

BALÁZS FERKELT
(ed.)

Challenges and alternative solutions in Central Eastern Europe



APOSZTRÓF

Challenges and alternative solutions
in Central Eastern Europe

edited by
BALÁZS FERKELT

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FOREWORD

The peoples, nations and states of Central Europe are characterized by several similar characteristics in terms of history, politics, and economics, as well as a few different features. The challenges and tasks facing the region are partly the same but at the same time country-specific features are emerging. The pandemic in 2020 and 2021 posed new challenges for this group of countries.

The Central European Regional Research Group, established at the Faculty of International Management and Business of the Budapest Business School - University of Applied Sciences in 2018, examines the peculiarities of the region in the framework of its research, conferences, and publications. The chapters of this study volume are based on the presentations of the online international conference “Challenges and alternative solutions in Central Eastern Europe” chaired by Judit Sági PhD habil. and are their revised and improved versions.

The conference was organized by the Central European Regional Research Group together with the Department of International Relations of the Faculty of International Management and Business and the Department of Finance of the Faculty of Finance and Accounting of Budapest Business School in May 2021. The fourteen studies cover current topics, mainly economic and financial, that have a direct or indirect impact on the countries of the region. Accordingly, several studies address the mechanism of the pandemic and the socio-economic processes in neighbouring regions. The volume of the study also introduces the reader to new trends in the world economy, such as the relocation in the fashion industry, one of the winners of which may be the Central European region. Among the authors we can find Hungarian and foreign lecturers, researchers, doctoral students, and master’s students at several Hungarian universities (Budapest Business School, Corvinus University of Budapest, Hungarian University of Agricultural and Life Sciences, University of Szeged). We recommend this volume to all academic staff, researchers and students interested not only in Central Europe, but also in today’s economic and financial processes.

Balázs Ferkelt
editor

RÉUNION? THE RELOCATION TENDENCIES OF THE GLOBAL SUPPLY CHAIN OF FASHION TOWARDS CENTRAL-EASTERN EUROPE

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ABSTRACT

Central-Eastern European (CEE) fashion production companies play an often 'invisible' but important role in the global supply chain of the fashion industry as subcontractors of well-known Western fashion brands. The COVID-19 pandemic has visibly disrupted the supply chains and turned the light on the importance of resilience to future shocks – and a shorter supply. The pandemic has boosted the already started relocation tendencies (nearshoring and backshoring) from Asia and the region is a potential destination at fashion production as Central-Eastern European companies are a long-standing, reliable partners of Western brands and the industry has a tradition and acknowledged expertise in fashion manufacturing. There is also a call for sustainability and systematic change within the industry. I focus on the examination and the possible solutions of the tension between economic and social sustainability among CEE countries in terms of fashion manufacturing and the effect and the possible roads after the pandemic for the fashion companies of the region, especially in Hungary. The methodology of the research is qualitative (literature review and interviews).

Keywords: relocation, fashion industry, global supply chain, sustainability

1. THE PLACE OF THE CENTRAL-EASTERN EUROPEAN REGION IN THE GLOBAL SUPPLY CHAIN OF FASHION

Most of the people do not associate Central-Eastern European countries with the fashion industry, where geography plays an important role. The geography of fashion primarily appears visibly as ‘Made in’ labels. Even if fashion – that refers to textile-, garment, leather, shoes and fur production, among from design to even retail and marketing is closely attached to the ‘fashion capitals’, like Milan, Paris, London or New York, the region plays an important role in the production background. Certain clothing brands, who became ‘household names’, are connected to specific countries and cities and the garment value chain is globalized in many ways: Godart calls the power structure of the fashion industry the current ‘fashion oligarchy’ [1]. There is a hidden, but very influential power dynamic among the different actors of the fashion industry, where ‘creation’ is different than ‘making’: with globalization, we have to make a difference between the headquarters of the fashion brands and where actually the garment are made. The second part of the XXth century and the globalization brought changes in the geographic of the production, and into the economic structure as well. Developed countries with higher wages (with the purpose of the improvement of their competitiveness) outsourced high labor need, work-intense production processes to regions with lower wages – to Central-, Eastern-Europe as well. According to the ‘experiences’ of the world economy, this intensified outsourcing and the fragmentation of production is one of the main characteristics of the fashion industry today, besides electronics and mechanics. But while the formerly mentioned industries were building strategic partnerships and operate their supply chains through subsidiaries, the fashion industry mainly works with independent companies and short-term contracts. The practice of subcontracting (contract work) means that the contractor (the fashion brand) owns the raw materials and other needed equipments (like zippers, buttons) and entrust the subcontractor (the company, who makes the production) to make the ordered garments after the specified documents and earning a charge [2].

In terms of product ‘drop’ and frequency, a fashion brand offers and presents collections, that is mainly attached to ‘seasons’. There are

two main seasons: the spring-summer and the autumn-winter, but in the practice, fashion brands offers semi-season collections (like resort and pre-fall) and additionally, capsule collections as well. Mass market brands, the so-called fast and ultra fast fashion brands, like H&M, the Inditex Group, etc. drops new pieces every months. An individual collection can take up to even 120 'looks'. A look is a complete outfit: it contains garments and accessories from head to toe. The characteristic of dominantly independent companies and short-term contracts is absolutely favourable in terms of fashion production: the fashion brand can easily switch to other, more specialized garment production partner (subcontractor), if it changes its collection.

So, while developed countries (like France, Italy or the United Kingdom in Western-Europe) have kept higher value-added processes (like design, product development and marketing), high labor intense – and implicitly less profitable – processes were taken place in Central-Eastern Europe (CEE) [3]. Even if there is no complete agreement on how to define Central-Eastern Europe, in the context of fashion production, Bulgaria, Czech Republic, Latvia, Hungary, Poland, Romania, Slovakia and Slovenia are among the most significant [4]. This paper is mainly focus on the examination of Hungarian companies. From the 1990s, the basis of the collaboration between Western and Eastern European countries fashion industry was the so-called outward processing trade (OPT) practice: the contractors transported semi-processed products, like fabrics, cuttings or semi-finished products to low wage subcontractors in Eastern Europe for assembly and intermediate work processes [5]. As a result, periphery countries acted as 'sewing workshops' for Western fashion brands and that practice also remained after the regime change and the join of the European Union as well.

Central-Eastern Europe is called the semi-periphery of the world economy at world system literature that refers its intermediate and dependent position. According to Arrighi and Drangel, revenue of the core countries are able to block the periphery's interests and they provide low income for them to stay in that position [6]. This theory is valid to the region's fashion production background, as companies do not earn enough from contract work to move towards significantly to higher value added processes or releasing own products to this day.

But how can CEE production countries can stay ‘invisible’ in the eyes of the customers? There is currently no harmonized ruling and unified practice among the member states of the European Union, regarding to the country of origin (COO). The regulation in force allows but does not make it compulsory to use the ‘Made in Europe’ if a product is made within the EU’s borders but does not inhibit the use of a single, concrete country. It is the interest of the fashion brands to sign a high-prestige country (think about Italy and France for example) as country of origin. But this practice is in contrast with the EU’s interest as consumer can differentiate products based on the COO sign and their perceptions, even if the products came from the internal single market.

The interest of the world public and the press turn to hidden production relations from time to time. Just to mention the latest, in 2019, the fact that the well-known British designer, Stella McCartney’s garments are made in Hungary, near to the Ukrainian border at the factory of Beriv in Berettyóújfalu raised interest as a coat from McCartney was worn by the Dutchess of Success, Meghan Markle, who is closely followed by the British tabloid media. Most of the article’s focus was on that workers are earning just £2.60 an hour at the factory and they can barely afford food and heating.

2. CAUSES OF RELOCATION

The question and importance of relocation tendencies within the fashion industry has raised as the past 1-1,5 years has brought unprecedented economic and business circumstances with the COVID-19. Relocation, and especially shorter supply chain can be a tool of resilience. But what is relocation? Formerly, from the 1990s, fashion brands were rushed to outsource their production to low labor cost countries – mainly Asia, especially China. Garment production contributes to a significant percentage of several developing countries’ (Vietnam, Bangladesh and Cambodia for example) export. Scholars, especially from management studies has been emphasizing the importance of relocation and shorter supply chain as a tool for the satisfaction of the ever demand-driven nature of the fashion industry. Now, an other factor, resilience has became upvalued. So relocation refers to the reverse of delocation: moving

production back from Asia. Under relocation, we can understand near-, back-, and onshoring as well. Nearshoring means that a company relocate its production, closer to the home country, backshoring refers to the relocation of the production to its original place (before delocation) and onshoring is the home country production.

Several factors are moving the direction of fashion production and globalization: the liberalization of developing countries' economic policy, trade agreements, technology, communication and human labor as well. While we can say that the geography, the map of the global supply chain of fashion has been previously shaped (mainly) by searching for low labor, now, the fashion industry has reached a crossroad where speed beats marginal labor costs regarding to the economics of scale in terms of marginal advantages and fashion is facing challenges as convergent labor cost. But in terms of global production, the gap is slowly, but getting to close as differences between wages became smaller: wages are growing at the peripheral (Asian) countries as well. But not just cost-efficiency lies in the background of relocation: the recognition of the importance of local supply and production, changing customer needs, cost reduction and optimalization of the supply chain, besides speed and flexibility are also factors behind the tendencies. Furthermore, fashion brands can benefit from the closeness of production to their markets as well [7]. According to the World Trade Organization's world textile and garment trade statistics published in 2019 (that refers to 2018 business year) both the US and the EU had been importing more finished textile products (such as home furnishings and carpets) as well as highly specialized technical textiles, rather than conventional yarns and fabrics for apparel production purposes. As Sheng Lu, assistant professor of fashion and garment studies at University Delaware points out: the weakening import demand for intermediary textile raw materials also suggests that reshoring (i.e., making apparel locally rather than sourcing from overseas) has not become a mainstream industry practice in the developed economies like the US and the EU [8]. As we could see, we cannot talk about significant relocation within the fashion industry formerly, based on the WTO's data, even if management literature has been emphasizing the process for around 10 years. It is still early to see clearly, what changes will the COVID-19 bring to the world economy.

Even if we can consider delocation (and outsourced production) as a continuously ongoing tendency, operational challenges and increasing costs are having effect the management of the global supply chain, and resulted the rethinking and reorganization of the activities within their supply chain, like re-location of their production or switching to local supplier [9]. The CEE region is attractive for Western companies because of its geographical and cultural proximity, the existing production capacities, qualified workforce and low-level respect and inadequate adherence to national, labor rights regulation [10].

Transportation is also a significant factor in terms of relocation motives: sea transport is the most common, but it takes time: it takes around 30 days for a parcel to reach Western-European markets from Asia and air transport is considered to be too expensive [11]. Former advantages of delocation are also derogated by geopolitical tension, trade agreements and the insecurity, caused by fluctuation in exchange rates as well.

A report of McKinsey & Company published in 2020, focusing on how fashion brands can use the crisis to make fashion sourcing more agile and sustainable it also prognoses changes in the fashion supply chain due to coronavirus: cut lead times, smaller batch sizes, increased transparency and sustainability (commitment from brands), a more demand-driven attitude besides increased flexibility and speed. The prognosed changes also include the reduced dependency on international fabric imports, the implementation of nearshored sourcing and forging stringer supplier partnerships. It is also highly capable that garment manufacturing clusters will emerge in Eastern-Europe [12].

Even if the CEE region is at the center of this paper, I cannot ignore the concerns and I would like to turn the light on the circumstances of the developing, least developed East-Asian countries, who are giving the significant part of the mass market garment production. It is like a zero sum game: if relocation and regionalization will be mainstream tendencies and processes, and Western-European fashion brands relocate their production to the region, that will mean the demise of big factories in poor countries at the other side. According to Shehadi, the Covid-19 pandemic has highlighted the need for more regionalised, tech-driven manufacturing that is closer to consumers, and has rehashed the dangers of long supply chains, while the rise of automation (or Industry

4.0) over the past ten years has made it cheaper to produce goods in less labour-intensive factories (and therefore be less reliant on low-cost countries). The author claims that even not every fashion brand will bring back production, ‘the days of big, cheap factories are numbered, and their loss in the coming decades could have devastating effects on developing countries’ [13].

Even several literature has claimed the importance of relocation and shorter supply chains and many reports presented the ‘likeliness’ and showed the ‘willingness’ of fashion brands and sourcing managers relocation, we can also consider delocation mainstream. Further proof and further studies on that ‘relocation is actually happening’ is a gap, so I have made several interviews to fill it with the experience of industry insiders and experts, mainly representatives of Hungarian fashion production companies. I conclude the results of the interviews in the following. My main questions were: Do you experience relocation tendencies as does the company ‘enjoy’ growing orders or new clients who relocate its production back from Asia? What are the factors from your point of view that moves relocation? Relocation faces several challenges as well that I will conclude later at the next chapter.

According to the representative of the HFDA: “The region’s countries are a favorable production partner for Western-European brands because of the low labor cost and tax burden (compared to the home country) as they are willing to pay more for good quality and reliable solutions since they have been disappointed in Asian production. The small Hungarian companies are in a great position as they are flexible and can work as an atelier and offers high handcraft skills and can make difficult products as well” [14].

Elegant Design Private Limited Company operates as an upgraded company since they act as intermediaries and subcontract assembly activity to 12 local and 20 Romanian factories. They are specialized in product development and logistic as well, working with 25 brands and welcomed new ones during the pandemic. I interviewed the director of the company, Ildikó Medgyessy Dr. “We are getting enough (order), but the prices are lower, with 10-20 or even with 30% and clients pay later than the average.” According to her, the worst scenario is that the local industry will be shrinking and the bigger companies (employs around 50 people, there are only a few of them) will disappear and small, atelier-

look companies, will work with who can produce smaller quantities as well as China is not rival in 'vállfás áru' (higher market category garments) [15]. This prognosis can be also illustrated by that one of the biggest garment factories, successor of 'Vörös Október Ruhagyár' and former Berwin Ruhagyár Private Limited Company, now ARJ Ruhagyár Private Limited Company in Vásárosnamény has left its 530 worker 'in lurch' in 2020. The possible causes of the closure are reduced orders and bad management while the COVID-19 pandemic was another kick for the loss-making company [16].

The joint KÉZMŰ, ERFO and FŐKEFE nonprofit company is the biggest employer of workers with reduced work capacity and people with disabilities. On 140 manufacturing sites from their 10 thousand employees, 83% are workers with reduced work capacity. The company has clients who they are working together with 5-10 years, and now 20% of their partners are 'new' (started to work with them during the past 1-2 years) and they experience a 'day-to-day' growing of new clients. According to their experience, those fashion brands who offer smaller series, were not likely to outsource their production to the Far-East. They also confirm the fashion brands' growing relocation of production from Asia, according to their numbers from the past 3 years, even brands who offer bigger quantities want to find partners in the region. Primarily, from their experience, German, Austrian and Italian fashion brands relocate their production and offer confection garments, home textiles, bags and leather goods. „The process has also begun at the sourcing of raw materials. China offers favorable prices in total for the finished products, but these textiles are relatively expensive next to cheap production cost. Those (fashion brands) who wants to run production closer, find better prices for textiles in the Near East.' According to them, now, flexibility is one of the most important for fashion brands who are suffering from the shrinking markets and that is challenging as they cannot give 'long-time prognose' but in return, they need very strict deadlines [17].

From the point of view of the interviewees, the beneficial factors of Hungarian production are the following: geographical proximity, cost-effectiveness in transport, long-standing tradition in manufacturing, easy, effective and fast communication, the opportunity of collaboration from design processes to product development and final products,

keeping the deadlines, fast and easy correction of problems and misunderstandings, next to the bearing capacity and the work mentality that they declared as ‘we love to meet challenges.’

3. COMMON CHALLENGES OF THE COUNTRIES, REGARDING TO UPGRADING

In parallel with the delocation tendencies, intensified from the 1990s, European fashion production became a ‘declining industry.’ The region’s fashion industry is deeply integrated to the global supply chains through the high rate of export and contract work as well. According to Gereffi and Fernandez-Stark, we can differentiate two key concepts of the global value chains: ‘governance’ is the top-down view which focuses mainly on lead firms and the organization of global industries. The other concept for the bottom-up perspective is ‘upgrading,’ which focuses on the strategies used by countries, regions and other economic stakeholders to maintain or improve their positions in the global economy [18]. The ‘economic upgrading’ is defined as the process by which economic actors – firms and workers – move from low-value to relatively high-value activities in GVCs through upgrading in product, process, function and chain. In terms of the fashion industry’s GVC, upgrading means stepping out from a dependent position is possible through taking strategic functions and building own supply chains. In the fashion industry, we can distinguish CMT (cut-make-trim), OEM (Original Equipment Manufacturing: manufacturing with the addition of sourcing equipments and raw materials), ODM (Original Design Manufacturing – manufacturing with the addition of design) and OBM (Own Brand Manufacturing) as steps of development. [19]. The concept of social upgrading has been described as “the process of improvement in the rights and entitlements of workers as social actors by enhancing the quality of their employment” [20]. In both developed and developing countries, there is growing concern that the economic gains of participating in global supply chains do not necessarily translate into good jobs or stable employment and, in the worst case, economic upgrading may be linked to a significant deterioration of labor conditions and other forms of social downgrading [21].

