Last but not least, a cost reduction may occur. A 10% cost cut will be met by a 2% increase of profit. Table 1 summarises the simulation results.

There is, however, a considerable difference between revenue and profit. There is price elasticity of demand, which may cause the profit to deteriorate if the price is set at an unacceptable level. Managers should most anxiously utilise price as a profit leverage, but they also should most anxiously preserve the market share. A price increase, however fashionable amongst the pricing consultants, is not always a right solution.

Table 1. Price as a profit leverage

	Initial state	Price increase	Sales increase	Cost reduction
Unit price	£59.95	£65.95	£59.95	£59.95
Sales	1 000	1 000	1 100	1 000
Revenue	£59 950	£65 945	£65 945	£59 950
Unit cost	£10.00	£10.00	£10.00	£9.00
Total cost	£10 000	£10 000	£11 000	£9 000
Profit	£49 950	£55 945	£54 945	£50 950
Percentage change		12	10	2

We have already seen how price affected revenue and profit. But what does affect the price? There are numerous factors driving the price dynamics. Most obvious is the customer's wealth. The terms budget constraint and customer preferences jump to mind immediately. This is how demand—both real and nominal—affects pricing.

Slightly less obvious is the impact of time. In late June the Harlequins shirts are sold on the cheap. It has been nearly a couple of months since the last match at the Stoop. The new kit is about to be introduced. The old kit, however, is still on the shelf. Promotional sales are conducted, and the prices are reduced. This is how the product's life-cycle affects pricing.

You have probably noticed by now that Harlequins shirts are not cheap. Local rivals, the Saracens, have priced their kit at a strikingly similar level of £60.00. Moreover, most of the Premiership teams charge approximately £60.00. This is how competition affects pricing. One may argue, however, that Quins and Sarries compete on the pitch, but their shirts are not even remotely close to being substitutes or that they complement one another. Yet I deliberately used this example to depict the similarities amongst prices of specific group of products. Besides, imagine the reaction of fans if they found out their arch enemies would spend 10 'quid' less for a shirt. Social media would neither forgive nor forget.

In marketing, and particularly in pricing, perception is everything. Sometimes a price is set very high in order to persuade the potential buyer that the product is exquisite. This strategy is called premium pricing. If a product is new, its price might be initially set high in order to target the consumer surplus. The price will eventually be reduced, when other producers start offering a similar product. This strategy is called skimming. An opposite strategy is called penetration.

Do Harlequins, Wasps, or Saracens employ it? Not really. Sport merchandising is based primarily on loyalty. And loyalty is a rare commodity. In the world of supermarkets and internet stores, customers drift from one supplier to another in a flash. In the B2B world, the landscape is different. It somehow is reminiscent of club loyalty, only the loyalty is much less emotional. The loyalty is built on mutual understanding between producer, distributor, and customer. Customers are trained by producers: electricians or panel builders attend workshops and training sessions supported by the largest energy management companies. Distributors are rewarded by taking good care of customers: switchboard builders do not contact producers if they need to buy a package of 12 circuit breakers. Thus, B2B pricing can rely on much more stable business relationships than B2C. The loyalty is built on growing the business together and by co-operating to deliver the desired technical solutions. But if a producer loses even one major client, the damage might be irreversible.

How many prices are there? In the B2C world, a final customer checks a price tag or looks it up on the Internet. In B2B, and every product entering the B2C market initially enters the B2B market, a price has a very complicated structure. The journey from a plant to the final customer starts with the list price. That is the one you may find on the internet whilst selecting a suitable circuit breaker. But you will not buy it directly from the producer. Instead, you will visit a local electric appliance store. The price of a circuit breaker will be much lower over there. It means that a shop keeper has been granted a discount. A discount structure is called a price waterfall. To be more precise, there are standard discounts, there are special discounts, there are rebates, and there are surcharges. The price waterfall is usually very complicated. To keep it simple, throughout this chapter we shall only consider list price, net price, and the final (net-net) price. What is net price? It is the price appearing on the invoice. A final net-net price is the price a customer is charged after subtracting all discounts and bonuses. The latter are especially important, as they are essentially paid on a quarterly or yearly basis. There is always an uncertainty towards the net-net price due to limited visibility on rebates. In

