

Hauke-Lopes, Aleksandra; Wiczerzycki, Marcin; Ratajczak-Mrozek, Milena

Article

Extra-industry imitation of digital platform business models

Entrepreneurial Business and Economics Review (EBER)

Provided in Cooperation with:

Centre for Strategic and International Entrepreneurship, Krakow University of Economics

Suggested Citation: Hauke-Lopes, Aleksandra; Wiczerzycki, Marcin; Ratajczak-Mrozek, Milena (2022) : Extra-industry imitation of digital platform business models, Entrepreneurial Business and Economics Review (EBER), ISSN 2353-8821, Krakow University of Economics, Centre for Strategic and International Entrepreneurship, Krakow, Vol. 10, Iss. 4, pp. 91-105, <https://doi.org/10.15678/EBER.2022.100406>

This Version is available at:

<https://hdl.handle.net/10419/335370>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nd/4.0/>

Extra-industry imitation of digital platform business models

Aleksandra Hauke-Lopes, Marcin Wiczerzycki, Milena Ratajczak-Mrozek

ABSTRACT

Objective: The objective of the article is to identify challenges and success factors related to the imitation of the digital platform business model in other industries.

Research Design & Methods: We based our research on a single case study of an extra-industry imitation performed by a digital platform operating in Poland that connects confectionery shops and final customers. The case study was based on direct interviews conducted with the co-owners of the platform.

Findings: The results indicated that successful extra-industry imitation faced certain challenges, including the different requirements of the new target industry and the related know-how, and attracting cooperating companies and customers. The success of an extra-industry imitation was determined by specific success factors linked mainly to prior experience regarding the digital platform business model, business relationships with technology/IT suppliers and companies from the new target industry, and personal competencies.

Implications & Recommendations: Formal and informal business relationships and cooperation are crucial for extra-industry digital platform business model imitation. Moreover, specific personal relational competencies, including willingness to learn and take risks, allow managers to respond successfully to market opportunities and imitate digital platform business models in new industries.

Contribution & Value Added: The main contribution of the article lies in assessing the challenges managers face during extra-industry business model imitation. In our model, we proposed a novel set of factors that impacts the successful implementation of the imitation business model process in a new industry.

Article type: research article

Keywords: business model; business model imitation; innovation; digital platform; business relationships

JEL codes: L2, O3

Received: 25 July 2022

Revised: 24 October 2022

Accepted: 17 November 2022

Suggested citation:

Hauke-Lopes, A., Wiczerzycki, M., & Ratajczak-Mrozek, M. (2022). Extra-industry imitation of digital platform business models. *Entrepreneurial Business and Economics Review*, 10(4), 91-105. <https://doi.org/10.15678/EBER.2022.100406>

INTRODUCTION

The emergence and proliferation of digital technologies have allowed, and sometimes even forced, existing companies to innovate new ways of conducting business (Bouwman *et al.*, 2018; Matarazzo *et al.*, 2021) by establishing increased connectivity between people, organizations, resources and across entire industries (Rohn *et al.*, 2021). This creates pressure on companies to revisit their business models – i.e. the way they operate and create value (Casadesus-Masanell & Zhu, 2013) – or even to develop entirely new ones (Baden-Fuller & Haefliger, 2013). However, with new business models such as the digital platform business model, which is emerging and rapidly gaining popularity across different industries (Şimşek *et al.*, 2022), it seems that in many cases the key to business model innovation is imitation (Casadesus-Masanell & Zhu, 2013; Frankenberger & Stam, 2020). In other words, rather than developing new digital business models from scratch, companies can utilize the existing solutions of companies from other industries as recipes or blueprints of sorts, and adjust them to the specific conditions of their field of business (Baden-Fuller & Haefliger, 2013). According to Enkel and Mezger

(2013), extra-industry imitation is based on deconstructing and aligning the elements of the current business model with their potential contribution to the new model value proposition in the new industry. Business model imitation can serve as a method of business model innovation (Baden-Fuller & Haefliger, 2013; Casadesus-Masanell & Zhu, 2013), particularly when it occurs between different industries, as in such cases the imitation is more likely to result in the development of novel, distinctive business models (Amit & Zott, 2015; Frankenberger & Stam, 2020).

The existing scarce research on business model imitation tends to focus on methods of preventing imitation, rather than utilising it for innovation and developing new ventures (Frankenberger & Stam, 2020; Shenkar, 2010). Existing research also does not provide examples of imitation which tend to benefit both the imitating and the imitated side. As Frankenberger and Stam (2020) add, 'there has been little research on whether business model imitation is a performance-enhancing strategy in its own right' (p. 101872). For such a question to be answered, the challenges and success factors specific to this form of innovation development have to be explored.

To the best of our knowledge, no studies have tackled this subject, in particular with regard to digital platforms. As a business model, digital platforms have been gaining a foothold in an ever-increasing number of industries (Täuscher & Laudien, 2018), and revolve around creating value by connecting independent actors through digital interfaces (Parker *et al.*, 2016). Their absence in the literature regarding business model imitation is surprising, as due to their digital nature, digital platforms facilitate the transfer of applied technical solutions and business models to other companies and even industries. In particular, research conducted so far has not yet tackled the subject of the challenges and success factors of extra-industry digital business model imitation, which is key if imitation is to lead to growth in new ventures.

To fill the above research gap, the article aims to identify the challenges and success factors needed for the imitation of the digital platform business model in a new industry. Our article responds to calls by Frankenberger and Stam (2020) for further investigation in terms of 'how entrepreneurs search for and evaluate pre-existing business models before deciding which elements to adopt' (p. 101872). Additionally, by identifying the challenges and success factors that managers may encounter during extra-industry digital platform business model imitation, we provide managerial recommendations for the successful implementation of digital platforms.

We based our research on the analysis of a single, exploratory case study (Eisenhardt & Graebner, 2007) of a digital platform provider that imitated its business model and adapted it from another industry that the co-owners had previous experience with. We used a qualitative approach as it allowed for an in-depth analysis of the problem under investigation (Rajala & Tidström, 2017). The data was collected through direct interviews conducted in the years 2015 and 2020-21.

We contributed to existing research on extra-industry business model innovation and imitation (Enkel & Mezger, 2013; Frankenberger & Stam, 2020; Shenkar, 2010), and responded to calls for further examination of the problem. Our main contribution lies in assessing the challenges managers face during extra-industry business model imitation. In our model, we proposed a novel set of factors that impact the successful implementation of the imitation business model process in a new industry.