We can experience a tendency among Hungarian companies in terms of economic upgrading, within chain upgrading as they are moving towards new, but related industries. According to Anna Hannauerné Szabó, head of Textile and Garments Section of the National Association of Entrepreneurs and Employers (VOSZ), “the production of home and car industry textiles helps fashion companies; it improves its statistics in a wild way” [22]. She also emphasized a tendency within local companies moving towards other segments, like specializing and working with functional textiles as garment production is decreasingly beneficial.

Even if we consider relocation as a continuous, intensifying tendency, there are so many challenges in terms of the recipient countries. Due to the lack of capital and technology, they are trapped in subcontracting that means moving towards upgrading – economically and socially as well – extremely challenging. As before the regime change, light industries were also supported by the government and the Comecon market meant a stabile market for the products of the companies, after the regime change, with the transition to market economy, also suffered from the lack any industrial policy. The Hungarian Fashion & Design Agency (HFDA) is the first and only institute, focusing on the local fashion and design scene. HFDA was established as a subsidiary of the Hungarian Tourism Agency in 2018, with the aim of providing structured and efficient professional assistance to all players in the industry. They established a mentoring program for manufacturers that focuses on increasing export capacity and efficiency, besides establishing a financial support scheme with the Ministry of Innovation and Technology and a partnership with the Hungarian Export Promotion Agency in 2021.

The comparative advantage of the Hungarian fashion companies lies in quality contract work and labor cost is a crucial point of it. After the regime change, the vocational training system also collapsed in Hungary and most of the workers are employed as sewing operatives, often low-skilled and trained on the job. The wages of the fashion workers are closely attached to the minimum guaranteed salaries and wages. Earning the minimum wage is not attractive for (younger) workforce as it does not reflect on the complexity and the exactitude of the garment sewing. Furthermore, public work also has a sniping effect. From the aging workforce perspective Anna Hannauerné Szabó declares that

Hungary is in a terrible position. “There is no education. Only bigger fashion companies are able to organize trainings.” According to her experience, the quality, the time and the cost are the only three factors, that matters to clients. Hungary has ‘good press’ regarding the respect and enforcement of (labor) laws and it is more and more important to fashion brands that health and safety at work is guaranteed at companies, where their products are made and proved to offer better quality than Romanian, Bulgarian and Ukrainian companies [23].

In terms of social upgrading, wages are stuck to minimum wages that is not attractive for young people as it does not represent the complexity of garment production. Then, having a national, settled minimum wage does not mean that workers are getting that amount of money: there are companies where employee wages are attached to competition of ‘daily norms’: if they complete 80 percent of the norm, they get the 80 percent of the minimum wage. Hungarian labor rights are decreasingly serving the interest of workers. Overtime is often not paid as overtime law sets a ‘working hours frame’: in practice, it means that overtime work is ‘slipped down’ at ‘dead seasons’.

‘More and more (fashion) company started to communicate their social responsibility as they seem better in the eye of the society if they can tell that they worked together with people with disabilities’ [24]. This tendency is absolutely favorable for them and supports social sustainability and inclusive employment. The operation of KÉZMŰ, ERFO and FŐKEFE proves that workers with disabilities are perfectly able to fulfill every step of fashion production, from cutting to sewing. The only difference between workers and workers with disabilities is the amount of time, not quality. Reduced work capacity also entails increased precision in their work, focused attention and in some cases increased tolerance of monotony.

CONCLUSIONS AND SOLUTIONS

The fashion industry of the Central-Eastern European region has long been neglected. The COVID-19 pandemic has disrupted the global supply chain of fashion in several level, from the raw material production to the retail as well. It also turned the light on the growing need for

shorter supply chain and the reform of sourcing practices. Another result of the pandemic is that it turned the light on the importance of the textile and the garment industry as medical textiles, masks and medical overalls was widely used and worn by health care workers (and everyone during the pandemic). Experienced shortages regarding to medical supplements and masks has also crucially showed the dependency on (Asian) import and the weakness of the fragmented supply chains. Formerly, fashion was cheating low labor but then, new factors were arisen due to the pandemic in terms of production location decisions: speed over low labor cost, resilience, trust, collaboration, flexibility and quality (disappointment in Asian production). The pandemic also shaped the customer habits towards sustainable fashion and caused a growing interest in sustainability and transparency. At the end of the day, customer preference will shape fashion brands business model and supply but the question is still open: Will they buy less, choose well and make it last? The sweatshop scandals and the critic of the opaque supply chain can give a pressure from the NGOs and the netizens to relocate production into 'more safety' countries and regions. We are living in unprecedented times and no one can know when can we go 'back to normal' or will we ever go back to normal? According to the EURATEX, the European Apparel and Textile Confederation survey, fashion companies expect a 50% drop in sales and production and 80% of them are already laying off workers. Finally, the confederation prognosed the ceasing of every fourth European fashion company [25]. With the (possibility and the threat of) bankruptcy among fashion brands and retailers, production companies are in danger as well as they rely on their orders and they are in a highly dependent position. The ceasing of certain fashion production companies can cause switch as their clients can look for replacement. Even if I got proof of growing, experienced relocation, I can not conclude the tendency representative, further research is needed. It is still a question that experienced relocation and the reported growing orders mean short or long term tendency? An other reported tendency, that fashion production companies are turning their eyes to other segments, related to textiles and production is a safer way due to the volatile fashion retail environment. The restructurement of company's size is also prognosed that cause a case that is worth further studying. Accord-

ing to Andersson et al. (2018), who identified nearshoring, automation and sustainability to the three main tools for establishing a demand-focused garment value chain, offering nearshoring to mass market brands as well, declaring the process will not happen without challenges. As we have seen, relocation tendencies are welcomed and even introduced in higher parts of the fashion pyramid. Bringing production (back) closer to consumers with near- and onshoring offers the opportunity for reducing lead time, but according to their survey, fashion brands are more likely to take action by 2025. Central and Eastern European garment production is fragmented (SMEs dominates), quality and labor productivity in some countries are volatile but also carrying own environmental and social compliance risks. One of the main challenges is the sourcing of raw materials – that dominantly are placed in Asia [26]. Additionally, not so flexible bigger factories – who would be able to meet the expectations in terms of capacity by mass market fashion brands – can possibly cease sooner by the pandemic caused economic conditions, than relocation would actually reach them.

Additionally, the lack of workforce and the aging employees considered to be the most crucial factor of the fashion production. If the workforce is seriously reducing during the past years, there is no point to talk about the possibilities and options of upgrading in terms of relocation. The fashion industry takes part in inclusive employment as people with disabilities are perfectly capable of doing every step of production. Additionally, there are more companies who communicate that they employ people with disabilities as they enjoy a better profile in this way in the eye of the society. In a short term, flexibility was key: producing masks were a lifebuoy for several fashion companies (and even fashion designers) in Hungary. In the long term, besides the need for industrial policy and government support, I see sustainability and technology as keys as well: implementing sustainable solutions, like innovative and environmentally friendly waste management, energy-efficiency, meeting environmental and social standards etc. can help make companies more attractive in the eye of the clients (fashion brands). It would be easy to make a conclusion like moving towards other sectors would be preferable but the fashion industry is a big employer, especially in rural areas, where there is no possible alternative.

SUMMARY

The fashion production companies in Central-Eastern Europe have been playing an important role within the fashion supply chain: they are subcontractors of well-known, 'house-hold name' fashion brands. But their role stays invisible in the eye of the customers as where the clothes are actually made remains hidden. Due to the nature of garment production (high need of labor), fashion is a big employer in rural areas. The COVID-19 pandemic has visibly disrupted the supply chains and turned the light on the importance of resilience to future shocks – and a shorter supply. The pandemic has boosted the already started relocation tendencies (nearshoring and backshoring) from Asia and the region is a potential destination at fashion production as Central-Eastern European companies are a long-standing, reliable partners of Western brands and the industry has a tradition and acknowledged expertise in fashion manufacturing.

The second part of the XXth century and the globalization brought changes in the geographic of the production, and into economic structure as well. Developed countries with higher wages (with the purpose of the improvement of their competitiveness) outsourced high labor need, work-intense production processes to regions with lower wages – to Central-, Eastern-Europe as well. From the 1990s, the basis of the collaboration between Western and Eastern European countries fashion industry was the so-called outward processing trade (OPT) practice: the contractors transported semi-processed products, like fabrics, cuttings or semi-finished products to low wage subcontractors in Eastern Europe for assembly and intermediate work processes. As a result, periphery countries acted as 'sewing workshops' for Western fashion brands and that practice also remained after the regime change and the join of the European Union as well. As the fashion industry mainly works with independent companies and short-term contracts, increase hierarchy within the power relations of the different actors and the dependency of the production companies as well. The practice of subcontracting (contract work) means that the contractor (the fashion brand) owns the raw materials and other needed equipments (like zippers, buttons) and entrust the subcontractor (the company, who makes the production) to make the ordered garments after the specified documents

and earning a charge. Assembly activity nevertheless mean the lowest value added activity along the supply chain of fashion.

While we can say that the geography, the map of the global supply chain of fashion has been previously shaped (mainly) by searching for low labor, now, the fashion industry has reached a crossroad where speed beats marginal labor costs regarding to the economics of scale in terms of marginal advantages and fashion is facing challenges as convergent labor cost. But in terms of global production, the gap is slowly, but getting to close as differences between wages became smaller as wages are growing at the peripheral (Asian) countries as well. But not just cost-efficiency lies in the background of relocation: the recognition of the importance of local supply and production, changing customer needs, cost reduction and optimalization of the supply chain, besides speed and flexibility are also factors behind the tendencies. Furthermore, fashion brands can benefit from the closeness of production to their markets as well.

Even if the world trade statistics of the WTO, regarding to textile and garment trade does not validate significant relocation tendencies (that can be measured as the trade of intermediary products as tool), several interviewees has reported experienced relocation and growing orders and a switch in terms of the factors that shapes fashion companies sourcing decisions. Former advantages of delocation are also derogated by geopolitical tension, trade agreements and the insecurity, caused by fluctuation in exchange rates as well, besides the slowness of sea transport from Asia and the expensiveness of air transport. One prognosed consequences of the pandemic-caused economic conditions is that the bigger companies (employs around 50 people, there are only a few of them) will disappear and small, atelier-look companies, will work with who can produce smaller quantities. It is in conflict with an other prognosis, that mass market brands are more likely to relocate their production to CEE clusters: the bigger companies who could meet the expectations of the clients can cease before relocation would be happening. From the point of view of the interviewees, the beneficial factors of Hungarian production are the following: geographical proximity, cost-effectiveness in transport, long-standing tradition in manufacturing, easy, effective and fast communication, the opportunity of collaboration from design processes to product development and final products,

keeping the deadlines, fast and easy correction of problems and misunderstandings, next to the bearing capacity and the work mentality that they declared as ‘we love to meet challenges.’ We can experience a tendency among Hungarian companies in terms of economic upgrading, within chain upgrading as they are moving towards new, but related industries as garment production is declared to be less beneficial than formerly.

Even if we consider relocation as a continuous, intensifying tendency, there are so many challenges in terms of the recipient countries. Due to the lack of capital and technology, they are trapped in subcontracting that means moving towards upgrading – economically and socially as well – extremely challenging. As before the regime change, light industries were also supported by the government and the Comcon market meant a stable market for the products of the companies, after the regime change, with the transition to market economy, also suffered from the lack any industrial policy. In terms of social upgrading, the wages of the fashion workers are closely attached to the minimum guaranteed salaries and wages. Earning the minimum wage is not attractive for (younger) workforce as it does not reflect on the complexity and the exactitude of the garment sewing and public work also has a sniping effect.

NOTES

- 1 In terms of market segments, there are several types of fashion brands that is the so-called fashion pyramid. On the top of the ‘pyramid’, there are the haute couture and luxury brands. Under them, there are the high-end brands that are often connected to the name of the designer, then the bridge and the premium brands. Finally, mass market brands represent the most affordable price category and have the widest customer base. Creativity, originality, handmade details and price are becoming even lower as we reach the lower parts of the pyramid.
- 2 Fast fashion is an inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends. Fast fashion retailers often ‘copy’ the trends and garments of the higher market segment (like premium, high-end, designer and luxury). Ultra fast refers to fashion brands, like Asos, Boohoo and Missguided who mainly sell online and represents an even rapid product cycle.
- 3 This paragraph was originally written by the author at a book chapter *The promise of sustainability and the pandemic? How Hungarian fashion production compa-*

nies could gain better position in the global supply chain due to re-location tendencies to the 'Environmental, social and economic sustainability in the light of the (geo)political challenges of our age' volume, edited by Zsuzsanna Szerényi, Zs., Salamin, G., Nemes, Zs. and published by the Pallas Athene Domus Meriti Foundation (PADME) and Corvinus Geographia, Geopolitica, Geoeconomia. Corvinus University of Budapest, Budapest. ISBN 978-963-503-886-2 DOI 10.14267/978-963-503-886-2

- 4 The 'buy less, choose well and make it last' is a quote from famous British fashion designer and environmental activist, Vivienne Westwood that is widely used in terms of sustainable fashion. It represents the confrontation and the reverse of the mainstream consumption culture and the fast product cycle and the disposal of cheap garments.
- 5 Netizen is a mixed word: it consist of net (the short version of internet) and citizen. It is used to describe the internet users who actively and keenly express their opinion towards politics and firms as well.

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RUSSIAN AND CHINESE VACCINE POLICY IN CENTRAL ASIA: COMPETITION, COOPERATION OR COMPLEMENTARITY?

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ABSTRACT

Following the disintegration of the Soviet Union, the press as well as the literature often referred to the Central Asian region as the arena of the “Great Game”, the geopolitical rivalry of the superpowers, primarily of Russia and China, despite the fact that in the 1990s the region seemed to be in a type of vacuum of superpowers and suffered from geopolitical abandonment. Concerning Central Asia, in subsequent decades, there was more cooperation than rivalry between China and Russia in several fields. It was a type of complementary relationship. It can definitely be established that following the COVID-19 pandemic, however, a new dimension, that of vaccine politics, was added to the main aspects (military, economic and cultural) of possible regional hegemonic ambitions. Both Russia and China regard research and development, production, and exportation of vaccines as a means of regional or global superpower politics and prestige. In addition to the brief introduction of Central Asian republics’ strategies of addressing the pandemic, the present paper addresses the question whether it is possible to speak of vaccine rivalry between Russia and China in Central Asia or cooperation and complementarity are the dominant features of their relationship in this aspect as well. The issue is of central importance for Central Europe, especially for Hungary, which is the only member of the European Union that uses both Russian and Chinese vaccines.