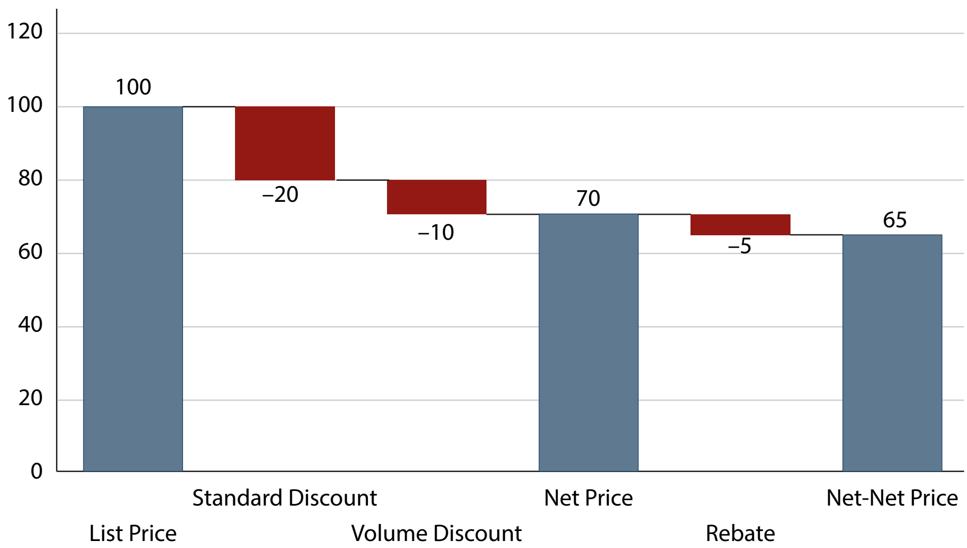


Figure 1. An example of a simplified price waterfall

other words, customers do not have full information on rebates when ordering the product; they do not know if they are going to meet the criteria necessary to be granted a rebate. Suppose the order is made in January, but the rebate is paid in April. The customer is not certain if she or he will sell enough. Nor does she or he know with certainty the rebate percentage.

That, my Dear Reader, is where the data analytics comes in, for quite by chance and the will of an upper management, Ex-Comm decided the analytics would become part of this tale. Uncertainty is an unpleasant feature a pricing manager would love never to meet again. In order to mitigate it, data of all sorts are utilised. Models are employed to find the optimum price, optimum discount structure, and optimum positioning. There are of course other ways a price might be set. In the sharpest possible contrast to the data-driven value-based pricing, stands the mark-up or cost-plus pricing.[9] As the name itself suggests, a price is determined by adding the desired margin to the cost. A cost-plus price loses a feature vital for the free market. Its elasticity.

In microeconomics, the price elasticity of demand is defined as the percentage change in quantity divided by the percentage change in price (Varian 2010). In other words, elasticity measures the reaction of quantities sold to a change in price. The expected sign of elasticity is obviously negative, meaning that a price decrease will generate an increase of sales.[10] Its magnitude may vary. If the elasticity is greater than −1, a proportionate price decrease will be met by a less than proportionate increase of quantities sold. Interestingly enough, elasticity is not necessarily constant even if only one product is considered. We shall discuss it in more detail in section 5.

There is controversy regarding the price elasticity. Surprisingly, the controversy did not originate in pricing or in microeconomics. It did so in the field of macroeconomic studies, where a good deal of theorists has claimed that the prices have in fact been rigid. A rigid or sticky price does not react to a change in nominal demand. Customers have thicker wallets, but prices are sticky, they do not adjust to the wallets' thickness (or adjust slowly), hence resulting in economic growth and collective happiness. Rigidities produce ominous effects when the wallets get slimmer. Customers do not like to be charged the same when they have less to spend. Rigidities will return in section 4.

[9] Dolan and Simon (1996) describe it as "one of the most popular price setting methods (…), wherein unit costs are determined and a mark-up is applied to yield price. Markups can be based on industry tradition, individual experiences, or rules of thumb."

[10] A standard routine, however, is to express the price elasticity of demand in absolute terms, dropping the negative sign.

We have just closed a circle. The section began with concerns regarding products priced too high or too low. We finished the section with remarks on price elasticity and the pace of nominal adjustment. They are two sides of the same coin. No matter what type of strategy a pricing manager is going to choose, skimming or penetration, psychological or bundle, or perhaps a combination of all possible strategies, the ultimate aim remains unchanged: the price needs to be set at an optimum level. In the following section I will describe the team responsible for this.

2. Before the journey starts: The teamwork

David Brent once identified people as the single most important thing for a company. A successful pricing transformation requires a well-managed and fully dedicated team of professionals. The managing part is especially challenging as every pricing transformation is conducted by a local team co-operating with a global team. The local team is represented by the pricing manager, offer marketing managers, and product managers. The global team consists of an insight manager, data analyst, and data scientist.

Agile and scrums are very popular these days. I am not going to pretend that I am an expert in project management. To me, a scrum is where you can find Kyle Sinclair, Joe Marler and Chris Robshaw. But project management and scrummaging go hand in hand. To quote the RFU: "The scrum is one of the purest examples of teamwork and confrontation."[11] The only difference concerns confrontation. Although many corporate world castaways might disagree, the project scrummaging is all about co-operation. There are no contestants in the room; this is not a rugby pitch or a football field (the one with the end zones), where you face an opposition team determined to win.

The data insights are produced in an iterative manner. The graph below shows one iteration, starting with the problem formulation, through data preparation, model estimations, visualisations, and finishing with a collective result interpretation.

The opening step consists of the problem formulation (see Table 2). Even without data we can make some bricks. The local team knows the business inside-out, it can identify the problematic issues. At this moment solving them is like answering the question asked by Miss Violet Hunter about the meaning

[11] http://www.englandrugby.com/my-rugby/players/rugby-basics/set-pieces/

of all this. We have no data, we cannot tell. But perhaps the local team itself formed some opinion. Undeniably, it did. Even though the steps 2 and 3 are assigned to different teams, interactions are essential. Take for instance the outlier detection. The data team prepares the data set and runs the quantitative procedure. Qualitative insight, however, helps to decide whether or not a transaction should be added to the set of analysed data.