The article is structured as follows. In the first section, we will discuss the subject of imitation as a method of business model innovation and relate it to the digital platform business model. Then, we will present the methodology of our study. The following section will be dedicated to the case analysis and the results of our research. Next, we will provide a detailed discussion of the results and their theoretical and practical implications. The article will end with concluding remarks.

LITERATURE REVIEW

Business Model Innovation

The concept of the 'business model' is an important part of business jargon and has garnered a great deal of attention from scholars in the management literature (Amit & Zott, 2015; Casadesus-Masanell & Zhu, 2013). Business models can either serve as model organisms utilised in the process of scientific

investigation or as recipes or blueprints that companies can use to experiment with, change, refine, or re-invent the way their businesses operate (Baden-Fuller & Haefliger, 2013).

Business model innovation constitutes the implementation of a business model that is new to the firm (Björkdahl & Holmén, 2013; Rachinger *et al.*, 2019), and which changes the way it creates and captures value (Berends *et al.*, 2016). Therefore, consistent with the dominant understanding of innovation derived from The Oslo Manual (OECD, 2005), such innovation does not need to introduce changes new to an entire industry or the whole world; it is sufficient for the novelty to pertain only to a particular company. That being said, it does not exclude the possibility that business model innovation entails the development of brand-new solutions that are revolutionary on a wider scale (Foss & Saebi, 2017). Moreover, just as the scale of the innovation can differ between cases, the degree of changes to a company's business model resulting from business model innovation can also vary (Rachinger *et al.*, 2019).

The Digital Platform as a Business Model

Business model innovation can be tied to broader technological innovations. This relationship works in two ways. On the one hand, the choice of business model largely determines which technologies are developed, applied, and monetised by the company, and how it is done. On the other hand, technological innovations themselves determine and outline the possible directions for business model innovation (Baden-Fuller & Haefliger, 2013) leading to the optimisation or transformation of existing business models and sometimes to the emergence of entirely new ones (Loebbecke & Picot, 2015). A prominent example of the latter is the digital platform business model enabled by digital technologies (Şimşek *et al.*, 2022; Täuscher & Laudien, 2018).

Digital platforms rely on digital technologies to connect independent actors (people, organisations and resources) to provide consumers with access to products and services (Bartosik-Purgat, 2019; Parker *et al.*, 2016), giving rise to constantly evolving business ecosystems (Teece, 1997). Whereas traditional businesses achieve competitive advantage through control over scarce, valuable, inimitable, and organisation-specific resources, in the digital platform business model, a company does not require direct control over such assets, instead facilitating transactions through its network of actors, the interactions between them, and the exchange of information (Rohn *et al.*, 2021). The value emerges from different resources – those owned by the company, and those shared, or from outside the ecosystem – coming together in various combinations (Liu, 2017; Yablonsky, 2018).

Digital Platform Business Model Imitation

One way of conceptualising business models is to treat them as recipes that companies can use to develop their businesses – either by implementing some aspects of a given model or incorporating it in its entirety (Baden-Fuller & Haefliger, 2013). As such, the existing business models of one company can be imitated by other organisations – either from the same industry or a completely different one. Thus understood business model imitation can serve as a valid method of business model innovation (Baden-Fuller & Haefliger, 2013; Casadesus-Masanell & Zhu, 2013; Frankenberger & Stam, 2020). In the case of extra-industry imitation, the imitating company does not have to face the additional challenge of differentiating itself from the competitor it is imitating (Frankenberger & Stam, 2020), whereas intra-industry business model imitation can make it hard for a company to achieve a clearly-defined competitive advantage (Frankenberger & Stam, 2020; Porter, 1991).

Despite the above, as noted by Frankenberger and Stam (2020), existing research on business model imitation tends to focus on methods of preventing imitation (Pisano & Teece, 2007), rather than utilising it to innovate and develop businesses. To remedy this, they proposed and tested a theoretical model of extra-industry business model imitation, which posits that business model imitation leads to business growth if two conditions are met: 1) the imitating company utilises novel technologies, and 2) its founders possess some degree of experience in the (new) industry, which allows them to adjust the business model to its unique growth opportunities.

A digital platform as a business model may prove somewhat unique in terms of imitation. As stated by Frankenberger and Stam (2020): 'to understand when business model imitation increases venture growth, we need to consider how new ventures combine replicated business models with other re-

sources and capabilities' (p. 101872). This can potentially be less challenging in the case of digital platforms, as these do not have to rely exclusively on their resources, but rather facilitate transactions between distinct actors that provide resources of their own. This in turn creates a competitive advantage that is hard to imitate (Rohn *et al.*, 2021). At the same time, digital platforms themselves rely on fairly uniform and standardised technology, such as mobile payment solutions (which themselves are often provided through other digital platforms), which in turn can make it easier to 'follow the recipe' while establishing the architecture of the new digital platform (Pil & Cohen, 2006; Tiwana *et al.*, 2010). This potentially limits the importance of technological innovativeness during the imitation process of the digital platform business model. Last but not least, the advantage of business model imitation partially stems from stakeholders potentially already being familiar with and understanding business models that already exist in other industries (Frankenberger & Stam, 2020). This is particularly relevant concerning digital platforms due to their presence in various industries (Täuscher & Laudien, 2018) making it substantially easier for potential business partners or consumers to understand this business model and accept it within the context of a new industry. Conversely, due to the uniqueness of the digital platform as a business model in terms of its reliance on independent actors and their resources, the disruptiveness of the adoption of such a business model can be fairly high. The need to switch from managing one's resources to orchestrating inputs from different actors may require a different set of competencies from managers and employees, thus, making the process potentially more challenging for the company.

RESEARCH METHODOLOGY

We based our analysis on an exploratory case study (Rajala & Tidström, 2017), which is advised for the analysis of phenomena that previous research provides little or no knowledge on. We used a case study as it allowed for an in-depth investigation of the problem and observation of the holistic (*e.g.* single-unit) phenomena in detail (Dubois & Gadde, 2014) and provided an understanding of processes that are embedded in a specific context (Ratajczak-Mrozek *et al.*, 2018). Case studies are especially recommended for industrial marketing research (Easton, 1998) as they allow the researcher to investigate the in-depth, complex, and constantly changing interactions that take place in business relationships during cooperation (Dubois & Gadde, 2014). This is enabled by comparing, using, and adopting different data or insights on the issues investigated (Kamalaldin *et al.*, 2020), as well as by using 'the unique advantage of getting insight into the internal logic of a group, organization or culture' (Ciechanowski *et al.*, 2020, p. 323). The case selection was purposeful as we wanted to investigate the extra-industry imitation of a digital platform business model. We analysed Alpha digital platform provider set up by managers who used to work for Omega digital platform provider but in a different industry.