Keywords: Covid-pandemic, Central Asia, China, Russia, vaccine politics

1. CENTRAL ASIA: THE ARENA OF RUSSIAN – CHINESE SUPERPOWER RIVALRY?

The disintegration of the Soviet Union created a drastically different situation in the Central Asian region. Several analysts argue that the unsolicited independence of Central Asian republics opened up a new arena for superpower rivalry in the heart of the Eurasian continent. According to the almost cliché argument in the literature about Central Asian states' international relations, this is a direct revival of the 19th century strategic rivalry, the "Great Game" between tsarist Russia and the British Empire – naturally with different actors this time. [1, 2] On the other hand, Philip Shiskin maintains that in the 1990s the post-Soviet Central Asian region suffered much more from a type of strategic abandonment: despite its geostrategic significance and considerable hydrocarbon resources measured even by global standards, superpowers showed rather limited interest in the new Central Asian states. "... Central Asia is no one's top priority," Shiskin is quoting a senior official at the U. S. State Department in the 1990s. [3]

Many are inclined to see the Central Asian republics as Russia's 'backyard'. Indeed, among the superpowers, to this day it is Russia that has the most extensive network of political and diplomatic relations and the most considerable military 'hard power' in the region. For the sake of its own security, Russia regards the maintenance of the Central Asian status quo as its primary and direct interest, while Central Asian regional hegemony is of key significance also for Russian foreign politics with its superpower identity. [4] Naturally, the life and future of the some five million ethnic Russians living in minority in the Central Asian republics is not immaterial either for Russia. [5]

Three of the five post-Soviet republics (Kazakhstan, Kyrgyzstan, and Tajikistan) are members of the Russian-dominated Collective Security Treaty Organization (CSTO)¹, and Russia maintains military establishments with various functions on their territory.² Up to as late as 2005, the Tajik - Afghan border had been guarded by Russian troops vested with a Commonwealth of Independent States mandate. At the same time, Turkmenistan, which conducted a consciously isolationist foreign policy under the motto of "positive neutrality" proclaimed by President Turkmenbashi, and Uzbekistan that aspired to be the regional leader,

put an end to the Russian military presence, making every effort at creating their own independent space of movement for their foreign politics against Russia. Although Uzbekistan was one of the founders of the CSTO, in 1999 it did not renew its membership. In 2005, however, probably because of the harsh western criticism of the Karimov regime following the Andijan massacre, they rejoined the cooperation, which in 2012 they left again. [6]

Russian efforts at the economic reintegration of the region have yielded far less success than the extension of military protection over post-Soviet Central Asia. According to Aleksy Malashenko, the noteworthy decline of Russia as an economic power centre is well reflected by the fact that while in 1991 the Community of Independent States comprised twelve former soviet republics, and between 1994 and 1999 the CSTO had nine members, the customs union of the Eurasian Economic Community – called Eurasian Economic Union from 2015 – was set up with the participation of only three successor states, namely Russia, Belarus, and Kazakhstan. [9] It should be added that in 2015 Armenia and Kyrgyzstan also joined the cooperation, and it seems likely that Tajikistan, which is strongly reliant on Russia in the military and energy areas, will do the same in the near future. Although the Eurasian Union is a cooperation project based on supranational bases in the post-Soviet space, it now appears that Russia is the main trade beneficiary of the integration [11]. It is perhaps due to this trend that although Uzbekistan's possible accession was on the agenda from 2016 when President Mirziyoyev took office, in January 2020 the Uzbek parliament voted for the country's observer status rather than full membership. [10]

Currently, China is a more dynamic and more proactive actor both in trade and capital investment than the economically shrinking Russia. The Central Asian republics' aggregate trade volume with China is larger than their turnover with Russia and the European Union. [11] Thereby, for several Central Asian republics China has replaced Russia, their traditionally main trading partner. Since the 2010s, the Central Asian countries have been importing the majority of everyday consumer goods from China. [12] Kirgizstan, which joined in 1998 and was the first and only Central Asian member of the WTO for years (Tajikistan joined the organisation in 2013, and Kazakhstan in 2015), is still the

main centre of the cross-border trade and reexport of cheap Chinese mass consumer goods. Although when Kirgizstan joined the Eurasian Economic Union in 2015, to some extent this threw back the cross-border trade of Chinese goods, but it is estimated that even today Chinese consumer goods are bought and sold in the Kyrgyz bazaars to a value that is close to the annual Kyrgyz GDP. [13]

Central Asian republics are major targets of the Belt and Road Initiative (BRI³), which is of dazzling dimensions. The highly ambitious Chinese investment projects in the Central Asian region, that the press sometimes euphemistically refers to as the “New Silk Road”, are almost exclusively related to the energy or the transport infrastructure sector. Here, the energy sector is always strongly intertwined with state power. As state-run enterprises, the national oil and gas companies are typically owned by the circle of the ‘presidential family’ or a close group of the political elite. As Marlène Laurelle and Sébastien Peyrouse point out, the latter are the main beneficiaries of Chinese investments and operate as a decisive pro-China lobby. [14].

One of the reasons why Chinese investors receive a warm welcome from Central Asian authoritarian elites is that, unlike in the case of western agreements, Chinese loans and investments have never been made politically conditional. This fact in itself makes China a popular economic partner for many of the developing countries. For example, György Nesz mélyi shows a similar case in Nigeria. [15] As President Islam Karimov remarked in 2013, “In 22 years of bilateral relations between Uzbekistan and China, the latter has never set any political demands”. [16]

The reason why China’s ever more spectacular economic expansion over the past years has not elicited much objection on the Russian part is partly because Russia, suffering from western sanctions, is also increasingly reliant on Chinese loans, and partly because in the ‘hard power’ dimension China is not aiming at major penetration in the Central Asian region, which has traditionally been seen as part of the Russian geostrategic space of interest. Although four of the five Central Asian republics – the exception being the consistently isolationist Turkmenistan – are part of the Shanghai Cooperation Organization (SCO)⁴, created on a Chinese initiative, this can hardly be regarded as any type of anti-Russian orientation, since Russia is one of the strong members

of this security organisation. In the intergovernmental framework of the SCO, the members have put the main emphasis on cooperation in security policy and fighting terrorism, or to use the Chinese terminology, in the name of the fight against the “three evils” of terrorism, separatism and religious extremism. With reference to the historical differences in the participating countries’ cultural traditions, political and social models and values, the organisation is against any form of interference into their internal affairs. In the words of Bailes and Dunay, the SCO may be seen as a type of “regime maintaining” pact, whose ultimate aim is to keep the status quo of the reigning authoritarian systems. [5]

Although still to a very limited extent compared to Russian capacities, Chinese military presence should already be reckoned with in the region. Although Tajik officials deny it, there are several indications that in the territory of Tajikistan close to the Chinese–Tajik–Afghan border, in the area of Murghab, since 2016 there has been a Chinese military outpost called *Sitod* (meaning ‘headquarters’ in Tajik). When in 2019 the Washington Post reported sighting a secret Chinese military base, Tajik officials reacted by saying that the western journalist had probably mistaken some Tajik border guard barracks for a Chinese base. Since then, the presence of Chinese staff in the establishment has been confirmed by locals, for example, when interviewed by Anahati Dodikhudo, the Dushanbe-based correspondent for Iran International. It seems that the main objective of the military base is to monitor Uyghur extremists trying to migrate from Afghanistan to the Chinese Xinjiang via Tajik territories. [17]

Although Chinese investors and Central Asian political elites maintain close and friendly relations based on mutual interest, in the republics’ wider public opinion, there are considerable reservations, and even Sinophobic sentiments against China, partly due to the brutal oppression of the Uyghurs, who are regarded as brothers of the Turkic people. Related to the grand infrastructural investments of the BRI project, fears about the Chinese “lease of land” especially in Kazakh and Kirgiz society have led to protest movements against China and even atrocities against Chinese citizens in these countries. [18, 19] In addition, wide ranging Kazakh and Kirgiz concerns about the Chinese economic and social expansion have been coupled with a certain degree of cultural

resistance. Citizens' attitudes to China and the Chinese have been examined in Kazakhstan only by one extensive survey so far, conducted by Yelena Sadovskaya. [20] It is shown that the overwhelming majority of respondents still feel that China is culturally more distant from them than Russia, or even Western Europe. It needs to be also remembered that although Moscow's political influence is generally met with distrust, up to this day the language of the press, public life and popular culture is predominantly Russian.

Russia and China, the two superpowers with the strongest strategic interests in Central Asia, could potentially be each other's rivals, but in practice they seem to have established a special 'division of labour' over the past decades. Russia continues to provide the military shield against militant Islamist Jihadism threatening the region from the south, and as a lingua franca the Russian language enjoys a cultural advantage, which China will find hard to offset. For these reasons, China is not trying to compete with the Russian military presence, even less does it strive at 'cultural imperialism'. Instead, it is trying to strengthen its economic influence through trade and infrastructural investments, mainly in sectors from where Russian capital is gradually withdrawing. Amid these dynamics of a fragile balance, the 2020 coronavirus pandemic with the accompanying rise of Russia and China as global vaccine superpowers have opened up a dimension that is worth thorough examination. The following sections deal with these issues.

2. RUSSIAN AND CHINESE VACCINE POLICIES IN CENTRAL ASIA

Related to the pandemic in the Central Asian region, it is to be noted that the countries' official statistics are notoriously unreliable in other areas as well. One telling example is that officially Turkmenistan is still corona-free. It is hoped that by interpreting the official figures through the lens of the independent press and expert sources, we might obtain a fairly realistic picture of the true situation.

According to press reports, the first three coronavirus cases (positive test results without sickness) came from Kazakhstan on the 13th of March 2020. The first infected people to be registered by plane ar-

rived from Germany and Milan. By the 15th of March, the number had increased to nine, and the Kazakh government declared a one-month state of emergency.

Instructed by President Kassym-Jomart Tokayev, Kazakhstan cancelled the Nowruz Persian New Year celebrations scheduled for 21-23 of March, as well as a military parade on Victory Day on the 9th of May. [21] The first positive case in Uzbekistan was reported on the 15th of March (in an Uzbek citizen returning from France), by the 16th, the number went up to six, among them two citizens returning from Istanbul. In Kazakhstan, the announcement was followed by measures similar to those in Uzbekistan and Kyrgyzstan. [22] In Tajikistan, the authorities had been denying the presence of the virus to the very end of April; nevertheless, they implemented restrictions (banning mass events, closing schools, and introducing travel limitations). Finally, on the 30th of April, only a few days before a WHO delegation's visit, Tajik Prime Minister Kohir Rasulzoda officially admitted the first fifteen cases. Subsequently, the official figures jumped to four thousand within less than a month. [23]

The Turkmen regime selected an even more idiosyncratic strategy than the Tajiks: according to the official communiqué, up to this day COVID has not appeared in Turkmenistan. [24] Turkmen President Gurbanguly Berdymukhamedov, who had served as minister of health between 1997 and 2007, held a special meeting on the 13th of March in which he recommended to his minister and his compatriots the burning of herbal remedies as a cure for bronchial disease. [25] Despite all that, Turkmenistan also introduced certain restrictions in February-March 2020. In the capital Ashgabat they closed the sports facilities and shut down the resort town of Avaza by the Caspian Sea. [26] Flights to China were suspended, but the preparations for the March 20th Nowruz celebrations were going ahead. [25] Although the information in the western press that even the use of the word 'coronavirus' had been banned in Turkmenistan seems to be exaggerated, [27] it is a fact that in the Turkmen state media not a word was said about the epidemic. In this light, it is not surprising either that in May 2020 there was "deafening silence" after a hurricane had hit the eastern parts of the country. [28] While in the *hospitals* of the capital Ashgabat there were obvious signs of the virus infection, Radio Free Europe's Turkmen Service reported that individuals had been arrested for talking about the global pandemic in public. [27]

The conclusion can be drawn that except for Turkmenistan and Tajikistan, Central Asian republics reacted fairly fast to the challenge of the first wave of the pandemic. [29] The official figures of infection stayed relatively low, especially in comparison with the horrendous case numbers in Iran, a country neighbouring the region. Restrictive measures, on the other hand, were not exceptionally drastic by international standards. [30] On the 11th of May 2020, for example, both Kazakhstan and Kyrgyzstan suspended its restrictive measures, and soon after that the population stopped wearing masks and social distancing. In his speech in May 2020, the head of the Kyrgyz national centre for the control of viral infections almost reprimanded those Kyrgyz citizens that still wore masks after the lifting of the restrictions. In June 2020, in Kazakhstan the activist Alnur Ilyashev was found guilty of the “dissemination of knowingly false information that threatens public order during the state of emergency” simply because he had posted on Facebook harsh criticisms of the government’s pandemic response. [31] The national economies of Central Asia had already suffered the first wave of the pandemic partly because of a drop in oil prices, and partly because guest workers’ remittances were not arriving. The latter specifically affected Kyrgyzstan and Tajikistan⁵. [32]

By May 2020, strict restrictions had been eased practically everywhere. With 5,279 confirmed coronavirus cases and 32 deaths, Kazakhstan stopped the health emergency on the 11th of May and relaunched its internal flights before the end of the month. Kyrgyzstan also stopped restrictions on the same day. The data provision of the two countries which are relatively the most transparent in their handling of the pandemic reflects that we are on a slippery slope when trying to build a reliable picture of the spread of the infection. By the 30th of June 2020, Kazakh authorities had reported 22,308 cases. However, when the recording protocol was modified, the number suddenly almost doubled to 41,065. In the same way, when in Kyrgyzstan not only cases with typical Covid symptoms were included in the statistics, but the number of cases also jumped from 13,101 to 24,606 in one day between the 30th of June and the 1st of July. [31]

In the light of the November 2020 OECD analysis, the national economies of Central Asia seem to have been more seriously affected by the second, late summer-autumn wave of the pandemic than their health

systems. Apart from a few soaring case numbers, that are mostly of a local dimension, in June and July, Central Asian death rates were much more favourable than in several European OECD member states, including the United Kingdom, France and Germany. Based on official data, in November only Kyrgyzstan counted among the fifty most infected countries (42nd place), while on the same list Kazakhstan was 61st and Uzbekistan 109th. In the meantime, all Central Asian republics went through economic recession primarily caused by the above factors, namely a drop in the oil and gas prices and the missing remittances from migrants. The Kyrgyz economy is the one that fell to the greatest extent (by 17%), while the officially “coronavirus-free” Turkmenistan suffered the smallest decline of 1.5%. [33]

Following the relatively peaceful winter months, from March 2021 case numbers started a worrying increase in March 2021 in Kazakhstan, Kyrgyzstan, and Uzbekistan, while Tajikistan’s official communication seems to have returned to the Turkmen concept of being ‘corona-free country’. Uzbekistan reported a record 111 new cases on the 14th of March, the highest since December 2020. In Kazakhstan, 731 was the number of new infections in the first week of March, 963 in the second week, and 1082 on the 17th of March. Despite these figures, there were no strict restrictions, and citizens did not observe the recommendations of social distancing and wearing masks. The Uzbek head of state Shavkat Mirziyoyev himself also appeared without a mask in his public engagements, including a visit to an old people’s home. [34] In Uzbekistan, bars and restaurants were not closed, and mass events and football matches were not cancelled either. Kazakhstan took the situation somewhat more seriously: the country was divided into green, yellow, and red zones depending on the level of infection. In the red zones, primarily in the capital Nur-Sultan and Almaty, shopping centres, marketplaces and cinemas were closed over the weekends, and the March Nowruz Festival was cancelled again. [24]

The situation, however, is different from what it was a year ago because in the spring of 2021, Central Asian republics launched their vaccination programs. Kazakhstan, where three times as many new infections were recorded in April 2021 as the negative record in March, the campaign was started in February 2021 with 22,000 doses of Sputnik V vaccines administered. President Tokayev, as well as 4,000 workers in

the Tengiz oil field, which is vitally important for the national economy, have also received their inoculation. Outside Russia, Kazakhstan is the first country in the world to have received permission to locally produce the Sputnik V vaccine; the vaccine factory near Karaganda started rolling out the vaccine in February 2021. [35]

The locally produced Quaz Covid vaccine is already at the licensing stage. Kazakh Deputy Prime Minister Yerally Tugzhanov said the first 50,000 doses had already been made and were ready for transport in the vaccine plant built in the southern Kazakh region of Jambyl. According to plans, in the second half of 2021 some Pfizer-Biontech vaccines will also be arriving in the country. Although there had been negotiations along these lines, by March 2021, the Kazakh authorities had not ordered any Sinopharm or Sinovac products. However, Kazakhstan, where neither of the Chinese vaccines is authorized, announced on March 26 that it would take three million doses of the Sinovac-produced jab. [36]

According to a public opinion poll conducted in February 2020, Kazakh society, which is as vaccine-sceptic as Russia, demonstrates more trust in Russian vaccines (52%) than in the Chinese ones (20%). [37] All this may be explained by the general pro-Russia cultural orientation of Kazakh society and its deeply engrained Sinophobia.

On the 23rd of April, Uzbekistan made the announcement that the first doses of the Sputnik vaccine had been administered, but it does not transpire from the communique how many doses had been injected and how many had been received. There was a statement of having ordered 500,000 doses of AstraZeneca. [36] In Central Asia, Uzbekistan is the country that has the most extensive vaccine-related cooperation with China. Uzbekistan is also actively contributing to the third stage of the experimental trials of the Chinese Anhui Zhifei Longcom Pharmaceutical Company. Uzbekistan is using the locally manufactured ZF-UZ-VAC 2001, which is based on a Chinese licence. According to the latest reports, Uzbekistan has placed an order for 35 million (!) doses of Sputnik vaccines to be delivered by September 2021. The words of Foreign Minister Sergei Lavrov suggest that Russia has been considering allowing Uzbekistan to produce Sputnik V in the same way as Kazakhstan. [38]

Using 150,000 Chinese vaccines, Kyrgyzstan launched its national vaccination campaign on the 29th of March. There is however very little interest and trust in it, since up to April only 13,000 doses had been administered. In April, 20,000 doses arrived of the Sputnik V vaccine, which they used for inoculating the over 65s. [36] Via the COVAX initiative of WHO, 500,000 doses of the AstraZeneca vaccine produced in India are likely to arrive in May and June. Storage and transportation of the Pfizer shot seems to pose an insurmountable challenge to the country whose transport infrastructure is weak. [38] Kyrgyzstan's newly elected president, the nationalist-populist Sadyr Japarov, who had come to power after the 2020 unrest, caused a sensation when in his Facebook post of the 15th of April, he offered drinking tea from a plant called wolf's-bane as the magic cure for coronavirus infection. His health minister Alimkadir Beishenaliyev demonstrated the miraculous effect of the potion by consuming a glass of the brew in front of a packed room of journalists. With this move, Japarov entered the exclusive club of populist heads of state that recommend poisons for the coronavirus, whose members are Turkmen President Berdimuhammedov and US President Donald Trump. The scandalous Facebook post disappeared within a few days, but in the meantime several people were hospitalized with serious symptoms of poisoning. [39]

Regarding coronavirus-free Turkmenistan, and Tajikistan, which "conclusively" defeated the virus in the spring of 2020, although they both deny the presence of the pandemic, in the spring of 2021 they launched their vaccination campaigns. Through the WHO COVAX campaign, Tajikistan has received some 200,000 doses of AstraZeneca/Covishield vaccines made in India. It must be admitted that because of the news coming from Europe of blood clots caused by the vaccine, there is still considerable uncertainty about its application. According to Tajik officials, negotiations about the acquisition of Russian and Chinese vaccines are underway. While independent sources are reporting that in the month of April, hospitals in Ashgabat were overwhelmed with corona patients in a serious condition, the inoculation of medical staff was started with the Chinese Sinopharm product. It is reported that the officially licenced Sputnik V shots are also available in the country at a price of 285 dollars a dose. [36]

CONCLUSIONS

Having examined the epidemic and vaccine policies of Central Asian republics, the data available do not enable us to outline a clear picture suggesting some type of Russian – Chinese vaccine rivalry, or ‘vaccine imperialism’ in the region. Each of the states has received western vaccines, partly through the WHO COVAX campaign, although because of pragmatic reasons, primarily logistical considerations, Central Asian republics, understandably, favour Russian and Chinese products. Nevertheless, based on foreign trade figures, there is a thin line between the more Russified north (Kazakhstan and Kyrgyzstan) and the southern countries (Uzbekistan and Turkmenistan) that tend to draw closer to China in their vaccine policies, as well as in other areas. The Kazakh and Kirgiz leadership, as well as the population, seem to be more inclined to accept the Russian vaccines, in the same way as they generally favour the Russian orientation. In contrast, Uzbekistan and Turkmenistan, whose main trading partner is anyhow China, seem keen to strengthen ties with China.