Table 2. Iterative approach to price revision

	Data team (global)	Managers (local)
Step 1	scope: selection of product(s) scope: selection of channel(s)	
Step 2		knowledge sharing: local specificities
Step 3	preliminary filtering outlier detection descriptive statistics model selection optimisation exercise simulations and forecasting	
Step 4	interpretation	
	if accepted: price revision if not accepted: get back to step 2	

There is one additional aspect that needs to be pointed out. It is important and, to paraphrase Roy Hunslett, *they didn't teach you that in the university*. Collecting and cleansing the data is as important as the analysis itself. Unlike the latter, the former is extremely time-consuming, tedious, and dull. But even the best algorithm fails when the data are not clean. Make sure that the data in your organisation is collected in a standardised manner, that the so-called master data is available, validated, and updated, and that various databases can be merged. Data science without clean data is just a collection of fancy procedures.

3. List price positioning

The list price in B2B is a tricky concept. Sometimes the list price does not even exist. Why should it, if it is just a meaningless number that has no bearings on the customer's perception? The buyer perceives what is printed on the invoice, and that is the net price. Is the list price something that pricing managers should not care about? Well, not quite.

In economic theory, price is a valuable source of information. So is the list price, with the exception that a list price is the only unlimited source of information available to all customers and producers. By setting the list price, companies communicate the value of their products. Figure 2 depicts the prices of Schneider Electric miniature circuit breakers (MCB) in Indonesia. The MCBs satisfy specific technical features: product range (Domae), number of protected poles (1P), network type (AC, alternate current), curve code (C), breaking capacity (4.5kA), and rated current. We will employ the latter to depict the positioning problem.

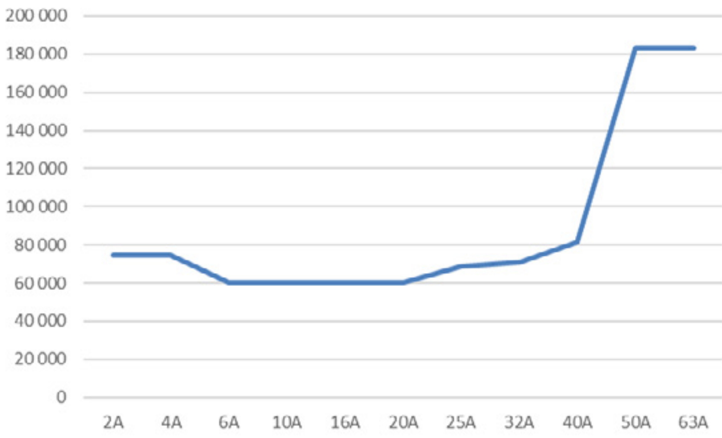


Figure 2. Schneider Electric Domae-type MCB list prices

The rated current, simply called rating or ampere rating, defines the maximum current the circuit breaker can carry without tripping.[12] The Domae-range list prices form a U-shaped curve subject to the specific rated current value (ranging between 2A and 63A). On second thoughts, a resemblance to a surfacing Loch Ness monster is probably a more adequate description. Why a Nessie-shaped curve? Because the rated current is one of the value drivers that affect the price.

[12] Numerous websites offer a guide through the fascinating world of electric power distribution devices. If you would like to learn more about circuit protection apparatus visit for instance Electrical Engineering Portal, where you can find an article *Miniature Circuit Breakers (MCBs) for beginners* by Edvard Csanyi (2015).

The use of electrical devices depicts the purchasing power of households. It is not surprising that in South-East Asia the use of high-wattage devices is limited. Hence, the most popular ratings are 6A and 10A. In Europe, however, it is a 16A MCB that enjoys the largest demand. I firmly believe that pricing, and that includes list price positioning as well, should illustrate the local specificities. Let us take a closer look at the Nessie-shaped curve. In the middle of the price distribution, the MCBs are relatively cheap comparing to other ratings appearing in both tails of the distribution. Between 6A and 20A the positioning is flat. This is a local-specific positioning, not present in the vast majority of European countries.

Do you still remember the case of the rugby shirt prices? In the circuit protection device market, there is no collective price setting. Large and small companies fight for market share using list price positioning. Market leaders are constantly confronted by market challengers via the list price comparison. Interestingly enough, the major producers do not publish the MCB list prices on their Indonesian websites. In some cases, the list prices are available via official distributors. Hager, perhaps Schneider's toughest competitor in this market segment, employs a different, much flatter, shape of the list price distribution (data: PT Oscar Tunastama website). As a competitor and challenger, Hager sets the price of 6A-10A devices approximately 25% below Schneider Electric. A flat positioning suggests a possible advantage for clients differentiating their orders. Let us assume for a moment that the 6A MCB is the most in demand, but 4A MCB enjoys particular attention as well. By keeping the prices of both devices at the same level, producers offer an additional incentive: a bundle purchase consisting of 4A and 6A devices will be even cheaper than the already mentioned 25%. On the other hand, making the most popular device more affordable is a powerful message, too. What is the floor for any comparison? A price of a device bought in hundreds, or a price of a device bought in tens of thousands? Competition in Emerging Markets makes the life of global leaders very difficult. Challengers offer basic products for less money. This is why the leaders differentiate their offers, targeting selected channels with selected ranges. Whatever you wear, whether your favourite rugby player tackles in a shirt with three stripes or three Kiwi birds, it has probably been sewn in South East Asia. Large plants producing rugby shirts (and more) value circuit protection in an utterly different way than households do. Not only an industrial circuit requires different apparatus, the apparatus needs to be of the best quality. And this is where the big companies are very active.