The data for the case study came from six semi-structured interviews. The first interview was conducted in 2015 with the CEO of Omega platform. The interviewed CEO set up a new platform in 2015 already after conducting the first interview. We decided to investigate the process of business model imitation in 2020. The time gap allowed us to grasp and assess the whole process of business model imitation, including the decision, the initial phase of developing and the later phase of running the platform. As a result, in the years 2020-2021, we conducted five more interviews with two co-owners of the analysed digital platform (one being the former CEO of Omega platform). We stopped the interviews when we reached data saturation, meaning that additional interviews would not bring any new information to our study. As we wanted to determine the challenges and success factors that are needed to imitate the digital platform business model in a new industry, we focused our questions on the specifics of the particular digital platform and its business model, as well as elements of the platform and business model that were imitated and/or newly developed by the Alpha co-owners when setting up the new venture.

The interviews were conducted personally (face-to-face) or via an internet communicator (for details see Table 1). All the interviews were conducted by at least two members of the research team. The interviews were recorded, transcribed, and used as the basis for further analysis. To decrease subjectivity, the transcripts were read separately by each researcher and then discussed. Additionally, we applied data triangulation (Kamalaldin *et al.*, 2020) by using an array of different sources of information, including the interviews themselves, external data (*e.g.* information from company profiles)

and internal data (financial statements of the analysed company, internal instructions and a network picture prepared by the co-owner of one of the analysed companies).

Table 1. Overview of interview details

Company name	Position of interviewee	Method of interview	Interview time	Year
Omega digital platform	CEO (now co-owner 1 in Alpha)	personal (on-site)	2 hrs. 10 mins	2015
Alpha digital platform	Co-owner 1	personal (on-site)	1hr 30 mins	2020
	Co-owner 1	Skype	1hr 50 mins	2020
	Co-owner 1	Skype	1hr 20 mins	2020
	Co-owner 2	Skype	2 hrs.	2020
	Co-owner 2	Skype	33 mins	2020
	Co-owner 1	Skype	1hr 40 mins	2021

Source: own study.

As part of the analysis, we coded the transcripts based on common words, phrases and terms used in the interviews (Kamalaldin *et al.*, 2020). Initially, we coded the challenges mentioned during the process of digital platform business model imitation, as well as the elements of the Frankenger and Stam (2020) model of extra-industry business model imitation needed for business growth, that is (1) utilisation of novel technologies by the imitating company and 2) founders' experience in the new industry. However, we then conducted a second round of coding as we identified success factors of extra-industry digital platform business model imitation that were not mentioned in the Frankenger and Stam (2020) model (Table 2).

RESULTS AND DISCUSSION

The unit of analysis was Alpha, a digital platform from Poland that is an intermediary between confectionery shops and end customers. Via the platform, customers may order a cake (from a standardised offer) and add personalised elements (such as a candle or an inscription on the cake). After payment, the order is sent to the nearest (in terms of place of delivery), formally independent confectionery shop. After two days in most cases, the cake is delivered in boxes labelled with Alpha logo to the order destination.

The Alpha platform was set up in 2015 by two co-workers: a former CEO and former Omega's manager. Omega is the Polish branch of a Swedish digital platform offering flower delivery. Platform customers choose a bouquet from a standardised offer and customise it with personal dedication. When payment is confirmed, the order goes to the nearest (in terms of place of delivery) formally independent flower shop. The order is realised within two hours (if it is placed before 5 p.m.). The letter cards attached to the delivered bouquets and any additional documents are labelled with the Omega logo. It took Omega some time to convince customers to order bouquets on the internet. The same was true for convincing the owners of flower shops, but as the Omega CEO at that time (and now co-owner 1 of Alpha) underlined, 'florists also see that the phone is already a channel that is dying out.' Moreover, digital solutions offer reliability, as an order that is put into the system provided by the digital platform provider is always there, and authorised employees have access to it at any time. On the technical side, the digital platform business model included solutions connected to accepting orders from customers, distributing orders to florists, providing the method of payment and issuing collective invoices for florists. On the florists' side, using the platform is highly intuitive and there is no need to have a good knowledge of IT solutions.

Table 2. List of codes used for the analysis

1st circle codes (from Frankenberger & Stam, 2020)	2nd circle codes	3rd circle codes
The utilisation of novel technologies by the imitating company	Relationships with previous technology/IT suppliers when imitating platform business model	Business relationships with technology/ IT suppliers
	Similar technologies (e.g., programming language, IT processes) applied in the imitated and imitating business model	
	Personal relationships with previous IT suppliers	
Founders' experience in the new industry	The utilisation of similar technology in the imitated and imitating business model	Prior experience regarding digital platform business model
	Self-confidence due to the experience gained in imitated digital platform	
	Fundamental similarities between the foundations of both business models (reliance on emotions and symbolism)	
	Experience with overcoming cooperating partners' resilience during the digitisation of a traditional business model	
	Experience with overcoming end customer's resilience to buy online traditional products	
–	Learning from the companies from the new target industry	Business relationships with companies from the new target industry
	Knowledge sharing with business partners on market trends and business solutions	
	Cooperative approach towards conflict resolution and day-to-day operations	
–	Assistance in case of unexpected problems, also outside of the usual working hours	Personal competencies
	Ability to develop business relationships with limited face-to-face contact	
	Ability to resolve tensions and day-to-day problems	
–	Differences in the production cycle and standards of production (impossibility of on-demand production and delivery)	Different requirements of the new target industry
	Differences in the product durability/freshness	
–	Unwillingness towards learning about a new industry	Difficulty in acquiring knowledge
	Lack of business partners willing to share their know-how	
–	Lack of direct contact – reliance on trust	Sourcing of cooperating companies
	The reluctance of business partners towards new distribution channels	
–	Interacting with customers via digital challenges (need for a change in business partner's behaviours)	Difficulty in acquiring customers
	Final customers' reluctance towards buying certain types of products online	

Source: own study.

The idea of offering cakes as an alternative to bouquets via a digital platform came to the Alpha co-owners spontaneously, when they saw no suitable offer for men on the Omega digital platform. Additionally, it was an opportunity to expand the offer as 'even if you deliver the most beautiful bouquet to your mother on Mother's Day, after some time, year after year, it ceases to be such a big surprise' (Alpha co-owner 2). The first orders of cakes were done via the Omega platform for Father's Day. The response exceeded expectations. The promising cake sales results via the Omega flower delivery digital platform, and previous experience with the digital platform was crucial element that pushed the Alpha co-owners to set up a new business. As co-owner 2 admitted, '[working at Omega]

gave me a lot of confidence and that's why I was sure it was doable,' and co-owner 1 added, 'we had experience and know-how in a specific business model, which allowed us to launch the project quickly.'