NOTES

- 1 The so-called Tashkent Agreement, the Collective Security Treaty of the Commonwealth of Independent States (CIS) was concluded in May 1992 by six member states of the former Soviet Union within the Commonwealth of Independent States (Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Armenia). Later, Belorussia, Georgia and Azerbaijan also joined. It was renamed as the Collective Security Treaty Organization (CSTO). Even if this is not explicitly stated, member states find the guarantee for their security in the Russian tactical nuclear arms. [6]
- 2 Among others, there is the Sary Shagan radar basis by Lake Balkhash in Kazakhstan, the Kant airbase in Kyrgyzstan that houses the CSTO anti-terrorist operational unit and the Karakol torpedo testing site on Lake Issyk-Kul, while in Tajikistan there are several overland bases and a very special Russian military space surveillance facility called Okno (Window). [7, 8]
- 3 In the Anglo-Saxon literature “Belt and Road” (BRI) has become the standard label, replacing the earlier “One Belt, One Road” term. This is the acronym the present paper will use.
- 4 The initiative was launched at the Shanghai Summit in 1996, which intended to settle the border disputes between China and its bordering four states (Russia,

Kazakhstan, Kyrgyzstan and Tajikistan). The “Shanghai Five” held their regular annual meetings from then onwards. In June 2001, their informal meetings were given a formal organisational frame. Initiated by China, the Shanghai Cooperation Organization (SCO) was established, comprising the Shanghai Five and Uzbekistan. [5]

- 5 According to the World Bank’s 2015 data, guest workers’ remittances amounted to 31% of the GDP in Kyrgyzstan and 52% in Tajikistan! Actually, the Tajik share is the highest in the world. Although lower, in 2019 remittances still made up roughly 30 percent of the two countries’ GDP. The number of migrants often employed as illegal workers must have been between 2.7 and 4.2 million, many of whom had lost their jobs or were forced to leave Russia, where they were not entitled even to the most basic medical services. [32]

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THE IMPLICATIONS OF THE GREAT RECESSION

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ABSTRACT

The lessons learned from the crisis management of the 2008 Great Recession stem from significant structural differences between the two centers of the world, the United States and the eurozone. This has been one of the worst and most widespread global economic downturns since the Great Depression. The crisis is over, but it seems that the crisis has long-lasting consequences. In the case of the United States, a monetary, fiscal and political union is realized, with a single economic policy, operates as a coherent unit, uniting the three areas. Ten years after the Great Recession GDP is rising, unemployment is at the lowest level since 1969 and government debt is the highest it has ever been which can cause problems in the long run. In the case of the eurozone, we can talk about a monetary union. The crisis has highlighted the structural flaws of the eurozone, because without a unified fiscal policy no effective economic policy can be achieved. The symptoms of the euro area crisis weren't the consequences of the global economic downturn; rather the stalling of the integration process, the lack of real convergence, and the weaknesses of monetary and fiscal policy were the problems that have been brought to the fore and exacerbated by the crisis.

Keywords: Great Recession, global economic crisis, eurozone, post-crisis recovery

1. INTRODUCTION

The lessons learned from the crisis management of the 2008 Great Recession stem from structural differences between the two centers of the world the United States and the eurozone. This topic now is ex-

tremely relevant, as it was one of the worst global economic downturn since the Great Depression. More than ten years have passed since the crisis began, growth has started in some centers, but it can be seen that the crisis has long-lasting consequences, such as over-indebtedness in developed countries which redraws the relations of world economic centers.

Each center took a different path, which is also due to their structural differences. The United States was already a monetary, fiscal, and political union and saw the recovery in a different way than the eurozone. The United States risked a larger deficit to stimulate the economy and executed expansionary monetary policy in a form of serious “quantitative easing”, which has led to the current unsustainable level of public debt. However, quantitative easing started again in 2020 because of COVID-19 and FED’s balance sheet is bigger than ever. The euro area, on the other hand, is just a monetary union and the fiscal and political union is not realised. During the 2008 crisis, the European approach focused on tight fiscal policy and operated with a primary aim to prevent the over-indebtedness of the eurozone countries. The eurozone compared the United States introduced a smaller amount of quantitative easing during the 2008 crisis. After 2018 the years to come will still be about the crisis, but only in different ways: challenges such as debt reduction versus growth and withdrawal of incentives will come to the fore. Due to the different structure of the two centers they will follow different trajectories.

2. THEORETICAL BACKGROUND

2.1 Economic policy instruments

The aim of the economic policy is to solve economic problems and increase economic prosperity. Part of this is stabilization policy, which main objectives are stable economic growth, low inflation, low unemployment and a stable balance of payments. As it cannot deal with all the objectives at once, such as low unemployment and low inflation, it must have continuous impact on the economy.

2.2 Fiscal policy

The revenues of the fiscal policy are mainly taxes, and the expenditures are mainly government investments, purchases and transfers. A deficit or surplus is created for the sake of economic stability. Fiscal revenues and expenditures have an impact on the economy and GDP growth.

2.3 Monetary policy

The branch of economic policy that seeks to make profit from the effects of money on the economy. Monetary policy involves the size of money, public and corporate credit in the economy and the regulation of the interest rate and the exchange rate. Its ultimate goal is to stabilize the economy, but it is primarily suitable for reducing or raising inflation, eliminating balance of payments disturbances, and stimulating or restraining the economy.

Monetary policy is in the hands of the central bank and it can regulate the amount of money in the economy by controlling the amount of central bank money and by regulating the ability of commercial banks to generate money. The central bank can stimulate the economy with low interest rates, which increases investment and consumption, but if interest rates cannot be further reduced or interest rates can be reduced but the transmission mechanism does not work, unconventional central bank instruments can be used.

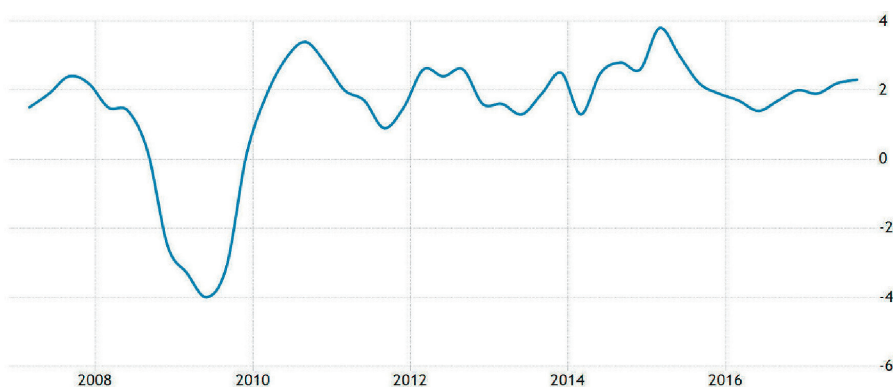
3. MATERIALS AND METHODS

In my paper I used different methods for data collection, while in some chapters I worked from books, periodicals, journals and central bank publications, which were mainly the theoretical background chapters and some data linked chapters. In other chapters I illustrated macroeconomic and economic policy processes. Therefore, I have accessed these from databases such as Trading Economics, which also compiles data from the CIA, World Bank, and IMF.

4. RESULTS

4.1 United States crisis management

The financial crisis emerged from the United States which has caused serious problems for the whole world. All countries have faced major challenges and significant measures have been put in place to bring economic stability. Crisis management was partly implemented through coordinated cooperation and partly within the framework under national competence. Some countries got help from international financial organizations. Bankruptcies caused by the financial crisis have spread to the whole economy. It caused reduced production, job losses, factory closures, rising public debt which are just a few examples of the global problems that required economic policy intervention. The following summary provides an overview of the measures that the United States has taken to recover from the economic crisis.

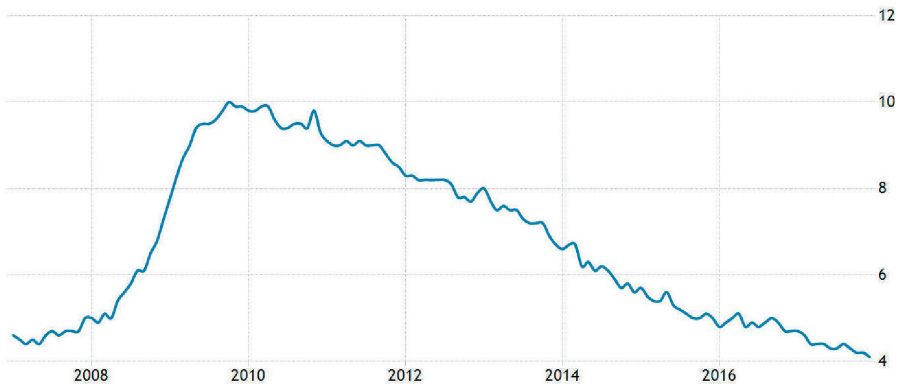


Graph 1: United States GDP annual growth rate (%), 01.2007.–12.2017.

Source: <https://data.worldbank.org/united-states/gdp-growth-annual>

The United States is the world's largest economy, a monetary, fiscal, and political union: its GDP was \$ 18,569 billion in 2016, nearly 25% of world GDP, and its population was 324 million. The country's public debt was 106.1% of GDP in 2016. The United States economy is largely determined by its internal market, which generates huge demand, and its competitive advantage is based on high value-added products [1].

The first Graph shows that, as a result of the crisis, U.S. GDP growth slowed from the first quarter of 2008 and then began to decline in the fourth quarter. The decline was at its lowest point in the second quarter of 2009, when it stood at -4.6%. This was followed by a reversal of the trend and the economic stimulus was taking effect: the economy started to expand from the first quarter of 2010, with growth of 1.9%. Between 2011 and 2017, GDP fluctuated between 1-3.8% and has not been able to exceed the 3.8% growth rate which the economy reached in the first quarter of 2015. It was clear that the crisis unfolded – GDP first slowed and then fell. A recession is a state of decline for two consecutive quarters for the U.S. economy, that was six quarters at the time of the 2008 crisis. The first graph also shows how growth reversed the downturn with the start of the stimulus and how GDP reached 2.3% in the third quarter of 2017. The U.S. has successfully emerged from the crisis on the basis of GDP indicator and has been growing steadily since 2010 on the observed timeline (Graph 1).



Graph 2: United States unemployment rate (%) 01.2007.–12.2017.

Source: <https://data.worldbank.org/united-states/unemployment-rate>

As a result of the crisis the unemployment rate rose above 5% in June 2008. After a year in June 2009, it was already above 9% and in November it exceeded 10%, but as the economy recovered the trend changed and the unemployment rate declined and stood at 4.1% in November 2017 [2]. Correlation can be detected in declining GDP and in rising unemployment: a 4.6% year-on-year decline in GDP accompanied by

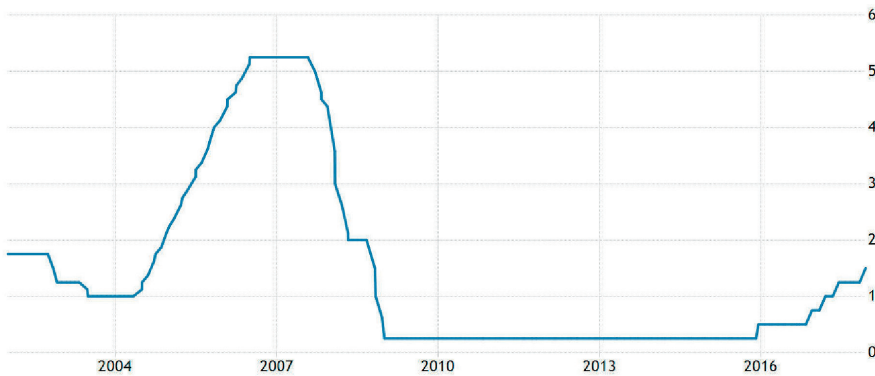
a nearly 4% increase in unemployment between June 2008 and June 2009. However, the decline in unemployment responds more slowly to GDP growth. According to Okun's law [3], a 1% decrease in unemployment requires a 2% increase in real GDP. Between September 2009 and September 2010, GDP grew by 2.8% year on year on a quarterly basis, while unemployment fell by 0.5%. Thus, the decline in unemployment, the job creation, is slower. In the trend over the period under review, GDP fluctuated between 1% and 3.8%, and the trend in unemployment continued to decline [4].

As a first step in crisis management the bankrupt banks were consolidated, and the United States provided assistance to the banking system through the Federal Reserve (FED) and the U.S. National Deposit Insurance Fund. The overall goal was for weaker banks to be bought by stronger competitors.

Capital injection also flowed into the automotive sector: since so many people were employed in the automotive industry, their help was also important in the development of further unemployment. These steps were vital to restore confidence and stability.

After the election of President Obama, he announced that his government plans to create 3 million new jobs and double exports over the next three years. The package would build roads, bridges, renewable energy power plants, support the modernization of energy consumption in public buildings, modernize schools and support the spread of fuel-efficient cars and alternative energy sources.

The United States saw the recovery differently than the eurozone, as higher deficits were also risked stimulating the economy. FED started an expansionary monetary policy and executed a serious amount of quantitative easing (QE) to stimulate demand. After the banks were consolidated the main problem was the rising unemployment which was resulting declining demand. So the FED introduced QE, which was designed to stimulate economic growth and create jobs.

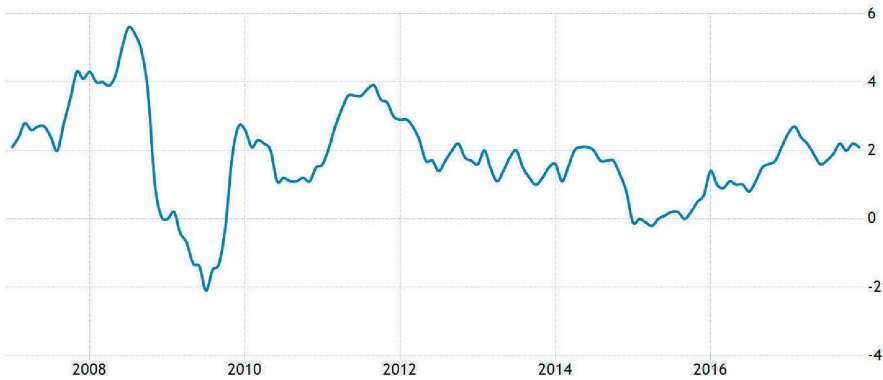


Graph 3: United States interest rate (%) 01.2002.–12.2017.

Source: <https://data.worldbank.org/united-states/interest-rate>

The central bank can stimulate the economy with low interest rates, which increases investment and consumption, but if interest rates cannot be further reduced or interest rates could be reduced but the transmission mechanism does not work, unconventional central bank instruments are used. The purpose of unconventional instruments is to keep inflation close to the target, to avoid deflation, to prevent the collapse of financial intermediation and to reduce the economic downturn to stimulate the economy. Basically, we can distinguish two situations: one of them is when we cannot apply further interest rate cut because the base rate is close to zero, but further monetary easing is needed. This was the case in the United States in 2009 when further interest rate cut couldn't be made (Graph 3.). The other one is when even above-zero base rate intervention is justified – if the transmission mechanism is breached – this was the case in the EU in 2009.