No matter whether big or smaller, every B2B company faces the challenge of list price revision. Not surprisingly, list price revision is also about information. To mitigate the devastating impact of uncertainty, a new price list is communicated to the distributors in advance. If you wonder why, please recall N. Gregory Mankiw's small menu costs. List price change is costly. It requires printing new catalogues or at least preparing them for download. It requires printing new price tags. In a nutshell, adjustment requires time.

We already know that it happens, but how often does it happen? A standard routine is to revise the prices once a year. I gather this revives the concept of menu costs again. Some macroeconomists claim that prices are rigid. In the quiet words of Ball and Mankiw (1994), 'We believe that sticky prices provide the most natural explanation of monetary non-neutrality since so many prices are, in fact, sticky'. Fair enough, prices are revised on the yearly basis, but which prices? And in which countries? Raising the former, sticky-price theorists are blinded by list prices. Their rigidities mean very little to the business dynamics. Comparing to net prices, they play a different role entirely. Because of this role, because of their informative potential, they do not change that often. Most important of all, their changes are not necessarily driven by changes in demand. That obviously is the perfect case of the sticky price—not only the price remains constant for a certain period of time, it is also inelastic.

Figure 3 depicts a case of the sticky list prices of MCBs in Korea between January 1995 and May 2018. It needs to be pointed out here that the Korean monetary and statistical authorities have delivered a tremendous effort in gathering and presenting price time series of such granularity. I only wish other statistical offices and central banks would follow the Korean example.

The bold burgundy line shows the MCB prices (left vertical axis, 2010 = = 100), the black line illustrates the annualised monthly inflation (i.e. percentage change in the same period of the previous year). The time span covers the so-called Great Moderation (mid 1990s until 2007), the financial crisis of 2007/8, and the recovery. The dynamics that the PPI displays is technically called level shift. Since 1996 every price change has shifted the price level up. Level shifts are not exceptional to prices, but this particular set of dynamics is in fact unique. The unconditional price change frequencies are striking. During the Great Moderation MCB prices have changed with a probability equal to 0.066. Since 2008 the probability has dropped to 0.040. It means that prices have been revised every 15 and 25 months, respectively. Graphs like this make theorists extremely sceptical towards the market-clearing price.

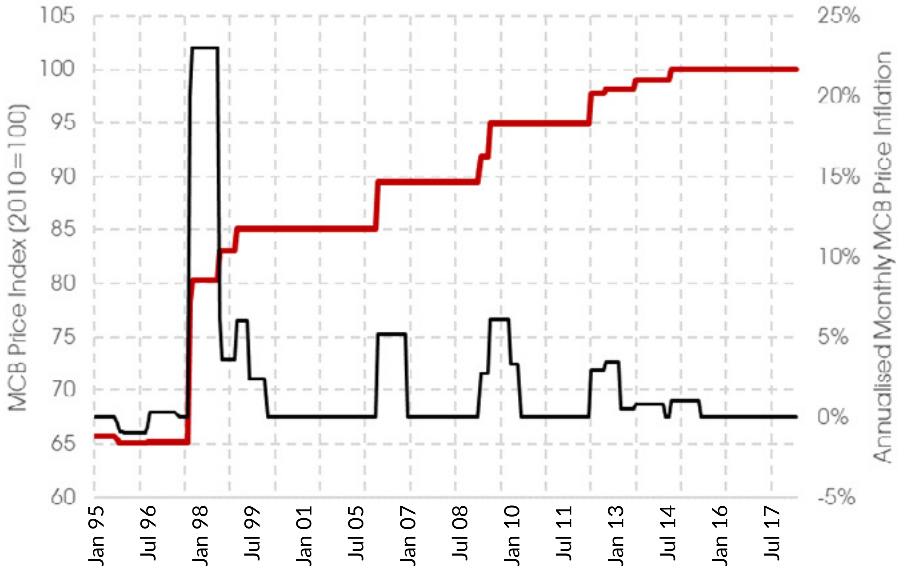


Figure 3. List price changes of MCBs in Korea

Source: (The Bank of Korea Economic Statistics System).