Not long afterwards, the Alpha co-owners decided to imitate the Omega business model. This was well accepted within Omega. Selling cakes (from the Alpha platform) on the Omega platform was seen as an opportunity to expand the Omega offer. For Alpha, the possibility of offering cakes on the Omega platform was seen as a new distribution channel. However, each platform wants to develop its main products (flowers or cakes) as their core offer, as 'the strength of our companies is in the specialization. We want to be specialists in baking, they want to be specialists in flowers' (co-owner 2). As co-owner 2 further explains, both platforms cooperate only to the extent that they consider effective and financially efficient, but they 'do not get in each other's way.'

From the technical point of view, the experience and know-how that the Alpha co-owners had from the Omega digital platform allowed them to effectively create a new digital platform in a very short time, as well as take effective action when promoting it on the internet. As co-owner 2 stressed, 'the basic barrier for people who have an idea is how I will set up a website, who will do it, how much it will cost me, what payments should I expect, how should I promote it, via which channels, whether to hit Google Ads or organically promote the website... We already had answers to all these questions.' The imitation of the digital platform business model involved technical solutions connected to accepting orders, distributing orders, providing the method of payment and issuing collective invoices.

The business relationship and cooperation between the IT supplier (named Beta in the case study) and the Alpha co-owners was valuable in the business model imitation. The same Beta IT supplier provided services for the Omega digital platform and Alpha wanted to use similar internet solutions to the ones employed by Omega. The well-functioning cooperation framework that already existed (stemming from the cooperation history in Omega) allowed for time-saving when discussing problems or new solutions ('if we say one word, one sentence, one phrase, this person (Beta) will know exactly what we want' co-owner 2). As underlined by both co-owners, some adaptations to the system were induced by its use in a new industry, including different products, prices or new partner confectionery shops. To manage the process of ordering cakes, co-owner 1 along with Beta created an IT system which allowed confectionery shops to see the status of an end customer's order, whether it is accepted, processed, sent to the confectionery or already realised.

Both Alpha co-owners stated that it was not only the digital or technical core of the business model – offering products via a digital platform – that remained the same between their two companies. First of all, the similarity between the business models lies in the fact that both industries are characterised by high seasonality, as bouquets and flowers are popular gifts for occasions such as Mother's Day. Secondly, both Omega and Alpha rely to a great extent upon trust in partner flower shops and confectioneries, as the providers of the digital platform do not see the end products delivered via the platform. Therefore, the ability to maintain informal relationships and personal contact was important in both business models. According to co-owner 1, the personal relationships between the platform and confectionery shop employees were more important than formal rules of cooperation. Despite the advanced digitalisation, there is always a person to talk to via telephone in case of emergencies or when there is a need to conduct negotiations. As Omega CEO added, 'technology is technology, but somewhere behind it there is a human factor. I have a lot of friends and acquaintances among the florists, and they always emphasize that it [the possibility of personal contact] was the biggest advantage.' Finally, as sending both bouquets and cakes is linked with emotions and special feelings, Alpha is responding to the same customer needs and core values as Omega. As Alpha co-owner 1 underlined: 'Buying cakes or bouquets is not only about buying the product itself, but rather to express gratitude, appreciate someone, make the other person smile or to thank business partners.' Based on the imitated technical solutions of the digital platform, as well as other elements of the business model, it seemed that the exact imitation by Alpha of the Omega digital platform business model was possible.

Although the sale of flowers and cakes seems very similar, there are differences between the two industries that have made the analysed extra-industry digital platform business model imitation challenging. As co-owner 1 stated: 'It turned out along the way that it is not so easy, that it is definitely easier with flowers than with such a physical product as a cake or any pastries at all.' The major challenge Alpha

faced was the production cycle, which was different in the Alpha and Omega business models. Flowers are long-lasting as they may stand for a few days in water without losing their charm. Moreover, a bouquet can be prepared very quickly. In contrast to the flower business, where a bouquet may be prepared with slightly different flowers, changing the fruit in a specific cake or its flavour is not usually possible without other people noticing it, as customers most often buy a specific type of cake. Additionally, many recipes require time (*e.g.* soaking a sponge cake overnight). When they started the digital platform, the co-owners of Alpha were not aware that in some cases it takes much more time to complete an order, especially if a customer asks for an artistic cake with decorations that are hand-made and on-demand, from fresh ingredients, and therefore may not be stored too long in advance. Hygienic conditions are also important. As opposed to flowers, preparing cakes requires maintaining high standards of hygiene. As the Alpha co-owners were not initially aware of all the challenging requirements that prevented the possibility of fast delivery of the product after an order (which was possible in the case of flowers), they initially started cooperation with a local confectionery shop. The owner of this confectionery shop taught the co-owners all the processes involved in the professional production of cakes.

Another important initial challenge when establishing the Alpha platform was to find confectionery shops that wanted to enter into cooperation. When choosing the confectionery shops, the co-owners looked for those with more than one premises (this meant that they had transport options), suitable production capabilities (which could respond to demand at peak times, *e.g.* Father's Day), and the necessary skills for preparing the cakes. For the vast majority of confectionery shops, selling their products on the internet was a novelty. Therefore, they were reluctant to join this new sales channel but as co-owner 1 explained, 'when we started to send orders [to the confectionery shops] and at the same time intensively educate the confectionery shops, it turned out that they would gladly accept the orders.'

An additional challenge was to create a strong brand and find customers who want to buy cakes from the digital platform. Alpha needed to ensure traffic on the platform using different digital promotion tools. The Alpha co-owners placed more attention on digital marketing than they had previously done at Omega. As co-owner 1 added: 'Because consumers are now digitally very advanced, every brand that is a B2C brand must have very well-developed digital channels.' Alpha promotes the brand actively on social media and they also use Google Ads, newsletters, and cold mailing. Obtaining customers was even more difficult as cakes are highly customised in terms of preferred taste and filling, and some customers expect direct personal contact and advice when placing an order. For this reason, Alpha opened a helpline to assist end customers in their choices. The financial cost/benefit relationship is not profitable for Alpha, however, as co-owner 2 stated, these customers become very loyal to the company.

Additional challenges that the company faced were connected with order completion. Customers who were accustomed to the swift delivery of items purchased online expected the same from the confectionery shops. The challenge was to reconcile these two sides of the platform – internet-empowered customers and confectionery shops with their traditional baking processes.