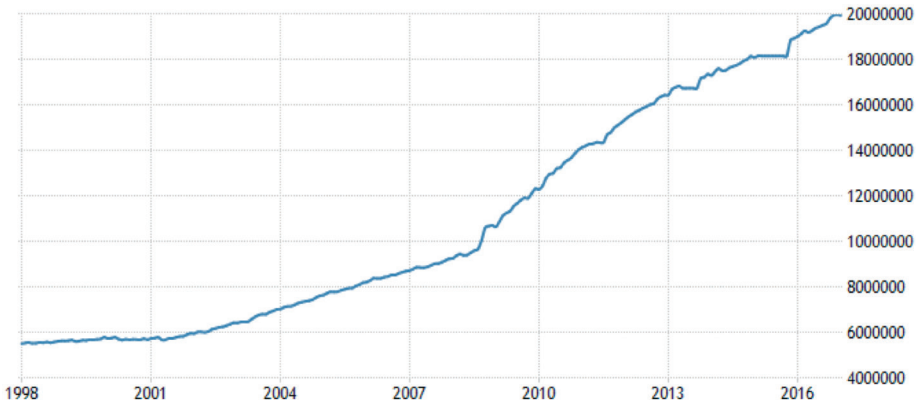
According to the QE method, three types can be distinguished: liquidity-providing instruments for commercial banks, direct credit market interventions, and government security purchases. According to another taxonomy, three types can be distinguished as well: credit easing, which aims to improve lending conditions in the private and banking sectors, quantitative easing, which aims to increase the volume of the central bank balance sheet, and qualitative easing, which aims to change the qualitative composition of the balance sheet. Central bank intervention is a welfare gain, as the state is able to raise funds indefinitely by issuing risk-free government securities.



Graph 4: United States inflation rate (%) 01.2007.-12.2017.

Source: <https://data.worldbank.org/united-states/inflation-rate>

Before the recession the FED already had \$ 700-800 billion worth of treasury bills on its balance sheet. In November 2008, the FED began buying (QE) mortgage-backed securities (MBS) worth of \$ 600 billion. In March 2009, it reached \$ 1,750 billion worth of treasury bills, MBS and debt, culminating in June 2010, when it had already reached \$ 2,100 billion [5].



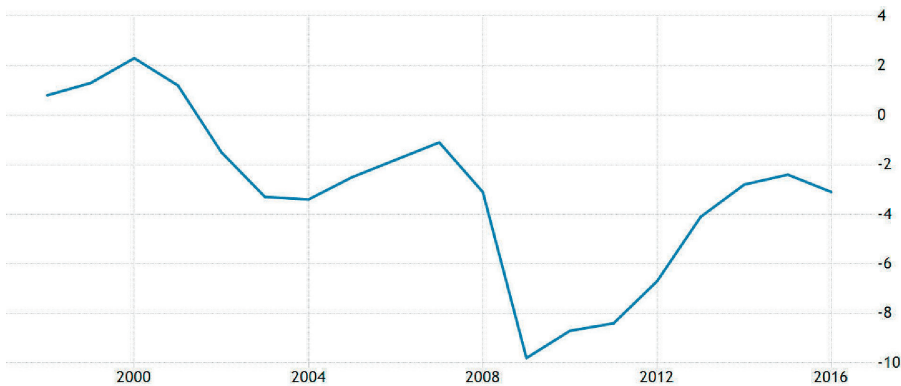
Graph 5: United States Government debt (USD Million), 01.1998.-01.2017.

Source: <https://data.worldbank.org/united-states/government-debt>

However, the first amount of incentives proved to be weak: strong economic growth was lagging behind, allowing FED to execute QE 2 from November 2010. This meant another \$ 600 billion of stimulus [6].

QE 3 was announced on September 2012, under an indefinite-term, \$ 40 billion-a-month MBS asset purchase program, while keeping interest rates low until mid-2015 [7]. The Federal Open Market Committee (FOMC) announced in December 2012 that it would increase the volume of open-ended purchases to \$ 85 billion a month and stipulated that these purchases would be maintained until unemployment fell below 6.5% and inflation expectations do not exceed two percent by half a percentage point over two years, which was the committee's long-term goal [8]. On February 1, 2014, Janet Yellen became the new president of the central bank and in October the FED terminated its bond-buying program [9].

On graph five we can see the trend of the government debt to GDP which increased significantly over the examined period and on graph six we can see the huge deficit of the government budget from 2008 to 2013.



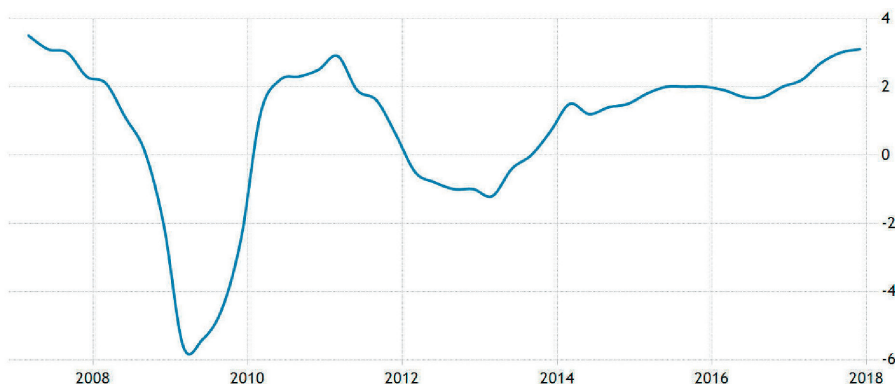
Graph 6: United States Government budget balance to GDP (%) 01.1998.–01.2017.

Source: <https://data.worldbank.org/united-states/government-budget-to-gdp>

From 2011, however, an interesting trend unfolded in the structure of U.S. debt: certain trends and conditions seemed to be reversed, as China was no longer the number one creditor of the United States. According to the data, the Asian country has been replaced by the US Federal Reserve. The FED's government securities portfolio rose to \$ 1,108 billion in January, pushing China in second [10].

4.2 Eurozone crisis management

The euro area is an economic and monetary union that is a group of countries within the European Union where the euro is the official currency. The monetary union is not considered to be a fiscal and political union. Eurozone countries are economically heterogeneous, but Germany, for example, has a competitive advantage and its economy is characterized by high value-added products such as machinery and vehicles.



Graph 7: Eurozone GDP (% YoY), 01.2007.–12.2017.

Source: <https://data.worldbank.org/euro-area/gdp-growth-annual>

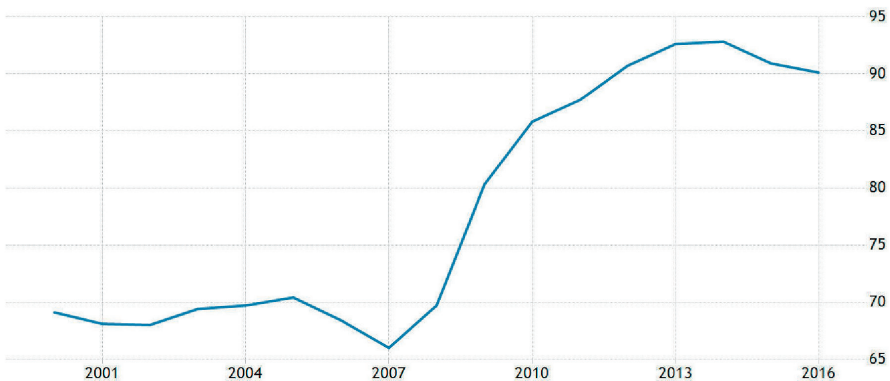
Fiscal policy may vary from country to country in the eurozone, but there are guidelines to follow. The Stability and Growth Pact was established to reach budgetary discipline. It stipulated that the budget deficit should not exceed 3% of GDP and public debt 60% of GDP. The European Central Bank (ECB) is responsible for the monetary policy of the countries in the euro area. The European Monetary Authority pursues a different policy from the FED, as its main task is to ensure price stability and in addition, to play an active role in rescuing the European financial system.



Graph 8: Eurozone Benchmark rate (%) 01.2002.-12.2017.

Source: <https://data.worldbank.org/euro-area/benchmark-rate>

The recovery of the eurozone differed from the United States recovery between 2007 and 2017. In the case of the euro area, after a downturn in 2008, in 2012 the economy fell into recession again (Graph 7). The stimulus-induced recovery was also smaller, as it did not exceed 2.4% for the euro area, in contrast to the US level. The development of GDP shows that although the economy grew in 2010, it did not last long, as in 2012 there was a decline again. GDP growth in the euro area suggests that crisis management has not been as successful as in the United States.

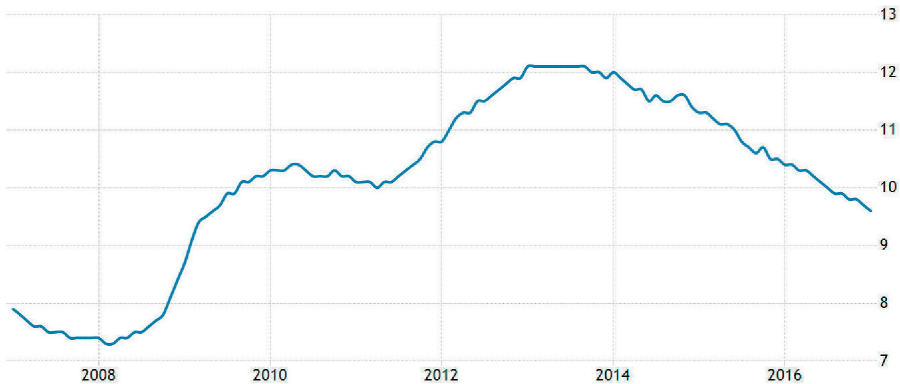


Graph 9: Eurozone Government debt to GDP (%) 01.2000.-01.2017.

Source: <https://data.worldbank.org/euro-area/eurozonedebttogdp>

The ECB didn't formally conduct quantitative easing at first, but provided virtually unlimited liquidity to the euro area banking system and played a major role in managing the euro area sovereign debt crisis. Since May 2010, it has been buying the riskiest government bonds of the monetary union on the market, for which it has initially spent around € 70 billion. The euro area interest rate wasn't reduced as the interest rate in the United States (Graph 8).

The ECB's communication is rather controversial, as the ECB is guarding over price stability in their official announcements. Accordingly, the European Monetary Authority wants to avoid suspicions of money printing. Due to the ailing economy in the eurozone and a successful QE in the US, the ECB launched a € 60 billion monthly asset purchase program in May 2015, which was raised to € 80 billion from March 2016 [11].



Graph 10: Eurozone Unemployment rate (%) 01.2007.-01.2017.

Source: <https://data.worldbank.org/euro-area/eurozone-unemployment-rate>

The amount of debt grew between eurozone countries and some member States had huge public debt. The debt crisis started to become a serious problem for the euro area (Graph 9.). Greece, Ireland, Portugal and Spain are the countries with excessively high debts. These countries needed to find a solution so that fiscal austerity does not contract their economies.

If we compared the eurozone and the U.S. we can see that unemployment was 4.1% in the U.S. in October 2017, while the unemployment

rate for the eurozone was 8.8% (Graph 10.). In addition, however, the euro area debt was 89.2%, compared with 106.1% in the United States, reflecting the cost of economic growth and low unemployment.

CONCLUSIONS

The 2008 Great Recession has highlighted the structural differences between the two centers of the world, the United States and the Eurozone. In the case of the United States, a monetary, fiscal and political union is realized, which with a single economic policy, operates as a coherent unit. Ten years after the Great Recession GDP is rising, unemployment is at the lowest level since 1969 and government debt is the highest it has ever been which can cause problems in the long run.

In the case of the eurozone, we can talk about only a monetary union. The 2008 crisis has highlighted the structural flaws of the eurozone, because without a unified fiscal policy no effective economic policy can be achieved. The symptoms of the euro area crisis weren't the consequences of the global economic crisis; rather the stalling of the integration process, the lack of real convergence, and the weaknesses of monetary and fiscal policy were the problems that have been brought to the fore and exacerbated by the crisis [12].

I consider the crisis management of the United States to be more successful, in which the single economic policy has played an important role – as long as the eurozone doesn't deepen integration, it will not be able to address vulnerabilities between its countries. For Europe to be competitive, it has to have the right economic policies. The post-crisis recovery has taken place here too, but in order to avoid further crises and to help the eurozone to catch up faster, we need targeted steps which will create the opportunities

SUMMARY

My paper provides an overview of the lessons which can be learned from the crisis management of the 2008 Great Recession. In the theoretical background I am writing about the economic policy instru-

ments, fiscal policy and monetary policy. The aim of the economic policy is to solve economic problems and increase economic prosperity. The revenues of the fiscal policy are mainly taxes, and the expenditures are mainly government investments, purchases and transfers. Monetary policy is in the hands of the central bank and it can regulate the amount of money in the economy by controlling the amount of central bank money and by regulating the ability of commercial banks to generate money.

The financial crisis emerged from the United States which has caused serious problems for the whole world. All countries have faced major challenges and significant measures have been put in place to bring economic stability. Crisis management was partly implemented through coordinated cooperation and partly within the framework under national competence.

The United States is the world's largest economy, a monetary, fiscal, and political union. The United States economy is largely determined by its internal market, which generates huge demand. As a result of the crisis, the United States GDP growth slowed from the first quarter of 2008 and then began to decline in the fourth quarter. The unemployment rate rose above 10% in November 2009. The United States saw the recovery differently than the eurozone, as higher deficits were also risked stimulating the economy. FED started an expansionary monetary policy and executed a serious amount of quantitative easing (QE) to stimulate demand. The central bank can stimulate the economy with low interest rates, which increases investment and consumption, but if interest rates cannot be further reduced or interest rates could be reduced but the transmission mechanism does not work, unconventional central bank instruments are used. The purpose of unconventional instruments is to keep inflation close to the target, to avoid deflation, to prevent the collapse of financial intermediation and to reduce the economic downturn to stimulate the economy. There were three rounds of quantitative easing in the United States.

The euro area is an economic and monetary union that is a group of countries within the European Union where the euro is the official currency. The monetary union is not considered to be a fiscal and political union. Eurozone countries are economically heterogeneous, but Germany, for example, has a competitive advantage and its economy is

characterized by high value-added products such as machinery and vehicles. Fiscal policy may vary from country to country in the eurozone, but there are guidelines to follow. The European Central Bank (ECB) is responsible for the monetary policy of the countries in the euro area. The European Monetary Authority pursues a different policy from the FED, as its main task is to ensure price stability and in addition, to play an active role in rescuing the European financial system. The recovery of the eurozone differed from the United States recovery between 2007 and 2017. In the case of the euro area, after a downturn in 2008, in 2012 the economy fell into recession again. The stimulus-induced recovery was also smaller, as it did not exceed 2.4% for the euro area, in contrast to the US level. If we compared the eurozone and the U.S. we can see that unemployment was 4.1% in the U.S. in October 2017, while the unemployment rate for the eurozone was 8.8%. In addition, however, the euro area debt was 89.2%, compared with 106.1% in the United States, reflecting the cost of economic growth and low unemployment.

The crisis has highlighted the structural flaws of the eurozone, because without a unified fiscal policy no effective economic policy can be achieved. The symptoms of the euro area crisis weren't the consequences of the global economic crisis; rather the stalling of the integration process, the lack of real convergence, and the weaknesses of monetary and fiscal policy were the problems that have been brought to the fore and exacerbated by the crisis [13]. I consider the crisis management of the United States to be more successful, in which the single economic policy has played an important role – as long as the eurozone doesn't deepen integration, it will not be able to address vulnerabilities between its countries. For Europe to be competitive, it has to have the right economic policies. The post-crisis recovery has taken place here too, but in order to avoid further crises and to help the eurozone to catch up faster, we need targeted steps which will create the opportunities.

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CONFLICT IN THE EASTERN MEDITERRANEAN

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ABSTRACT

The ongoing conflict in the Eastern Mediterranean involves Greece, Turkey, and Cyprus but also Libya, Egypt, Israel, Lebanon, Germany, France, and Russia have significant roles. The UN Convention, Laws of the Sea states the countries' EEZ (Exclusive Economic Zone). However, Turkey never signed it and they claim their territories of the sea according to the continental shelf. As a result of the Turkish invasion in 1974, Cyprus has become divided into two parts. The Republic of Cyprus, located in the Southern part of Cyprus, is recognized by the international community while the Republic of Turkey of Northern Cyprus is only recognized by Turkey, but Turkey claims their territories of the waters around Northern Cyprus which is inside the Republic of Cyprus' EEZ. The dispute escalated when a gas field was discovered in Cyprus' EEZ and Turkey has started sending its own drilling ships to their claimed zones. Negotiations about bringing gas to the surface between Greece, Cyprus, Egypt, and Israel excluding Turkey was a trigger point in the conflict. Between Greece and Turkey, a dispute about the waters around the Greek islands belonging to Greece also affects the relations of these three countries. Turkey has been provocative since then and believes that the EU is on the side of Greece.