In some countries list prices are revised more frequently. This is where macroeconomics puts its mark on B2B pricing. The pressure comes from two variables—inflation and the foreign exchange rate. Persistent inflation is a distinctive feature of emerging market economic dynamics, though I suspect persistence to be a feature of a much more universal nature. The upper panel of Figure 4 shows the PPI inflation in Russia (solid line) and in the UK (dotted line). The bottom panel shows the autocorrelation functions for the PPI in both countries up to lag 18. In other words, the graph shows how current inflation is correlated with inflation a month ago, two months ago, etc. The magnitude of the autocorrelation coefficients is greater for the UK, which confirms my expectations of persistent inflation universally appearing across the globe.

Let us get back to the upper panel of Figure 4. The ups and downs in both countries have coincided for a short period of time (2006–2013), but then Russia has experienced a hike in inflation followed by roller-coaster dynamics oscillating around 5%. Spikes and hikes of a large magnitude are the actual distinctive features of emerging market inflations. In a highly inflationary environment, list price revisions are more frequent. In Russia, they used to happen every quarter.

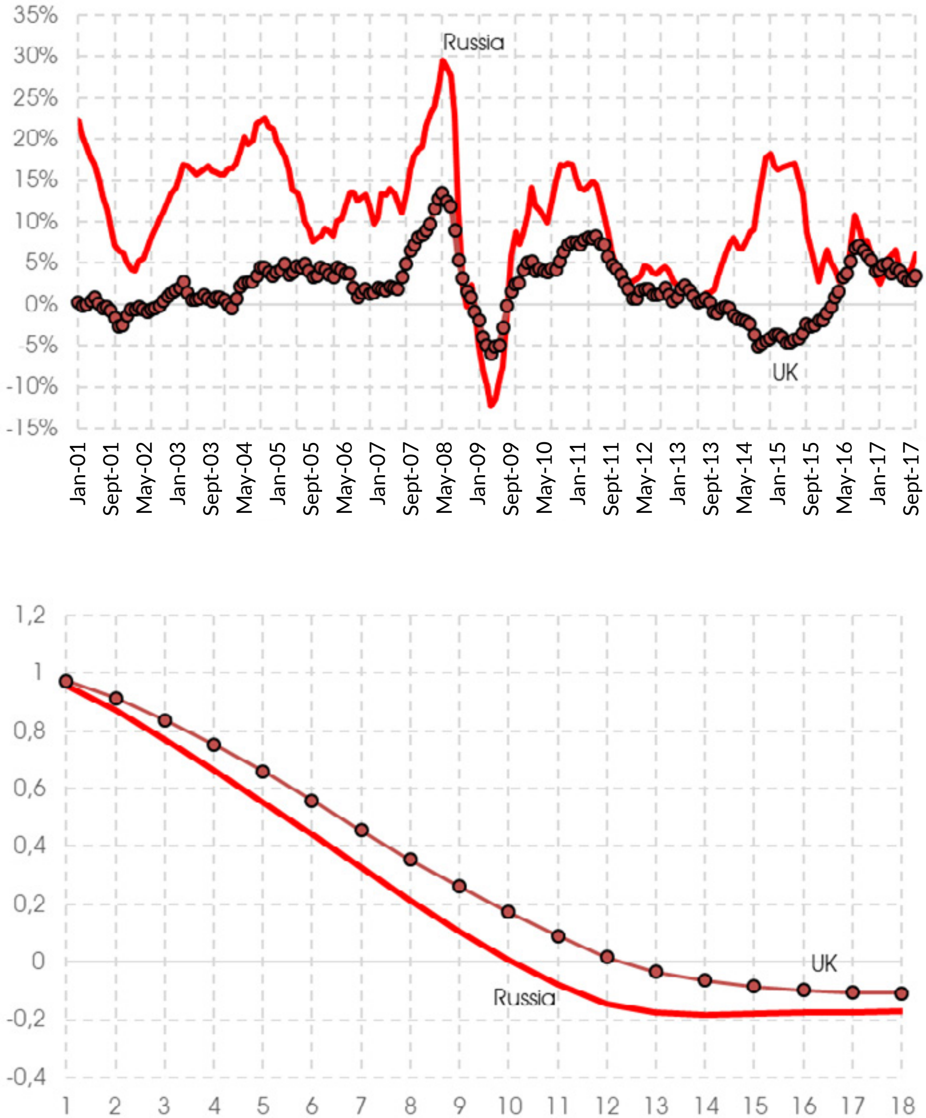


Figure 4. Domestic Producer Prices Index: Manufacturing for the Russian Federation and the United Kingdom

Source: (OECD).

How does data science support the list price positioning? A standard procedure consists of diagnostics and simulations. The former is needed to quantify the relationship between quantities sold of various items. Let us get back to the Nessie-shaped curve, where prices of 4A and 6A MCBs you could find at different levels. One way to determine the price difference is to inspect the market demand and draw conclusions based on the regression coefficients. Figure 5 shows a hypothetical case of 4A vs. 6A MCBs. I have marked two regression lines suggesting that model selection procedure must have been applied. A point estimated ratio follows the model selection. You have probably noticed that an interval for the ratio has been calculated. Leaving some room for manoeuvres is extremely important, as estimation results are guidelines that need to be interpreted and applied within the existing business context.