Our research confirmed that business model imitation may be a source of innovation and growth in new ventures (Casadesus-Masanell & Zhu, 2013; Frankenberger & Stam, 2020). We showed that this was especially true in the case of a digital platform business model as it is easier to imitate.

The Alpha platform imitated many elements of the digital platform business model already used on the Omega platform. These were mainly standardized and broadly used solutions, such as mobile payments, product presentation and order processing, but also included the company's core value ('selling emotions') and the informal approach towards relationships with partner companies.

Imitation mainly embraces operational activities such as cooperation standards within the platform, order processing, elements linked with fees, etc. However, the imitation of activities does not entail copying them directly. Some activities require varying degrees of adjustment due to the differences between the respective industries (such as the time sensitivity of the products). This is one of the main limitations of business model imitation as a method for innovation.

The analysis of success factors allowed us to reveal the specific challenges faced by companies undertaking extra-industry digital platform business model imitation. First of all, when approaching a new industry, a good knowledge of its specificity and both production and delivery processes is needed. Although industry knowledge is not a hard and fast requirement for initiating new market

entry, it can instead be developed during the entry process itself, as long as managers display the willingness to learn from their mistakes. Secondly, when conducting extra-industry business model imitation, one of the main challenges is to source business partners (in the case of Alpha: confectioneries) and attract the customers themselves. While in more innovative industries, similar innovation would most likely be met with understanding, if not enthusiasm, in more traditional industries, as our case study shows, potential partners might require not only convincing but also educating. Word-of-mouth and the diffusion of information may be instrumental in overcoming this challenge. In our case, confectioneries that saw their competitors successfully cooperating with Alpha and thus reaching new customers treated this as a proof-of-concept and requested to join Alpha's platform.

Similar challenges pertain to customers. While in some industries, such as digital goods and services or those that deal with relatively simple and cheap physical products, a digital platform business model can be seen as suitable or even preferable to the more traditional way of carrying out business operations, the same solution applied to a more traditionally-oriented industry can encounter customer resistance. On the one hand, in industries where abiding by traditional methods of production can be perceived by customers as synonymous with high quality or even prestige, the adoption of innovative business models such as digital platforms may undermine or be downright incompatible with the carefully cultivated brand or company image, thus potentially decreasing a company's existing competitive advantage (Matarazzo *et al.*, 2021). On the other hand, an important barrier that limits the customers' willingness to make their purchases via a digital platform or on the internet in general is the limited ability to examine products beforehand. While this factor is less important for cheap products, or those where seeing a photo is sufficient for making a decision, for products where factors that cannot be conveyed through visuals alone are important (such as a taste for cakes or fit for clothes), this creates a significant barrier. While some industries, such as the clothing industry, can counteract this with extensive return policies designed to convince customers that purchasing via a digital platform is safe, for others, such as the confectionery industry, similar solutions are not available due to the customizable and fast-spoiling nature of the product itself. This can potentially limit the degree to which customers will accept companies that utilise this particular business model.

Innovation through imitating business models such as digital platforms and incorporating them into traditional industries also creates another problem concerning customers. As stated in the literature review, an advantage of business model imitation is the fact that customers are likely to already be accustomed to this particular way of carrying out business transactions, and thus potentially more accepting of the innovation (Frankenberger & Stam, 2020). However, our case study shows that this can potentially be a disadvantage in certain situations. While it is true that customers are already familiar with ordering products or services via digital platforms in other industries, which made it easier for them to understand and accept their application in the confectionery industry, this simultaneously has led to some unrealistic expectations and misconceptions about the nature of the service. Many digital platforms (including the one owned by Omega) can boast very fast order processing and realisation times. Customers become accustomed to this convenience and grow to expect this level of service from all digital platforms, fuelling the so-called on-demand culture (Epps *et al.*, 2009). While such effectiveness concerning order processing is relatively easy to achieve when dealing with digital goods and services, and distributing goods that have already been manufactured, or goods that can be assembled quickly on the spot (as was the case with Omega's flower bouquets), for more traditional industries such as confectioneries, it remains unfeasible. This placed a burden on the platform owners in terms of educating customers and partner confectioneries alike, as the particularities of the cake production process needed to be explained to them to temper their expectations with regard to the delivery time and to avoid potential conflicts. Therefore, customers' familiarity with the business model, while it may be beneficial in some regards, can also very well become a source of additional challenges if innovations are based on imitation of solutions from different business industries.

Our research identified success factors that facilitate the process of digital platform business model imitation. First of all, contrary to Frankenberger and Stam (2020), our results showed that the industry experience of the founders is not necessarily required for the successful imitation of the platform business model. In our case, the co-owners did not know the industry. To fill this gap, they gradually learned

how to prepare cakes, as well as the particularities of their production. However, after initial setbacks, Alpha managed to adjust its operations to the specific characteristics and quirks of the confectionery industry and close the experience gap. The initial lack of industry experience can, at least in some cases, be compensated by a willingness to self-develop and engage in the lengthy learning process. Our results also point to an important factor that influences the outcome of business model imitations based on digital platforms, namely business model experience. Contrary to the Frankenger and Stam (2020) model, in which the imitating company required experience in the industry it is operating in to successfully implement an innovative business model it lacks experience with, in our case the situation was reversed: existing experience with the imitated business model was used to facilitate the transition to a new industry that the company itself did not have experience with. This suggests that while experience is an important factor influencing the outcome of the business model imitation process, this experience does not necessarily have to be tied to the industry.

Moreover, our research did not confirm that the imitating company has to use novel technology to be successful in the imitation of the platform business model (Frankenger & Stam, 2020). As already stated, Alpha's success was partly founded on the continuation of the relationship with the Beta IT company, using the same technology as they used at Omega. That being said, this technology, while relatively widespread in other industries, was nevertheless a novelty in the confectionery industry. Relying on Beta's resources allowed Alpha to quickly start and expand the platform.

Another factor which surfaced in our case as potentially important for business model imitation based on a digital platform was the presence of already established business relationships. If we follow Baden-Fuller and Morgan's (2013) metaphor of the business model as a recipe, then the business relationships that the Alpha co-owners carried over from their time working at Omega can be viewed as acquired thanks to the help of the original cooks who came up with the recipe in the first place and thus know how to successfully follow its every step. This can be beneficial in two major ways. Firstly, such partners can be an additional source of experience with the inner workings of the imitated business model. Secondly, since not every company is capable of developing all the technology required for the adoption of the innovative business model, such relationships can be a way of accessing these technologies and associated competencies indirectly. This concerns relationships both with partners from the target industry as well as relationships with technology/IT suppliers. This confirms that the platform's competitive advantage is determined by resources that the platform may not directly possess but has access to through its co-operators (Rohn *et al.*, 2021).