Keywords: EEZ (Exclusive Economic Zone), Cyprus, pipeline, gas fields

1. GENERATORS OF THE CONFLICT

1.1 *Cyprus and the territorial claims*

The conflict, including Cyprus, Israel, Greece, and Turkey as main actors is going over maritime territory claims. The UN Convention on Laws of the Sea states the borders of the waters belonging to the countries. It has been a guideline of setting borders in the waters since 1982. According to this, every country has the sea of 12 nautical miles from the shore and has EEZ (Exclusive Economic Zone) of 200 nautical miles from the shore, where they can perform economic activities e.g., fishing, sending explorational ships, drilling. It is signed by 157 countries, but Turkey and Israel have never signed it. Turkey claims their territories according to the continental shelf therefore there have always been disputes about the claims. The continental shelf includes the land under water that does not yet reach the open ocean. It's up to 200 meters. The discovery of natural gas fields brought more conflicts between the countries mainly between Greece, Turkey, and Cyprus. Cyprus is divided into two parts by the 'Green Line' introduced by the United Nation in 1964. Between the Greek Cypriots and the Turkish Cypriots, there has been always a conflict. After Cyprus became independent from Britain in 1960, the so-called enosis, that is the unification with Greece supported by the Greek Cypriots, was not possible. To generate peace, they elected a Greek President and a Turkish Vice President but neither the Greek Cypriots, neither the Turkish Cypriots liked it. In 1974, the Greek military junta attempted a coup which was successful but, since Cyprus is also inhabited by Turkish Cypriots, it would have been unacceptable for Turkey, therefore they sent troops to the Northern part and they occupied the region, as well. As a result of the Turkish invasion, the island has been divided since then. The Republic of Cyprus is in the Southern and the Turkish Republic of Northern Cyprus, in the Northern part of the island. But the Turkish Republic of Northern Cyprus is not recognized by the international community, only by Turkey. Cyprus was accepted in the EU, in 2004, even though it's divided. Negotiations were taken place to unite the island but neither of them was successful. The UN Annan Plan was one of the most important cases when the United Nations played the role of a mediator in 2002. [12] This plan could have re-unite the island and create peace between the Greek

Cypriots and the Turkish Cypriots, but it was rejected by most of the Greek Cypriots, but it was accepted by most of the Turkish Cypriots, in 2004. [18] In February 2014, the United Nations attempted to mediate and start negotiations between the two parties. According to the Joint Declaration on Cyprus, the island would have been united, the united island would have been the member of the EU, there would have been one Cyprus citizenship etc. but after only eight months Greek Cypriots decided to withdraw from it and the negotiations stopped. Now, Turkey would prefer the Turkish Republic of Northern Cyprus to be recognized by the international community, and not the unification of the island.

2. INTERACTIONS OF THE COUNTRIES INVOLVED

2.1 *Main agreements between the countries*

As the island is not united, the Turkish Republic of Northern Cyprus is not recognized by the international community and the disputes between the Greek Cypriots and the Turkish Cypriots are still going on, it affects the maritime zones, as well. Even though, the Northern side of Cyprus is recognized only by Turkey, they claim their continental shelf around the island and these claims are inside the EEZ of Cyprus which is recognized by every country and Cyprus would have the rights of these zones to operate. As some countries are that close to each other that the 200 nautical miles can't be applied, further agreements are needed. Cyprus signed Delimitation Agreements of the Exclusive Economic Zones, first with Egypt in 2003, where they agreed on that the median line would be the division line and if either of the parties has natural resources that are belonging to both countries' EEZ then they would negotiate about the exploration rights, drilling rights and the use of the resources. Then Cyprus signed a Delimitation Agreement of the Exclusive Economic Zones with Lebanon, as well, in 2007, with the same principles, but this was not ratified by Lebanon because of an agreement between Cyprus and Israel in 2010, where according to Lebanon, they modified one of the principles. [19] But Cyprus doesn't want to be that much involved in the conflict going on between Lebanon and Israel, and because Lebanon didn't even ratify the agreement therefore, they don't think that it's necessary to negotiate with Beirut while making an agree-

ment with Israel. [19] One of the most important agreements Cyprus signed was with Israel in 2010. They not only signed a Delimitation Agreement of the Exclusive Economic Zone but also an agreement about building a pipeline. In Israel, two important natural gas fields were discovered, one of them is the Tamar natural gas field, discovered in 2009, the other one is the Leviathan natural gas field, discovered in 2010. It was a very important discovery for Israel because it was a net importer of energy, and they don't have to rely on Egyptian gas. Cyprus and Israel agreed on building a new pipeline connecting the gas fields and both parties can send exploration ships to each other's EEZ. Since then, the relations between Cyprus and Israel are strong [20] and later they involved Greece and Italy, as well. Last summer, Cyprus, Greece, and Israel signed an agreement about the new pipeline. In March 2021, Italy also joined, and a Greek and Italian company signed an agreement with a Israeli gas company about transferring the gas to Europe. [25]

2.2 Main trigger points

When the Aphrodite natural gas field was discovered inside Cyprus' EEZ in 2011, it could have been a key to Turkey and Cyprus to sit together and figure something out related to bringing the gas to the surface and it could have been the start to solve the Cyprus question, because gas has been a good reason for parties to sit together who didn't have good relations but they could agree on a win-win solution. But instead of this, Turkey and Cyprus chose the other way, and the disputes started to escalate. [17] There are natural gas fields in the waters, EEZs of Egypt and Israel and these countries sit together to discuss how they will use and bring the gas to the surface, but they excluded Turkey from the negotiations which was a trigger point. [17] Israel and Cyprus even agreed on building an LNG (Liquefied natural gas) plant onshore or offshore but Cyprus prefers it onshore [23] which would be economically more beneficial and cheaper for Cyprus than the EastMed pipeline because of Cyprus' perfect strategical position in the Eastern Mediterranean, it would be an exporter which would be beneficial for the EU, as well. [27] At the negotiation they also discussed two possible pipelines. One between Israel, Cyprus, and Greece, the other one between Israel and Turkey. It could have brought Israel and Turkey closer as the relations between these two countries have been at a low point since the Gaza War

in 2008-2009 when Israeli forces didn't allow Turkey to help Gaza. [12] The current conflict between Gaza and Israel doesn't help the situation either. In January 2020, Greece, Cyprus, and Israel signed an agreement on building a pipeline, the so-called EastMed pipeline, which would bring gas to Europe. It is planned for 2025-2027 but through the Turkish claimed maritime zones that could not be a problem because it's not viewed by the majority, but it will still generate problems. When Turkey was excluded from the negotiations, she got upset and started to send its own drilling ships, exploration ships and even warships, since then they have been sending these ships to the region. But actually, where they are exploring, there have been no gas fields discovered yet, but they are operating inside Cyprus' EEZ, inside their claimed zones which is not acceptable by either Cyprus, either any other countries. In November 2019, Turkey signed a deal with Libya, and they divided the sea between them, but it covers some Greek islands' maritime zones e.g., Crete, [32] which is also generating problems between Greece and Turkey, and as Greece and Cyprus are basically "one" country, it affects all the problems that are going on in Cyprus and between Turkey and Greece. They created a shared EEZ, that means that both countries can operate there. This can't be called an agreement therefore it's called 'memorandum of understanding' because only Turkey ratified it, the Libyan government didn't ratify it. Turkey signed this because they want to block the planned pipelines and because they were insulted when Israel, Egypt, Cyprus, and Greece came together to discuss the maritime borders. Turkey was also excluded from the East Mediterranean Gas From which was formed in 2019 but officially signed in September 2020 between Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, and Palestine. In the Summer 2020, Greece and Egypt signed an agreement where they divide the sea between them but without taking into consideration the deal between Turkey and Libya.

3. CONFLICT BETWEEN ISRAEL AND LEBANON

3.1 *Israel, Lebanon border dispute*

In the Eastern Mediterranean, the conflict between Israel and Lebanon is also important. The two counties don't have good relations with

each other since Lebanon doesn't even recognize Israel as a state. On land they have a border set by the United Nations, the so-called Blue Line. The maritime borders are also disputed. Israel didn't sign the UN Convention on Laws of the Sea, Lebanon did but they are close to each other therefore the convention can't be applied. Lebanon has a shortage of gas and in Israeli waters several gas fields were discovered near to Lebanese waters. They tried to negotiate but Israel refused to give or share any of the gas fields. [20] There is a high chance that in the Lebanese waters, mainly in the disputed area, there are gas fields, but Lebanon can't send exploration ships there unless they reach an agreement with Israel. The U.S. has tried to mediate between the two countries since 2012 but Lebanon doesn't trust the U.S. as it considers the Hezbollah a terrorist group. [15] The U.S. tried to create the "Hof Line". Even though, it was accepted by Israel, the Hezbollah didn't accept it. Since then, there hasn't been a successful agreement. [15]

3.2 Possible solutions, the US as a mediator

The conflict that has an impact on the maritime borders, as well, starts in 1948 with the Arab Israeli war when Israel occupied the Southern part of Lebanon and they had been operating there until they could reach an agreement about that the Israeli troops would withdraw back to the border from Lebanon. Palestinian refugees started to go to Lebanon and even two camps were built up, but the Lebanese Christians didn't like that therefore the refugees didn't have any rights. [26] The Palestine Liberation Organization was established in 1964 and they came to Lebanon to help the refugees. They started to attack Israel as they wanted to have a sovereign Palestine State, but the Israel attacked back, it was not a serious clash, but it was the start of more serious conflicts. In 1982, Israel invaded the Southern part of Lebanon, again. A mandate stated that Israel can send troops only to the region that is in 25 miles from the border. But Israel sent troops to Beirut which breaches the mandate because it's more than 25 miles from the border. [26] With the help of the US, peacekeeping forces were sent to Lebanon and part of the troops had to withdraw from Beirut but still part of it remained there. To generate peace between the Arabs and Israel, Reagan tried to mediate and

offered a resolution, but it was rejected by the Arabs. But finally, in 1983, with the help of the US, again, most of the Israeli troops withdrew from Beirut. The problem started when the Hezbollah, a militant group, or a terrorist group, attempted a bombing at the US peacekeeping forces therefore the US troops withdrew from Lebanon. In 1985, Israel started to an intermitter withdrawal of the troops from Beirut but until 2000, the Southern part of Lebanon remained occupied by Israel. Probably, the most important solution would be to ease the tensions between Israel and Palestine because it also highly involves Lebanon. There have been attempts to solve the conflict like the Oslo Accords in 1993. According to it, Palestine would have got self-governance and the Israeli troops would have withdrawn from the Palestine territory. But in Gaza, an Islamic group, Hamas, was against it and attacked the Israeli civilians, Israel responded by killing two leaders of the Hamas. [26] The US tried to mediate and find a solution by the Wye River Memorandum, but it was suspended in 1999. In 2001, a hundred of Palestinians were killed by Israelis and it had been going on until 2005. In 2008, the conflict between the Hamas and Israel escalated, around 1000 were killed but unilateral ceasefires were made. There have been several peace operations but none of them was very successful. In 2017, Donald Trump tried to mediate but clearly, he is more likely on the side of Israel than on Palestine's because he needs the Jews' support. The current events in May between Israel and Palestine, especially Gaza, reduced the hope for a long time. But in Israel, they are trying to get rid of Prime Minister Binyamin Netanyahu because he is the generator of the problems as he is against the Palestinians and Arabs. These conflicts, and the war between Israel and Lebanon in 2006 impact the maritime borders, as well. As the conflicts going on, they are unwilling to sit down and negotiate but in October 2020, they began to negotiate mediated by the United States. It went well but further negotiations are needed but it'll depend on the Biden administration how much attention will be paid on this issue. and it could be a start of creating better relations and finally finding a solution to the disputed maritime zone where probably valuable natural gas resources can be found.

4. THE SIGNIFICANCE OF TURKEY AND GREECE IN THE CONFLICT OVER CYPRUS

4.1 *Conflict between Turkey and Greece*

Between Turkey and Greece, two NATO member states, the question of Cyprus and the conflict over the natural gas fields are not the only problems. One of the conflict-generator problems is the little islands between Greece and Turkey in the Aegean Sea. If this problem would be solved, to solve the other problems including the Cyprus problem, would be easier. These little islands belong to Greece even though some of them are a lot closer to Turkey than to Greece e.g., Lesbos (approx. 500 km from Greece Mainland, approx. 30 km from Turkey), Chios (approx. 250 km from Greece Mainland, approx. 6 km from Turkey), Samos (approx. 300 km from Greece Mainland, approx. 4 km from Turkey), they are that close to Turkey that the cars going on the motorways in Turkey are visible from the islands. [17] The conflict is generated from that the waters around these little islands belong to them ergo to Greece, as from each islands shore, the EEZ applies and even though some islands are very close to Turkey, Turkey can't operate in the waters. Turkey wants the EEZ to start from Greece as a mainland and the little islands not to have their own EEZ. Turkey accepts 6 nautical miles territory of these little islands, which is a problem in itself but Kastellorizo is 4 nautical miles from the Turkish borders, so this island is one of the most problematic islands among all of them. Therefore, Turkey sends exploration and drilling ships into the waters around this island. The tension escalated when a Greek and a Turkish warship collided last summer. Turkey has been provocative since then. Above the islands of Greece flying fighter jets are visible but above Turkish coasts, as well. Both countries are sending planes and warships to the Eastern Mediterranean. [17]

4.2 *Raised solutions*

Several solutions have been discussed to be appropriate but none of them was done yet or if they tried, they couldn't achieve any success, despite of the fact that gas could ease relations and there were examples to it e.g., Russia and Europe. Many experts say that to start effective negotiations, first the Cyprus question should be resolved. It would not be easy since neither Turkey recognize the other part of Cyprus, the

Republic of Cyprus, neither the international community recognize the Turkish Republic of Northern Cyprus. One possible solution could be the condominium principle in international law, by that both sides could share the revenue that is coming from the drillings. [23] But because of none of the parts recognize each other, it is also problematic to happen. The international court could be also a solution, but the disagreements and the legal solution ideas should be submitted, and they are not clear by the parties. Moreover, Greece prefers international arbitration, but Turkey would rather have bilateral agreements. [32] Solving this conflict is also Europe's interest, not just because it would be beneficial for the EU as it relies on the gas from Russia, but also because it involves three EU member states, Cyprus, Greece, and France. Since last year, France has been active in the region. As a member of the East Mediterranean Gas Forum, it has good relationship with Greece but not Turkey. When President Macron met Kyriakos Mitsotakis, the Greek prime minister, he publicly criticized Turkey and said, „stop provocation and begin dialogue” [9]. After that, the Turkish president Recep Tayyip Erdogan said about Macron that he is a „alleged Napoleon”. France openly expressed its solidarity for Greece and Cyprus and France was the one who pushed the EU to sanction Turkey. [9] They have been holding naval exercises together with Greece and Cyprus in the Eastern Mediterranean. Russia is also an important country to mention because they are willing to mediate between the countries but actually, Russia has a better relationship with Turkey. [4] The Soviet Union supported the Turkish invasion in Cyprus and, now Russia, the transformation of the Hagia Sophia back into a mosque therefore Russia doesn't have good relations with Greece or Cyprus. Between Turkey and Russia, there have been strong ties in terms of economy, politics and strategy. They are also holding naval exercises together with Turkey in the Eastern Mediterranean. [4] Germany also proclaimed the willingness to play a mediator between the two countries in 2021. Even though, Germany is on the side of Greece and Cyprus openly and said to Turkey not to be provocative, they have relatively good relationship with Turkey. In 2016, they agreed on that if Turkey doesn't let the refugees cross the Turkey-Greece border, the EU will fund the refugees in Turkey therefore Germany thinks at Turkey as an important country both strategically and economically. In March 2021, NATO held a conference to discuss the matters. Actually, the US

and Europe should pay more attention to this region. In this year, Turkey stopped sending their exploration ships to the region and there were talks between Turkey and Greece, but nothing was achieved. One country who could be an ideal mediator is the UK and they have been talking with both sides since last year and willing to talk further. [17] In December 2020, they imposed sanctions on illegal drilling in Cyprus' EEZ by unauthorized ships, as well. The UK has good relationships with both Greece and Turkey, especially, because of the Brexit, the UK is viewed neutral by Turkey who claims that the EU is on the side of Greece. [17] For the UK would be also beneficial to solve this problem, especially the Cyprus question because they have two sovereign bases in Cyprus. Ever since the UK has been speaking to both sides and will be, as well.

CONCLUSION

The Eastern Mediterranean conflict is a very complex dispute. It not only involves the countries in the Eastern Mediterranean but also some EU countries and Russia, as well. Next to the conflict between Israel and Lebanon over maritime borders, the dispute between Greece and Turkey has three main generators. The conflict between Turkey and Greece, their rights over Cyprus and it's EEZ, and the divided Cyprus. If the Cyprus question could be solved, to solve all the others, would be easier. The problem could be solved by a mediator who could be the UK, possibly Germany or Russia. Since both Turkey and Greece are NATO member states, it would be also a board to discuss the issues. The almost 35-year attempts and negotiations show that it's not that simple to find a win-win solution. Actually, according to France, it's a zero-sum game. Turkey has been provocative but this year they have been showing quietude as they stopped sending ships to the region and their willingness to talk.