Other methods employed for quantitative positioning include pricing experiments and surveys. To name a few, value map and the van Westendorp meter offer additional insights into the intra-range, cross-range, and cross-competitor positioning. Last but not least, time series econometrics helps to discover the patterns behind inflation dynamics and helps to predict inflation.

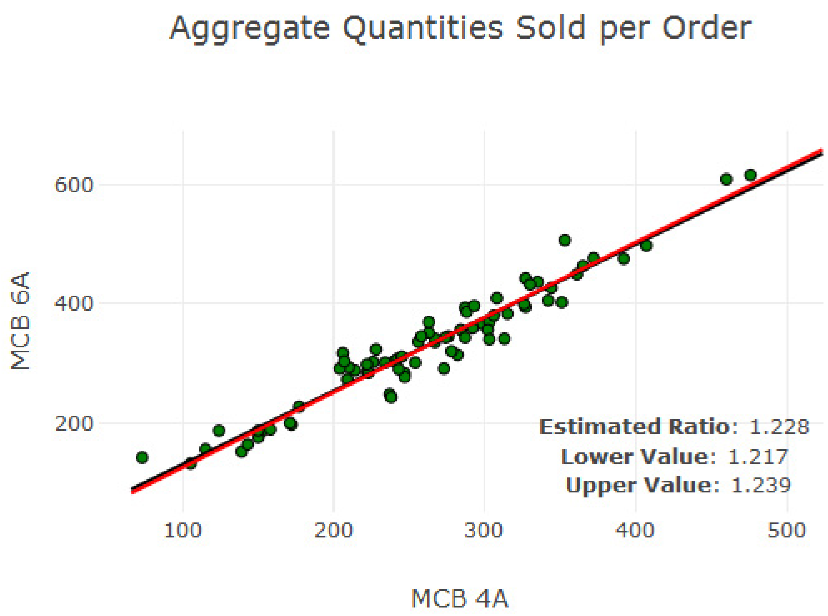


Figure 5. Hypothetical case of list price positioning based on quantities sold

List price is indeed a tricky concept. Even though the B2B prices are set in a counter-waterfall-wise manner, starting with the net price and then determining the list price, the latter is by no means irrelevant. An analogy to the modern theory of money jumps to mind. Central banks use interest rates to govern inflationary expectations. Companies use list prices to govern customers' expectations towards the value.

4. Net price optimisation

In the previous section I called the list price an unlimited source of information. The list price, if announced of course, is available to the entire market. The net price is only available to both parts of the transaction, which determines the limited visibility. Both the supplier and the customer enjoy full visibility on net prices over the whole range of transactions they have closed. For obvious reason the visibility is restricted to transactions in which they have taken part. Figure 6 portrays the limited information on net prices.

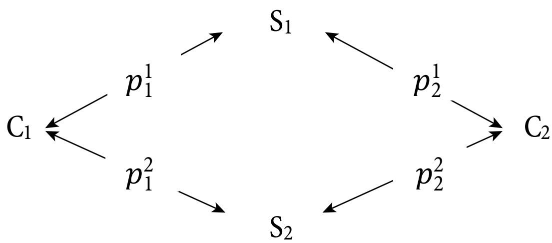


Figure 6. Limited information on net prices

Let us take a closer look at supplier S_1 and customer C_1. On one hand, the seller S_1 possesses a full set of information about prices p_1^1 and p_2^1. On the other hand, S_1 cannot access information regarding the net prices set in transactions with S_2. Customer C_1 faces a similar constraint. On one hand, C_1 can compare the prices set in transactions with both suppliers, on the other hand she or he cannot access the information regarding the net prices set in transactions with C_2. In short, the bargaining power of their competitors is unknown to customers and sellers. This is what economists call a competitive market with imperfect information. This is also where the plot thickens.

The products supplied by S_1 and S_2 usually meet the technical requirements demanded by C_1 and C_2. Therefore, to win a contract means to offer better pricing conditions. With only a limited knowledge on the net price structure, the optimisation process becomes a stochastic, non-trivial problem. Data analysis offers a way to approximate the price structure, and the data scientist offers similar services like Mr. Winston Wolf. Data scientists solve problems.

The first problematic issue that needs to be addressed before the optimisation exercise starts is the type of transaction that affects the data. This is a very important feature that also falls into Roy Hunslett's didn't-teach-you-that-in-the-university sort of knowledge: the major distinction in the B2B data is transaction-type driven. I shall call one type of transaction a project. Take for example Mr. Uri Omovich, who wanted to turn 12 acres into one of London's premier residences. Developing such a residential area would create a massive albeit one-time demand for electrical equipment. A special price would be requested. Now imagine that within the pricing year various projects are undertaken, including hospitals in Surabaya or a nuclear-powered icebreaker in Archangelsk. The requested terms mould the net price depending on the size of order or bargaining power, so the net price is scattered.

The other type of data is generated by typically smaller, albeit much more frequent, transactions with distributors.[13] The net price for an individual transaction is set according to the discount matrix. Discount matrices may consider size of order, size of customer, frequency of transactions, type of product and a good deal many other features. A simple example of such a matrix is presented in Table 1, where the discount is related to the order size and customer classification.