All the above-mentioned elements are closely linked with managers' competencies. These embrace both digital competencies in managing a digital platform, as well as relational competencies for starting and/or developing relationships with companies cooperating with the platform (Ratajczak-Mrozek *et al.*, 2021). As far as relational competencies are concerned, the willingness to learn and self-develop is also important, including regarding the way the new industry functions. One also has to underline the importance of the informal approach towards cooperation as dedicating time to the education of cooperating companies as well as building trust in the relationships cannot be overestimated.

Based on our analysis we propose a conceptual model presented in Figure 1.

In the literature, business model imitation is seen as a negative phenomenon that threatens the imitated company (Frankenger & Stam, 2020; Shenkar, 2010). Our case study showed that under specific conditions, including the mutual agreement of both platforms' owners and industry specialization, extra-industry imitation may lead to the growth and success of both the imitating new venture and the imitated company. Extra-industry imitation was successful for both platforms; Omega expanded its potential market (by offering cakes on its platform) and Alpha could develop its platform with the experience acquired at Omega. Nevertheless, both platforms remained focused on their industry and core competencies, allowing them to maintain leadership in their respective industries.

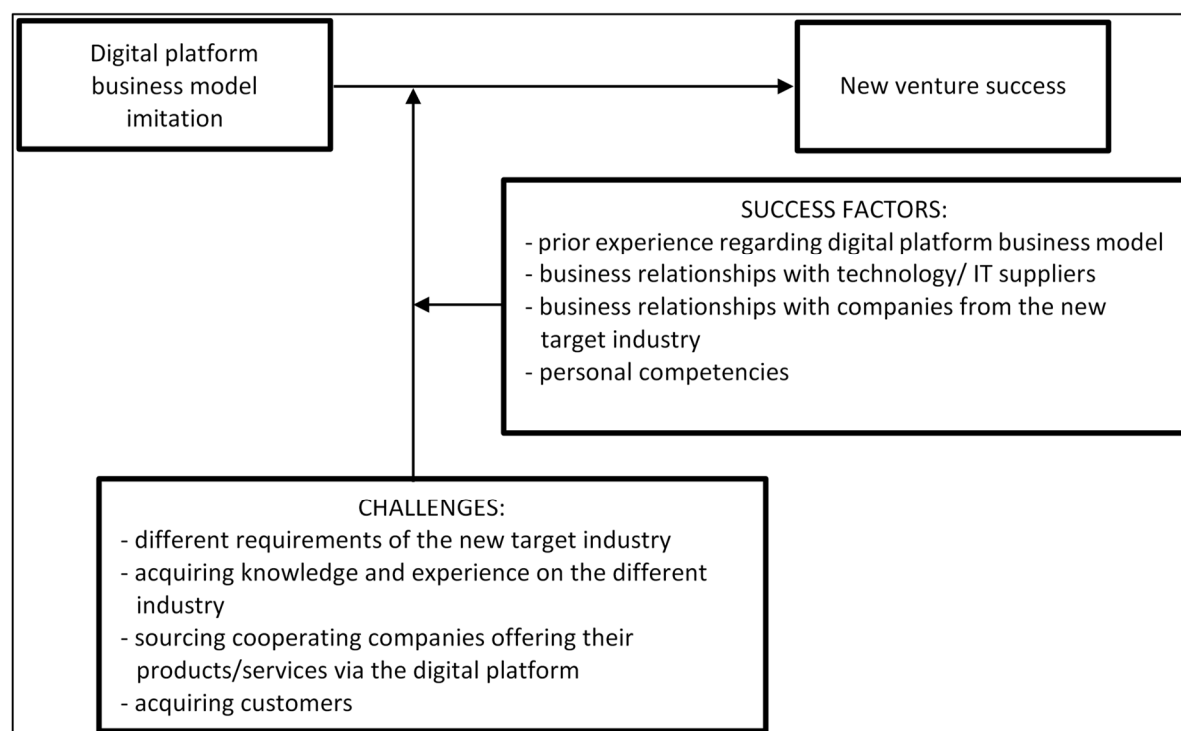


Figure 1. A model of successful implementation of the extra-industry business model imitation

Source: own elaboration.

CONCLUSIONS

Our research showed that extra-industry business model imitation may be successful if managers possess prior experience with a specific digital platform business model, as well as having prior business relationships with crucial partners (in terms of the new business model) or developing these relationships at the beginning of the imitation process. These business relationships provide the missing knowledge on the industry. Additionally, specific personal competencies such as willingness to learn and self-develop, trust building, readiness to take risks, mitigate challenges and allow the same business model to be successfully imitated in the new industry. Our results, contrary to Frankenberger and Stam (2020), showed that successful extra-industry business model imitation does not require knowledge of the new industry or novel technology. Therefore, our research set a basis for further investigation of digital platform extra-industry business model imitation and the challenges that may be faced during this process. We find this issue to be of great relevance as we are observing a continual emergence of digital platform business models in different industries. As some of these industries share similarities (such as reliance on emotional value in our case), business model imitation can be a way for businesses to learn from others and thus increase their chance of success.

The results of our research are also of practical importance. Firstly, business relationships and cooperation are crucial for extra-industry digital platform business model imitation. Importantly, these relationships should not only be based on formal agreements but managers should also dedicate time to developing more informal contacts with business partners. Only in such a situation will there be enough trust for the sharing of tacit knowledge. Secondly, managers should maintain and utilise the business relationships that have been already developed for the imitated business model. These relationships will empower them in the further development of the imitating business model. Thirdly, the development of specific personal relational competencies is important. These include a willingness to learn and take risks. Thanks to this personal trait, along with know-how of the existing digital platform business model, managers may respond successfully to market opportunities and imitate digital platform business models in new industries.

Our research is not free of limitations, however, it outlines directions for further research. First of all, the analysis is based on a case study with no hypotheses being tested and is limited to a specific company, time and location, which in our case is Poland, which does not allow to draw generalizations. Further research conducted in a different setting could identify additional factors for successful business model imitation. Therefore, future research should focus on other industries (e.g. medical) or other countries to investigate whether the extra-industry imitation challenge and success factors differ from the ones indicated in our research. Moreover, we call for quantitative research to analyse the specifics of extra-industry business model imitation to test our model and measure the impact of the success factors and challenges that we identified on the success of new business ventures. This would allow more general results to be obtained and would set a new direction for further research into extra-industry business model imitation.