SUMMARY

In the region, we can see a lot of problems which should be resolved. The first one is the disagreement about the borders, the problems with the continental shelf and the conflict over the little islands between

Greece and Turkey, to whom should the waters around them belong, to Turkey or to Greece? The second one is the natural gas dispute. Who should have the rights of drilling the gas from the newly found gas fields inside Cyprus's EEZ? The gas would be beneficial for Turkey and for Europe, as well. The third one is the Cyprus problem which generates most of the problems.

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DOES THE FREQUENCY DETERMINE THE EUR-HUF COMMON MOVEMENTS?

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ABSTRACT

This paper analyses the influence of frequency-choice on the common movement of euro (EUR) and Hungarian Forint (HUF) currencies. Therefore, it employs minutely, hourly and daily sampling to determine the Dynamic Conditional Correlations (DCC-GARCH) between the currencies. Since contagion is defined as a significant increase in the level of the correlation under market shocks, a Markov-switching model was implemented to check if the correlation has a tendency of jumping back and forth between regimes. This behaviour can have important message for the monetary policy, since it can point on the fact that a hypothetical depreciation is driven not by the macro-fundamentals or financing conditions (like the interest rate parity) but the change of the market sentiment only.

Keywords: HUF, high frequency data, DCC-GARCH, Markov-switching, contagion

1. INTRODUCTION

Emerging markets are more fragile than developed ones due to their inherited higher external imbalances and exposure towards external funding, which is similar for currencies as well. Foreign exchange rates are mirroring both the developments of the external and internal balance of the economy, while they respond to the changes in the market sentiment. Currency markets can be assumed to be efficient in idealistic cases, which can be approximately true for key currencies, but we have to deviate from this idealistic view in case of the emerging ones.

This study focuses on the comparison of the foreign exchange rates, the euro (EUR) and Hungarian forint (HUF) to give a closer picture about the nature of their common movements. Historically, all currencies around the Eurozone tend to maintain a strong ($\rho > 0.7$) correlation with the euro [2], but they can deviate from it under stressed and turbulent periods in case of rapid de- or appreciations. This paper focuses on the problem of sampling frequency of this data-generating process by comparing the dynamic conditional correlations of the high- (minutely and hourly) and low-frequency (daily, quarterly) data. Then we are looking for patterns in the changes in the correlations, by applying Markov-switching model on it to see if we can separate the stable and changing correlation periods on two regimes without any additional information.

2. THEORETICAL BACKGROUND

Efficient markets are assumed to be similar to the competitive market model in microeconomics. Statistically its consequence can be the normal distribution (or at least a near-zero mode and a nearly 3 kurtosis) and the lack of autocorrelation and heteroscedasticity which eliminates the memory both on the level of time series and their variance. As we start to deviate away from the competitive market design towards a more complex and oligopolistic topology, the statistical properties became more and more erratic as Gabaix et al. [6] and Bonanno et al. [1] proved. High-frequency data has a turbulent nature as well, providing a more deviations from the basic statistical assumptions.

Cross-currency correlations can be crucial to understand the nature of contagions. Contagions can be narrowly defined as a relative increase in cross-country correlations during “crisis times” compared to “tranquil times” – underlining the propagation of shocks from one currency to others through financial, real and political links. Financial links can be relevant to the scope of the paper since they are based on the connections of the international financial system (for example: interconnected lenders, common financial institutions, nonbank financial market participants [3] etc.). However, we should not forget the influence of the monetary policy which can intervene directly or indirectly (for example through the uncovered interest rate parity) or sometimes unconsciously (for example their decision is in conflict with previous market expectations). Even an indecently floating exchange rate can be fine-tuned by the monetary policy, or managed under the “fear of floating” considerations. Meanwhile market sentiment can drive capital flows asymmetrically towards safe assets (and therefore safe haven currencies) under “run to safety” anomalies.

Therefore, it is a valid expectation that the market behaves “well” in most of the times, by meeting the efficiency criteria under the expected statistical terms, but there is an alternative regime which deviates from the previous one – making the efficiency only asymptotical.

3. DATA AND METHODS

3.1 Data

Our sample covers the EUR/USD and HUF/USD exchange rates on the following frequencies as high-frequency data was compared on the following set: minutely (‘10-Sep-2020 09:15:59’ – ‘10-Mar-2021 09:11:00’, N = 186901), hourly (‘10-Sep-2020 10:00:00’ – ‘10-Mar-2021 10:00:00’, N = 3187), daily short (‘10-Sep-2020’ – ‘10-Mar-2021’, N = 130); while the low-frequency set was defined as daily long (‘09-Mar-2001’ – ‘10-Mar-2021’, N = 5217) and quarterly (‘31-Mar-2001’ – ‘31-Mar-2021’, N = 81). All the data was downloaded from the Revinitív Eikon database [4] and pre-processed in Matlab.

Basic statistics of the high-frequency set supported our initial expectations (see Table 1): the HUF had more erratic nature as an emerging currency as the excess kurtosis proved the presence of fat-tailness. It

means that emerging and especially emerging and high-frequency currency contains significantly more extreme fluctuations than it could be possible if the data-generating process would be random (and the underlying market efficient). However, it is an interesting finding, that auto-correlation and heteroscedasticity was present only in the minutely data.

		~0		~0	~3	Jarque-Bera (p > 0,05)	Ljung-Box (p > 0,05)	ARCH-LM (p > 0,05)	ADF (p < 0,05)
		mean	std	skew-ness	kurtosis	Normal distr.	Auto- correl.	Het- erosc.	Sta- tionar- ity
minute	eurusd	0.0000	0.0001	-0.0946	8.2767	0.0000	0.0000	0.0000	0.0000
	hufusd	0.0000	0.0002	0.3821	21.5740	0.0000	0.0000	0.0000	0.0000
hour	eurusd	0.0000	0.0008	-0.5957	7.6911	0.0000	0.1575	0.4180	0.0000
	hufusd	0.0000	0.0013	-0.1949	9.0869	0.0000	0.1888	0.4658	0.0000
day	eurusd	0.0001	0.0037	0.0240	2.8093	0.8599	0.4915	0.5153	0.0000
	hufusd	-0.0001	0.0065	0.3664	3.4691	0.1581	0.2064	0.2993	0.0000

*Table 1: The basic statistical properties of the high-frequency set
Source: Authors' edition in Matlab*

The turbulent nature of the emerging HUF currency was verified on the low-frequency case as well (see Table 2), where the excess kurtosis diminished only for the quarterly frequency.

		~0		~0	~3	Jarque-Bera (p > 0,05)	Ljung-Box (p > 0,05)	ARCH-LM (p > 0,05)	ADF (p < 0,05)
		mean	std	skew-ness	kurto- sis	Normal distr.	Auto- correl.	Het- erosc.	Sta- tionar- ity
day	eurusd	0.0000	0.0059	0.0373	4.9640	0.0000	0.6572	0.7518	0.0000
	hufusd	0.0000	0.0088	-0.3674	7.2788	0.0000	0.9559	0.9791	0.0000
quarter	eurusd	0.0038	0.0481	-0.1644	3.1651	0.8341	0.9573	0.9708	0.0000
	hufusd	-0.0002	0.0699	-0.4130	3.8614	0.1327	0.8760	0.9366	0.0000

*Table 2: The basic statistical properties of the low-frequency set
Source: Authors' edition in Matlab*

3.2 Methods

The analysis of the data followed the following steps: first a dynamic conditional correlation (DCC-GARCH) model was estimated in Matlab on the different datasets using the MFE-toolbox, then the different regimes were estimated with Markov-Switching model.

Conditional variance-covariance matrices are the multivariate cases of the conditional variance models, originally published by Engle (2002) as the DCC-GARCH model [5]. The dynamic conditional correlation model (DCC model) estimates the $\sigma_{i,t}^2$ conditional variance of time series that can be characterized with $r_t | \phi_{t-1} \sim N(0, H_t)$ return and all ϕ_{t-1} information available at $t-1$ point in time:

$$\begin{bmatrix} \sigma_{i,t}^2 & \cdots & \sigma_{i,j,t} \\ \vdots & \ddots & \vdots \\ \sigma_{j,i,t} & \cdots & \sigma_{j,t}^2 \end{bmatrix} = \sum_{i=1}^p \alpha_{i,j} \begin{bmatrix} e_{i,t-p}^2 & \cdots & e_{i,j,t-p} \\ \vdots & \ddots & \vdots \\ e_{j,i,t-p} & \cdots & e_{j,t-p}^2 \end{bmatrix} + \sum_{i=1}^q \beta_{i,j} \begin{bmatrix} \sigma_{i,t-q}^2 & \cdots & \sigma_{i,j,t-q} \\ \vdots & \ddots & \vdots \\ \sigma_{j,i,t-q} & \cdots & \sigma_{j,t-q}^2 \end{bmatrix} \quad (1)$$

A linear AR(1) model with time-variant parameters is able to capture the different assumptions of an unspecified regime-specific parameter.

$$x_t = (\varphi_{1,0} + \varphi_{1,1}x_{t-1})\mathbf{S}_t + (\varphi_{2,0} + \varphi_{2,1}x_{t-1})(1 - \mathbf{S}_t) + e_t \quad (2)$$

In case of the \mathbf{S}_t is known, we can define it with a dummy variable to describe the regime change, but if it is unknown but depends on some unobservable variables it is possible to use Markov-Switching (MS) models [6]. A two-regime MS model (3) can be written as:

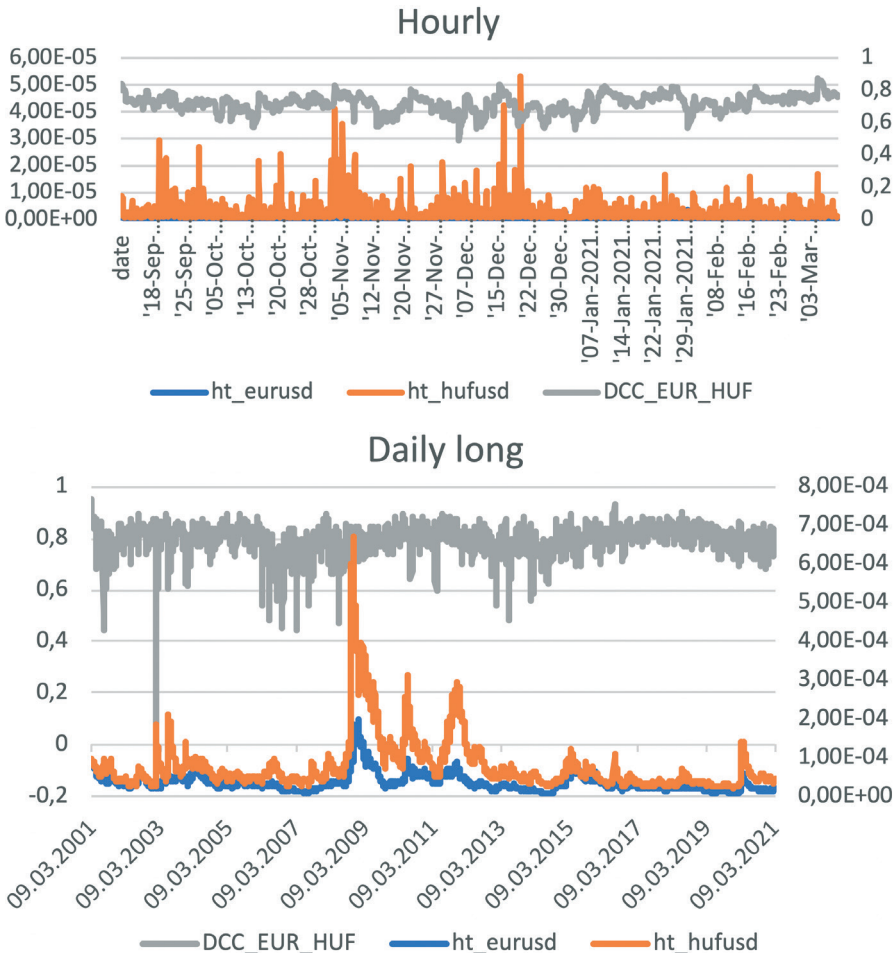
$$x_t - \mu(\mathbf{S}_t) = \sum_{i=1}^p \varphi_i(\mathbf{S}_t)(x_{t-i} - \mu(\mathbf{S}_{t-i})) + \sigma(\mathbf{S}_t)e_t \quad (3)$$

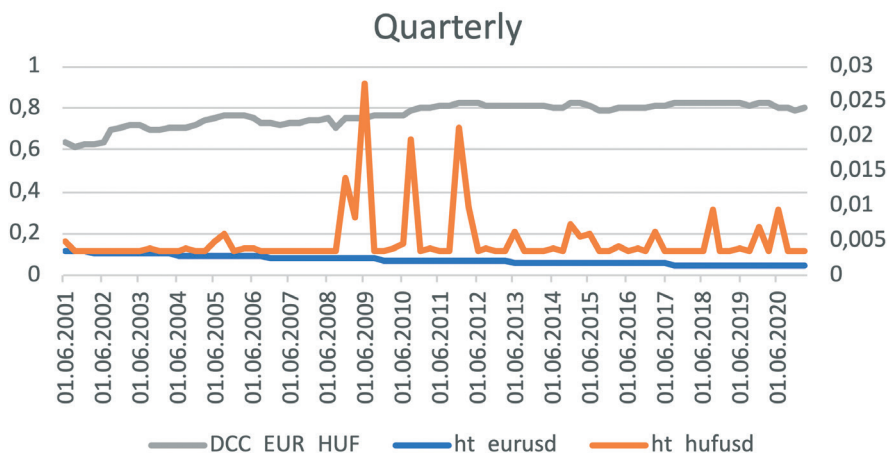
Where the non-observed process (\mathbf{S}_t) is an ergodic Markov chain, e_t is a standardized white noise process and parameters of $\mu(\mathbf{S}_t)$, $\varphi_1(\mathbf{S}_t)$, ..., $\varphi_p(\mathbf{S}_t)$ and $\sigma(\mathbf{S}_t)$ are time-varying and describe the dependence of x_t to the current regime \mathbf{S}_t . The associated transition matrix of the Markov chain is defined by $P(\mathbf{S}_t=j | \mathbf{S}_{t-1}=i) = p_{ij}$ in the transition matrix of $\eta = \begin{pmatrix} p_{11} & p_{21} \\ p_{12} & p_{22} \end{pmatrix}$. The MS model fits well if the residuals are not autocorrelated, and the model prefers more to stay in the regimes ($p_{11} \sim 1, p_{22} \sim 1$) instead of jumping to an other one ($p_{12} \sim 0, p_{21} \sim 0$) [7].

4. RESULTS

4.1 Dynamic Conditional Correlation

First, the minutely data proved to be too erratic to estimate a DCC-GARCH model, so it was left from the later analysis. However, the hourly, the long daily and the quarterly data provided a good fit (see Graph 1). All of them showed a similarly strong correlation between the HUF and EUR, making this behaviour frequency-invariant. However, there were setbacks in all the cases, when correlation declined suddenly before a similarly fast recovery. Therefore it seemed to be meaningful to estimate the MS model on the low-frequency data – the hourly data maintained its autocorrelation at the residuals even at higher lag numbers.





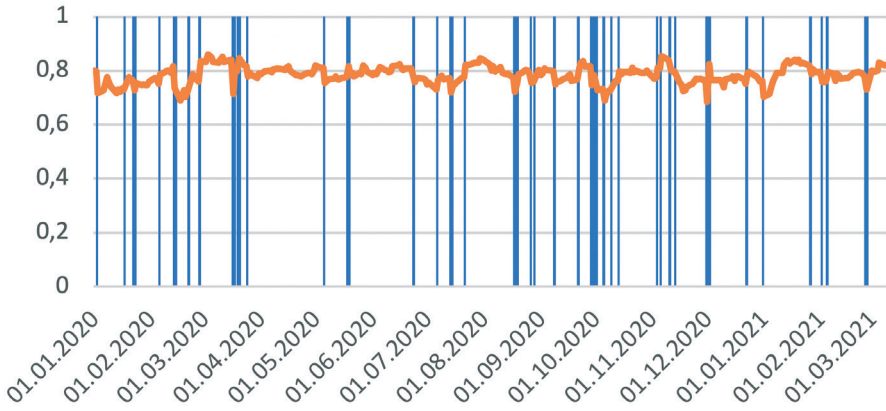
Note: the 0-1 scale represents the level DCC-GARCH, while the other scale represents the univariate dynamic volatility.