Table 3. Hypothetical discount matrix

	Order size: 1–25 (%)	**Order size: 26–50 (%)**	**Order size: 50+ (%)**
Customer Cluster 1	5	7.5	10
Customer Cluster 2	7.5	10	12.5
Customer Cluster 3	10	12.5	12

The net prices 'produced' by a discount matrix are still dispersed. They are, however, concentrated around unique price points. The green dots in the upper panel of Figure 7 show the hypothetical net prices and quantities per transaction.

[13] Bear in mind, however, that distributors are often rewarded with special prices as well. Moreover, distributors often serve as intermediary partners for contracts.

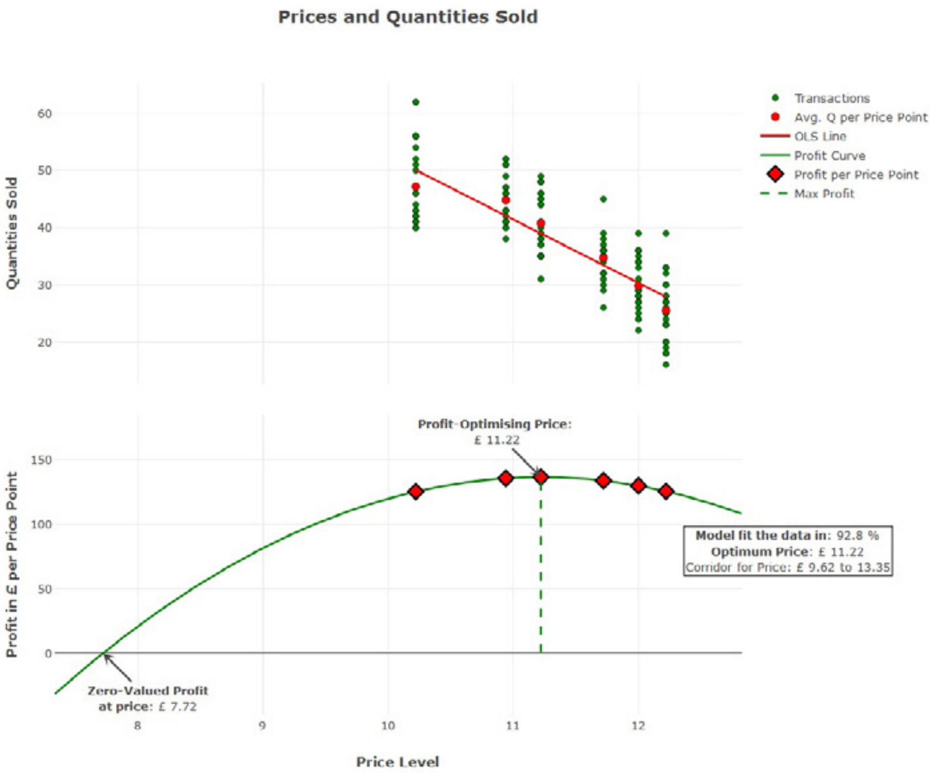


Figure 7. Price optimisation: The case of repeatable net price points

The spread of contract net prices is in the sharpest possible contrast to the price points in Figure 7. Figure 8 presents a hypothetical data (I deliberately keep repeating that the Figures depict only hypothetical data) for contract transactions.

The cloud of dots cannot be put down to any specific discount matrix. Every dot represents a contract, which in turns means a separate bargain. Despite the differences in the data-generating processes, data analysis can provide an insight impossible to gain by speculations, gut-feeling or any other method customarily attributed to elderly chaps with big grey beards, wearing pointy hats.

In both cases regression models have been applied to obtain the insight. The insight is twofold. First, we can infer about the net price elasticity. Second, we may estimate the profit-maximising price. The red lines in Figures 7 and in the upper panel of Figure 8 show the fitted regression lines. The model might be linear or non-linear, fitted to average quantities per net price point or to all