REFERENCES

- Amit, R., & Zott, C. (2015). Crafting Business Architecture: the Antecedents of Business Model Design. *Strategic Entrepreneurship Journal*, 9(4), 331-350. <https://doi.org/10.1002/sej.1200>
- Baden-Fuller, C., & Haefliger, S. (2013). Business Models and Technological Innovation. *Long Range Planning*, 46(6), 419-426. <https://doi.org/10.1016/j.lrp.2013.08.023>
- Baden-Fuller, C., & Morgan, M.S. (2010). Business models as models. *Long Range Planning*, 43(2-3), 156-171. <https://doi.org/10.1016/j.lrp.2010.02.005>
- Bartosik-Purgat, M. (2019). Digital marketing communication from the perspective of individual consumers: A cross-country comparison. *Entrepreneurial Business and Economics Review*, 7(3), 205-220. <https://doi.org/10.15678/EBER.2019.070311>
- Berends, H., Smits, A., Reymen, I., & Podoynitsyna, K. (2016). Learning while (re)configuring: Business model innovation processes in established firms. *Strategic Organization*, 14(3), 181-219. <https://doi.org/10.1177/1476127016632758>
- Björkdahl, J., & Holmén, M. (2013). Editorial: Business model innovation-the challenges ahead. *International Journal of Product Development*, 18(3-4), 213-225.
- Bouwman, H., Nikou, S., Molina-Castillo, F.J., & de Reuver, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance*, 20(2), 105-124. <https://doi.org/10.1108/DPRG-07-2017-0039>
- Casadesus-Masanell, R., & Ricart, J.E. (2010). From strategy to business models and onto tactics. *Long Range Planning*, 43(2-3), 195-215. <https://doi.org/10.1016/j.lrp.2010.01.004>
- Casadesus-Masanell, R., & Zhu, F. (2013). Business model innovation and competitive imitation: The case of sponsor-based business models. *Strategic Management Journal*, 34(4), 464-482. <https://doi.org/10.1002/SMJ.2022/FORMAT/PDF>
- Chen, J., Wang, L., & Qu, G. (2020). Explicating the business model from a knowledge-based view: nature, structure, imitability and competitive advantage erosion. *Journal of Knowledge Management*, 25(1), 101108. <https://doi.org/10.1108/JKM-02-2020-0159>
- Chesbrough, H., & Rosenbloom, R.S. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11(3), 529-555. <https://doi.org/10.1093/icc/11.3.529>
- Ciechanowski, L., Jemielniak, D., & Gloor, P.A. (2020). TUTORIAL: AI research without coding: The art of fighting without fighting: Data science for qualitative researchers. *Journal of Business Research*, 117, 322-330. <https://doi.org/10.1016/j.jbusres.2020.06.012>
- De Reuver, M., Sørensen, C., & Basole, R.C. (2018). The digital platform: A research agenda. *Journal of Information Technology*, 33(2), 124-135. <https://doi.org/10.1057/s41265-016-0033-3>
- Dubois, A., & Gadde, L.-E. (2014). Systematic combining—A decade later. *Journal of Business Research*, 67(6), 1277-1284. <https://doi.org/10.1016/j.jbusres.2013.03.036>
- Dymitrowski, A., & Mielcarek, P. (2021). Business model innovation based on new technologies and its influence on a company's competitive advantage. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(6), 2110-2128. <https://doi.org/10.3390/jtaer16060118>

- Easton, G. (1998). Case Research as a Methodology for Industrial Network: A Realist Approach. In P. Naudé & P. W. Turnbull (Eds.), *Network Dynamics in Marketing* (pp. 73-87). Pergamon Press.
- Eisenhardt, K.M. (1989). Building Theories from Case Study Research. In *Source: The Academy of Management Review*, 14(4), 532-550. <https://doi.org/10.2307/258557>
- Enkel, E., & Mezger, F. (2013). Imitation processes and their application for business model innovation: An explorative study. *International Journal of Innovation Management*, 17(1), 1340005. <https://doi.org/10.1142/S1363919613400057>
- Epps, A., Govers, R., & Go, F.M. (2009). A history of internet purchasing: Suggestions for web/based entrepreneurs and SMEs. *Journal of Research in Marketing and Entrepreneurship*, 10(1), 4-18. <https://doi.org/10.1108/01443571010996208>
- Foss, N.J., & Saebi, T. (2017). Fifteen Years of Research on Business Model Innovation: How Far Have We Come, and Where Should We Go?. *Journal of Management*, 43(1), 200-227. <https://doi.org/10.1177/0149206316675927>
- Frankenberger, K., & Stam, W. (2020). Entrepreneurial copycats: A resource orchestration perspective on the link between extra-industry business model imitation and new venture growth. *Long Range Planning*, 53(4), 101872. <https://doi.org/10.1016/j.lrp.2019.02.005>
- Hacklin, F., Björkdahl, J., & Wallin, M.W. (2018). Strategies for business model innovation: How firms reel in migrating value. *Long Range Planning*, 51(1), 82-110. <https://doi.org/10.1016/j.lrp.2017.06.009>
- Kallinikos, J., Aaltonen, A., & Marton, A. (2013). The ambivalent ontology of digital artifacts. *MIS Quarterly: Management Information Systems*, 37(2), <https://doi.org/10.25300/MISQ/2013/37.2.02>
- Kamalaldin, A., Linde, L., Sjödin, D., & Parida, V. (2020). Transforming provider-customer relationships in digital servitization: A relational view on digitalization. *Industrial Marketing Management*, 89, 306-325. <https://doi.org/10.1016/j.indmarman.2020.02.004>
- Kazan, E., Tan, C.W., & Lim, E.T.K. (2016). Towards a framework of digital platform competition: A comparative study of monopolistic & federated mobile payment platforms. *Journal of Theoretical and Applied Electronic Commerce Research*, 11(3), 50-64. <https://doi.org/10.4067/S0718-18762016000300005>
- Liu, C. (2017). International competitiveness and the fourth industrial revolution. *Entrepreneurial Business and Economics Review*, 5(4), 111-133. <https://doi.org/10.15678/EBER.2017.050405>
- Loebbecke, C., & Picot, A. (2015). Reflections on societal and business model transformation arising from digitization and big data analytics: A research agenda. *Journal of Strategic Information Systems*, 24(3), 149-157. <https://doi.org/10.1016/j.jsis.2015.08.002>
- Martinec, R., & van Leeuwen, T. (2020). The Language of New Media Design. In *The Language of New Media Design*. MIT Press. <https://doi.org/10.4324/9781003060499>
- Matarazzo, M., Penco, L., Profumo, G., & Quaglia, R. (2021). Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective. *Journal of Business Research*, 123, 148-2963. <https://doi.org/10.1016/j.jbusres.2020.10.033>
- OECD. (2005). Oslo Manual. In *OECD and Eurostat Publication: Vol. Third edit*. Retrived from https://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en%0Ahttp://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en on May 20, 2022.
- Ondrus, J., Gannamaneni, A., & Lyytinen, K. (2015). The impact of openness on the market potential of multi-sided platforms: A case study of mobile payment platforms. *Journal of Information Technology*, 30(3), 260-275. <https://doi.org/10.1057/jit.2015.7>
- Parker, G.G., Van Alstyne, M.W., & Choudary, S.P. (2016). Platform Revolution. In *W.W. Norton & Company*.
- Pil, F.K., & Cohen, S.K. (2006). Modularity: Implications for imitation, innovation, and sustained advantage. *Academy of Management Review*, 31(4), 995-1011. <https://doi.org/10.5465/AMR.2006.22528166>
- Pisano, G.P., & Teece, D.J. (2007). How to Capture Value from Innovation: Shaping Intellectual Property and Industry Architecture. *California Management Review*, 50(1), 278-296. <https://doi.org/10.2307/41166428>
- Porter, M.E. (1991). Towards a dynamic theory of strategy. *Strategic Management Journal*, 12(2 S), 95-117. <https://doi.org/10.1002/smj.4250121008>
- Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management*, 30(8), 1741-1779. <https://doi.org/10.1108/JMTM-01-2018-0020>

- Rajala, A., & Tidström, A. (2017). A multilevel perspective on organizational buying behavior in coopetition—an exploratory case study. *Journal of Purchasing and Supply Management*, 23(3), 202-210. <https://doi.org/10.1016/j.pursup.2017.03.002>
- Ratajczak-Mrozek, M., Fonfara, K., & Hauke-Lopes, A. (2018). The Impact of Conflicts in Foreign Business Relationships on SME Performance. *Entrepreneurial Business and Economics Review*, 6(2), 171-183. <https://doi.org/10.15678/EBER.2018.060209>
- Rohn, D., Bican, P.M., Brem, A., Kraus, S., & Clauss, T. (2021). Digital platform-based business models – An exploration of critical success factors. *Journal of Engineering and Technology Management*, 60, 101625. <https://doi.org/10.1016/j.jengtecman.2021.101625>
- Shenkar, O. (2010). Copycats: how smart companies use imitation to gain a strategic edge. *Strategic Direction*, 26(10), 3-5. <https://doi.org/10.1108/02580541011080474>
- Şimşek, T., Öner, M.A., Kunday, Ö., & Olcay, G.A. (2022). A journey towards a digital platform business model: A case study in a global tech-company. *Technological Forecasting and Social Change*, 175(C). <https://doi.org/10.1016/j.techfore.2021.121372>
- Täuscher, K., & Laudien, S.M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, 36(3), 319-329. <http://dx.doi.org/10.1016/j.emj.2017.06.005>
- Teece, D.J. (1997). Next-generation competition: New concepts for understanding how innovation shapes competition and policy in the digital economy. *Journal of Law, Economics & Policy*, 1(c), 1-17.
- Tian, J., Vanderstraeten, J., Matthyssens, P., & Shen, L. (2021). Developing and leveraging platforms in a traditional industry: An orchestration and co-creation perspective. *Industrial Marketing Management*, 92, 14-33. <https://doi.org/10.1016/j.indmarman.2020.10.007>
- Tiwana, A., Konsynski, B., & Bush, A.A. (2010). Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. *Information Systems Research*, 21(4), 675-687. <https://doi.org/10.1287/isre.1100.0323>
- Yablonsky, S. (2018). A Multidimensional Framework for Digital Platform Innovation and Management: From Business to Technological Platforms. *Systems Research and Behavioral Science*, 35(4), 485-501. <https://doi.org/10.1002/sres.2544>
- Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). The new organizing logic of digital innovation: An agenda for information systems research. *Information Systems Research*, 21(4), 724-735. <https://doi.org/10.1287/isre.1100.0322>
- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019-1042. <https://doi.org/10.1177/0149206311406265>

Authors

The contribution share of authors is equal and amounted to 1/3 for each of them.

Aleksandra Hauke-Lopes

Assistant Professor in the Department of International Marketing at Poznań University of Economics and Business, Poland. Her scientific research focuses on value creation in business networks and international marketing and cooperation on business-to-business markets.

Correspondence to: dr Aleksandra Hauke-Lopes, Poznań University of Economics and Business, Al. Niepodległości 10, 61-875 Poznań, Poland, e-mail: aleksandra.hauke-lobes@ue.poznan.pl

ORCID  <http://orcid.org/0000-0002-0879-5499>

Marcin Wieczerzycki

Assistant Professor in the Department of International Marketing at Poznań University of Economics and Business, Poland. His research interests include consumer behaviour and value co-creation in the technological context of new media.

Correspondence to: dr Marcin Wieczerzycki, Poznań University of Economics and Business, Al. Niepodległości 10, 61-875 Poznań, Poland, e-mail: marcin.wieczerzycki@ue.poznan.pl

ORCID  <http://orcid.org/0000-0002-5696-9836>

Milena Ratajczak-Mrozek

Associate Professor in the Department of International Marketing at Poznań University of Economics and Business, Poland. Her main areas of research include companies' relationships and cooperation in an international setting and performance in the global market.

Correspondence to: Prof. UEP, dr hab. Milena Ratajczak-Mrozek, Poznań University of Economics and Business, Al. Niepodległości 10, 61-875 Poznań, Poland, e-mail: milena.ratajczak-mrozek@ue.poznan.pl

ORCID  <http://orcid.org/0000-0003-4432-5459>

Acknowledgements and Financial Disclosure

The project was financed within the Regional Initiative for Excellence programme of the Minister of Education and Science of Poland, years 2019-2023, grant no. 004/RID/2018/19, financing 3.000.000 PLN.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright and License



This article is published under the terms of the Creative Commons Attribution – NoDerivs (CC BY-ND 4.0) License
<http://creativecommons.org/licenses/by-nd/4.0/>

Published by Cracow University of Economics – Krakow, Poland



Ministry of Education and Science
 Republic of Poland

The journal is co-financed in the years 2022-2024 by the Ministry of Education and Science of the Republic of Poland in the framework of the ministerial programme "Development of Scientific Journals" (RCN) on the basis of contract no. RCN/SP/0583/2021/1 concluded on 13 October 2022 and being in force until 13 October 2024.