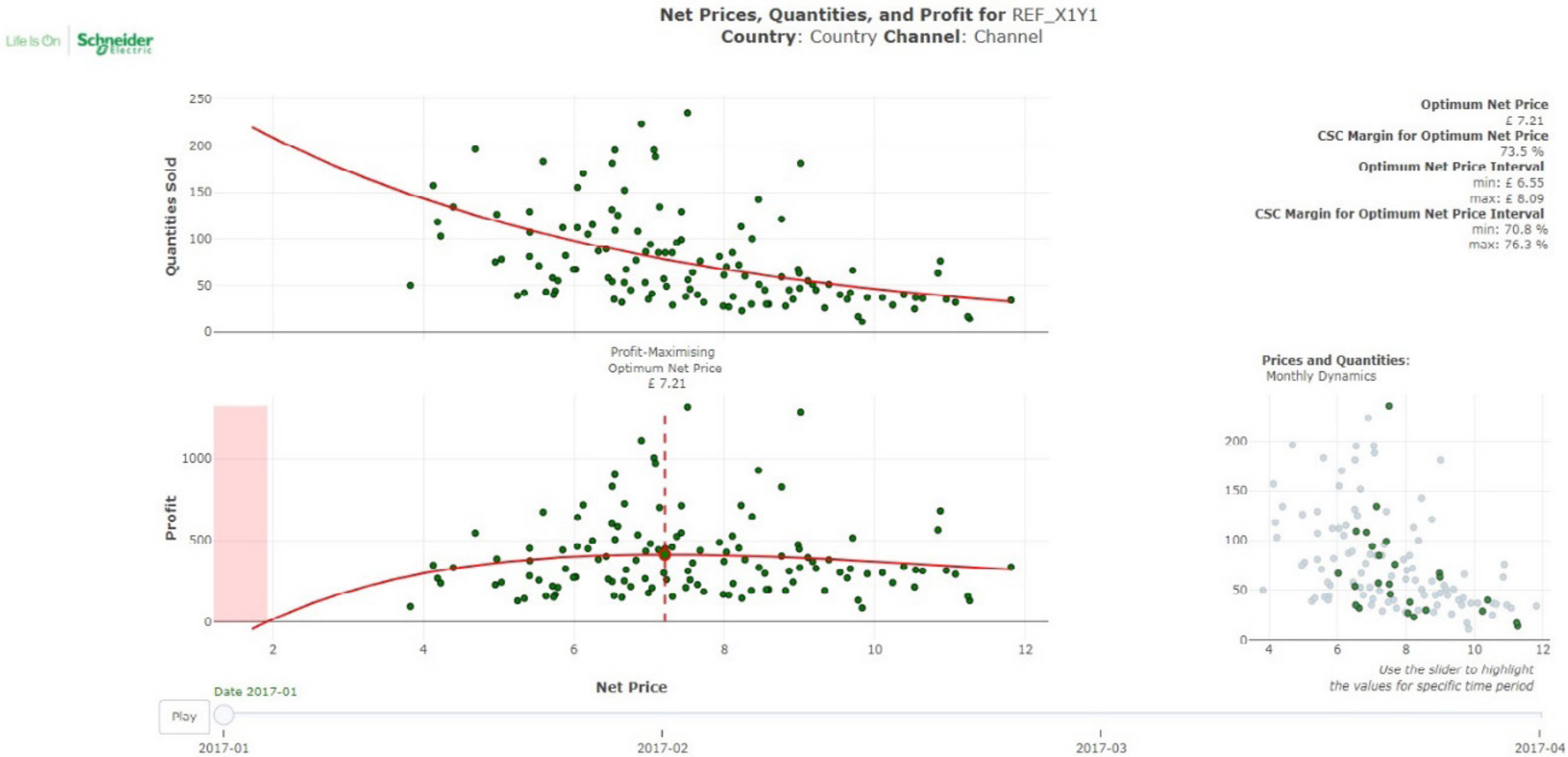


Figure 8. Price optimisation: The case of contract data

quantities per net price. The general idea, however, remains the same. Using regression techniques, we can simulate the profit and find a net price that maximises it. Price change may result in a reduction of quantities sold. This is where we apply the elasticity by simulating the real effects (i.e. the response of quantities to change in price) of the cuts and increases in net prices. Take for instance the points laying to the right from the dashed lines. The quantities should increase following the elasticity pattern. How about the points to the left from the dashed lines? A price increase will reduce the willingness to buy and cause a negative reaction of quantities. Many pricing analyses end here, focusing solely on the price elasticity. The next step worth-taking, however, is to use the simulated quantities, multiply them by the difference between net prices and cost, and generate a hypothetical profit line (the solid lines in lower panels of Figure 7–8). The pricing optimisation exercise is completed by finding the profit-maximising net price—a net price for which the profit line reaches its highest point.

Data analysis should always be supported by qualitative information. Running regressions is fun. But just like everything else that is fun, it requires preparation. Models do not perform well when the data are noisy. Various channels, various customer classifications, various regions, promotional and regular sales—the noise must be filtered out. Clustering methods or business basket analysis will not substitute a good talk with offer managers. Also, the profit-optimising net price is when the data analysis ends and business analysis continues. The most successful teams are those who are able to combine quantitative analysis with qualitative information.

DISCUSSION QUESTIONS

1. After a successfully concluded R&D phase, your company is about to launch a new product. The company is recognised as one of two market leaders, though the customers perceive the product supplied by the main competitor as technologically more advanced and therefore offering the highest value. How would you position your new product against:
   [1A] an older, technologically less-advanced product offered by your company (list price £199);
   [1B] a technologically highly-advanced product offered by a competing company perceived as the other market leader (list price £299.99)?

2. The Slough branch of the Wernham-Hogg Paper Company applies the so-called net price agreement, whilst the Swindon branch employs a slightly more complicated pricing waterfall consisting of three types of standard discount and a special discount. The price is negotiated for each and every transaction. In Swindon, standard discounts are granted if customers satisfy the criteria regarding the size of the transaction, their total net sales volume, as well as the product mix. Additionally, a special discount is granted if a transaction exceeds £10 000. What are the benefits and drawbacks of simple and more complex pricing waterfalls?
3. Your company is about to establish its operations in a new country. How could the macroeconomic environment affect your pricing strategy? Which macroeconomic variables would you monitor? How could these variables affect customers' behaviour?

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