Graph 1: DCC-GARCH at different frequencies

Source: authors' edition

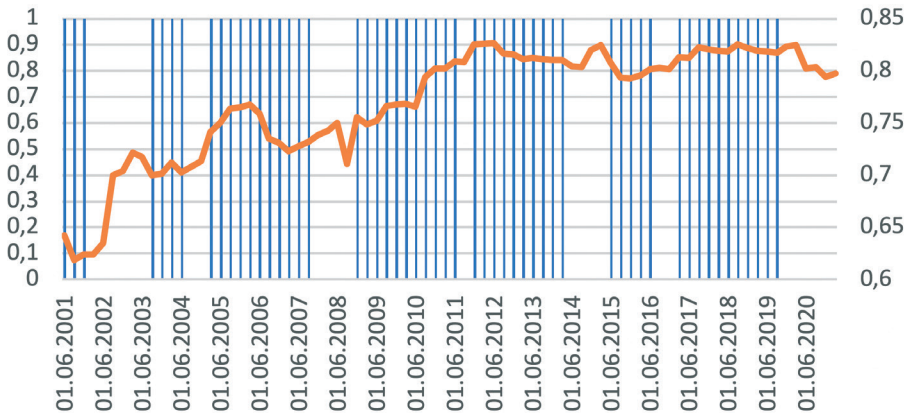
4.2 Markov-switching Model

The daily long DCC-GARCH data provided an MS model with no autocorrelation in the residuals (Durbin-Watson statistics: 2.1521) and with meaningful constant transition probabilities: $\eta = \begin{pmatrix} p_{11} & p_{21} \\ p_{12} & p_{22} \end{pmatrix} = \begin{pmatrix} 0.3604 & 0.6396 \\ 0.1483 & 0.8517 \end{pmatrix}$. It means the correlation tended to stay in the second regime with high ($p_{22}=0.8517$) probability, but there was a low but possible chance to step in the first regime ($p_{11}=0.3604$) temporarily since the jump back to the second regime had higher probability ($p_{21}=0.6396$) – supporting our initial “market hiccup”-hypothesis. Regime two provided stable and high dynamic correlation between the HUF and the EUR, while the regime one was responsible for the sudden spikes (see Graph 2).



Graph 2: MS model fitting results on daily (long) DCC-GARCH data
Source: authors' edition

We were able to find similar results at the quarterly data as well (Durbin-Watson statistics: 2.008991, $\eta = \begin{pmatrix} p_{11} & p_{21} \\ p_{12} & p_{22} \end{pmatrix} = \begin{pmatrix} 0.5724 & 0.4276 \\ 0.7991 & 0.2010 \end{pmatrix}$), but now the first regime had higher persistence and the second was temporary. However, our finding was the same at this frequency as well, which provided some robustness of the results.



Graph 3: MS model fitting results on quarterly DCC-GARCH data
Source: authors' edition

5. CONCLUSION

The purpose of monetary intervention is to balance changes in the exchange rate (fine-tuning), to maintain a possible exchange rate target and to deal with temporary shocks (exogenous shocks). Intervention is direct if the central bank stabilizes the shortage of supply or demand for foreign exchange at the expense of its foreign exchange reserves (this is good for fine-tuning, not to cover up unsustainable fixing). This is necessary, for example, if investors decide to sell some currency due to increased domestic risks or a low interest rate premium, in which case the central bank may start selling foreign currencies out of its foreign exchange reserves (reverse operation), which can only be limited by the depletion of reserves.

Maybe sometimes it is better not to intervene for the central bank, if the exchange rate is re-valuated by a sudden change in the market sentiment. This can be the main conclusion of the paper since we were able to point on both the more erratic nature of the HUF as well as the presence of its sentiment-dependent common movement with the euro. It means that a cautious “fear of floating” management would be not just expensive but inefficient in many of the cases.

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DID THE EURO REQUIRED THE SACRIFICE OF MACRO-STABILITY IN THE CORE-COUNTRIES LIKE THE PREVIOUS GOLD-BASED SYSTEMS?

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ABSTRACT

Gold-based currency systems like the gold-standard and the Bretton-Woods regimes were known of the bias what the shocks in gold supply and demand added to the regime. Therefore, macro-variables like the real GDP, inflation and long-term interests are thought to be more volatile than they are nowadays under the inflation targeting monetary policies and floating exchange rates. However, the maintenance of the Eurozone implemented further and further challenges for the economic policy not just in the 1990s but during the 2010s as well, requesting for a deeper integration and further institutions to mitigate shocks (like the Banking union or the ESM). This paper focuses on the impact of the implementation of these policies on the volatility of the key macro-variables to determine a general level of shock-generation due to these policies. Therefore, the following countries' annual data were analysed between 1870 and 2017: Germany, France, Italy, Portugal, Spain, Netherlands, Belgium and Finland to represent both the core and periphery of the Eurozone. Macro-volatility was estimated with a GARCH (1,1) model in Matlab for the entire time set, while the euro-adoption's impact was analysed with a Markov-switching model.

Keywords: Eurozone, historical data, GARCH, Markov-switching, macro-volatility

1. INTRODUCTION

There is a long debate in the literature about the costs and benefits of the single currency even long before the introduction of the Euro. This paper would like to contribute to this topic by focusing on the possible losses, measured by the volatility of the key macroeconomic variables. Instead of evaluating the institutional environment's adequacy to the conventional optimal currency area requirements, by focusing on the macro-volatility, we can look for regime-changes in these variables. If we can detect higher frequencies of these volatility-regime changes, we can backtrack it to the inadequate policy responses of the underlying institutional background. This research is motivated by the previous findings about the gold-standard, since it generated historically higher volatilities for the key macro-variables – therefore we can assume the possibility of a trade-off between foreign exchange and macroeconomic stability. In case of poor institutional response.

Our sample covers the annual data from 1870 to 2017, representing Germany, France, Italy, Portugal, Spain, Netherlands, Belgium and Finland to include both the core and periphery of the Eurozone. Macro-volatility was estimated with a GARCH (1,1) model in Matlab for the entire time set, while the euro-adoption's impact was analysed with a Markov-switching model in Eviews software.

2. THEORETICAL BACKGROUND

Quantity-objectives are responsible for the generation of additional noise in the interest rates as Bindseil [1] stated, which can be familiar from Pool's (1970) analysis, which pointed on the higher efficiency of the interest rate as an instrument instead of focusing on the monetary aggregates.

In the gold standard, there was an obvious trade-off between the foreign exchange rate stability and the macroeconomic volatility: both Taylor – Williams [7] and Bordo [2] underlined the higher volatility at the output, interest rates and the consumer price index (CPI). While the gold standard maintained a quantity-based burden for the currency, which had to be backed by adequate gold reserves – meaning

that money supply was the subject of gold supply, while the economy was growing by an exponential trend after the first and due to the second industrial revolution. This exponential growth not just improved drastically the living standard of the era, but since it was fuelled by a dramatic increase in productivity which worked against the inflation by cutting back the unit costs like never before. Therefore, we can state that the gold standard had a low inflation not because of the implementation of the gold-backed currency, but because of the harmonious development of the aggregated demand and supply. The importance of this balance was underlined by the 1929-1933 crisis and the entire mid-war period of the 1920's and 1930's.

Meanwhile the road to the single currency after the second world war explored and rejected most of the alternatives of the euro: the Breton-Woods system collapsed due to the lack of discipline in the US economic policy and resulted stagflation and currency volatility, the Exchange Rate Mechanism I (ERM-I) from 1979 to 1998 was able to stabilize the European exchange rates (and inflation) with the introduction of the European Currency Unit (ECU) without any meaningful institutional background, but it was fragile for asymmetric shocks (as it happened during the ERM-crisis in 1992). The introduction of the Euro established the single monetary policy, operated by the European Central Bank, while the institutional background of the fiscal discipline, bank supervision and the public debt consolidation was reinforced after the sovereign crisis of the early 2010s.

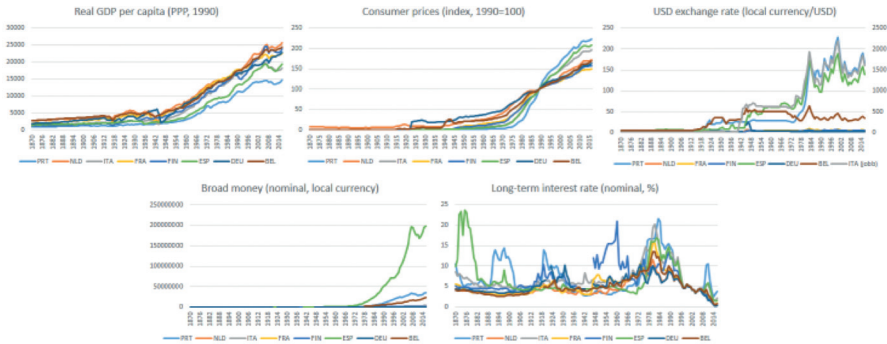
However, we can raise the following question: was the implementation of the single currency even necessary if it fuelled a seemingly never-ending institutional evolution? On one hand, European countries were conducting most of their trade among each other, so the elimination of the foreign exchange risk can have a multiplicative effect. On the other hand, foreign exchange risk can be eliminated by different financial innovations [6] and many countries existed around the Eurozone with their own currency which can react on asymmetric shock better. Nevertheless, it had not be expected that the maintenance of fiscal discipline and macroprudential policies would be required without the Euro as well.

Therefore, it seems to be necessary to test the impact of the evolving institutional establishment on the macro-volatility – which is usually used to estimate the impact of the monetary policies [7].

3. DATA AND METHODS

3.1 Data

To represent both the core and periphery of the later Eurozone, the following countries were included in our sample from the Jordà-Schularick-Taylor Macrohistory database¹ due to the ability of data: Germany, France, Italy, Portugal, Spain, Netherlands, Belgium and Finland. The following three periods were analysed separately: gold standard 1870-1913 ($t = 43$ years), Breton-Woods 1946-1971 ($t = 25$ years) and ERM I. – ERM II. 1980-2017 ($t = 37$ years). Meanwhile the following key macro-variables were included due to their importance in economic analysis: real GDP per capita, CPI, broad money (M2), long-term interests, USD exchange rate. Both the real GDP per capita, consumer price index and broad money followed and exponential growth trend, while long-term interest rates and USD exchange rates presented crisis-specific shocks (see Graph 1).



Graph 1: The development of the key macro-variables
 Source: Jordà-Schularick-Taylor Macrohistory database

3.2 Methods

The analysis of the historical data followed the following steps: first a GARCH (1,1) model was estimated in Matlab on the entire annual dataset (1870-2017) using the MFE-toolbox, then the different monetary regime intervals were introduced to compare the mode of the conditional standard deviations. The analysis ended with the estimated Markov-Switching model to look for regime changes after euroadaption.

Volatility is time variant as market sentiment changes constantly, so the usage of unconditional (time-invariant) standard deviation would be misleading. Persistence is another important property, since heteroscedasticity represents the presence of high and low volatile periods – meaning that if the market was unsure to price in an asset (volatility was high) it will be uncertain tomorrow as well. Such persistence can be captured by different GARCH models, since they can be fitted to estimate conditional (time-variant) standard deviations, following Cappeillo, Engle and Sheppard [3].

The following GARCH(p,q) model (1) can be useful to capture volatility developments and their clustering in time (heteroscedasticity).

$$\sigma_t^2 = \omega + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^q \beta_j \sigma_{t-j}^2. \quad (1)$$

Where σ_t^2 represents present variance, ω is a constant term, p denotes the lag number of squared past ε_{t-i}^2 innovations with α_i parameters, while q denotes the lag number of past σ_{t-j}^2 variances with β_j parameters to represent volatility persistence.

The analysis of macroeconomic or macro-financial relationships involve non-linearities. A linear AR(1) model with time-variant parameters can be written up with different assumptions about our knowledge of the regime-specific parameter.

$$x_t = (\varphi_{1,0} + \varphi_{1,1}x_{t-1})\mathbf{S}_t + (\varphi_{2,0} + \varphi_{2,1}x_{t-1})(1 - \mathbf{S}_t) + e_t \quad (2)$$

In case of the \mathbf{S}_t is known, we can define it with a dummy variable to describe the regime change, but if it is unknown but depends on some unobservable variables it is possible to use Markov-Switching (MS) models. A two-regime MS model (3) can be written as:

$$x_t - \mu(S_t) = \sum_{i=1}^p \varphi_i(S_t)(x_{t-i} - \mu(S_{t-i})) + \sigma(S_t)e_t \quad (3)$$

Where the non-observed process (S_t) is an ergodic Markov chain, e_t is a standardized white noise process and parameters of $\mu(S_t)$, $\varphi_1(S_t)$, ..., $\varphi_p(S_t)$ and $\sigma(S_t)$ are time-varying and describe the dependence of x_t to the current regime S_t . The associated transition matrix of the Markov chain is defined by $P(S_t=j|S_{t-1}=i) = p_{ij}$ in the transition matrix of $\eta = \begin{pmatrix} p_{11} & p_{21} \\ p_{12} & p_{22} \end{pmatrix}$. The MS model fits well if the residuals are not autocor-

related, and the model prefers more to stay in the regimes ($p_{11} \sim 1, p_{22} \sim 1$) instead of jumping to an other one ($p_{12} \sim 0, p_{21} \sim 0$) [4].

4. RESULTS

4.1 Historical Conditional Volatility

Historical conditional volatilities (see Graph 2) had similar modes during the gold-standard and the ERMI-ERMII eras, while the Bretton-Woods system suffered from higher macro-volatility – namely due to post-war stress factors. Only the long-term interests rates beared higher volatilities in the recent eras than before.

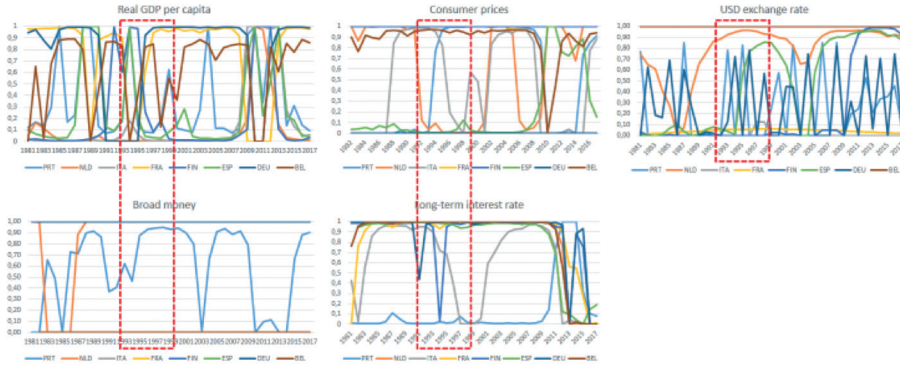


Graph 2: Expected values of historical conditional variances
Source: authors' edition

4.2 Markov-switching Model

The preparation period of the Eurozone in 1992-1998 did not result dramatic regime changes in the macro-volatilities as Graph 3 showed. Only the output per capita suffered from rapid regime change before the calm period of the 2000s. However, the calmness of the 2000s can be misleading, since that was the build-up-period for the sovereign crisis in the early-2010s since the institutional background was blind on the fiscal discrepancies and emergent financial imbalances. This caused rapid regime changes in the macro-volatilities in the 2010s were only the reinforced institutions and the introduction of the unconventional monetary policy were able to stabilize the economy. It is interesting

though, that there were no differences in the regime changes of the core and periphery as well as the inadequacy of the broad money to capture anything.



*Graph 3: MS model fitting results
 Source: authors' edition*

Decisions to adopt or not to adopt the euro will require alignments in the areas of macro-prudential policy and external debt management, in addition to fiscal and monetary policy, both in Member States facing integration problems in the euro area (e.g. Portugal and Greece) and successful external ones (e.g. financial adjustment in the Czech Republic). The experience of the 2008 crisis has shown that the success of long-term monetary integration and catching-up is assured once real convergence has taken place. In the case of exogenous shocks, the catching-up of the V4 countries with the national currency was higher than the EU average in terms of GDP, employment or external balance compared to Slovakia with the euro.

5. CONCLUSION

The Euro has a deep and sophisticated institutional background – unlike the gold standard: not just the common budget and the European Central Bank or the single market, but a huge variety of fiscal rules were implemented (like the European Semester), the European Stability Mechanism acts as a tool of sovereign debt consolidation and the bank

union focuses on the macroprudential discipline. Meanwhile the macro-shocks are less persistent nowadays than in the previous periods. However, the results are pointing on the continuous evolutionary pressure on the existing institutional background, since past calm periods were always followed some rapid regime-changes in macro-volatilities.

NOTES

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IMPACT OF COVID-19 ON A COMPANY WORKING IN THE FOOD INDUSTRY AND ITS FINANCING SOLUTIONS

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ABSTRACT

In the beginning of 2020, the appearance of coronavirus in Europe made national governments continuously apply restrictive measures to bring the pandemic under control. These measures slowed the economy down, causing financial difficulties for both companies and the population. In the first section of my study, I evaluate the measures announced by the Hungarian government to soften the negative economic effects. I pay special attention to the loan programs of Hungarian National Bank and other state financial companies for handling the crisis, and the applicability of them.

In the second part of the study, we intend to present the effects of the economic recession caused by COVID-19 through the example of a food company, and the ways and products a commercial bank can offer to help the company in such difficulties.

Keywords: COVID19, Corporate finance, National Bank of Hungary

1. INTRODUCTION AND LITERATURE OVERVIEW

From beginning of March 2020, restrictive measures related to coronavirus were introduced in Hungary with the primary goal of protecting the health of the population. Economic operators could already sense the negative effects of the restrictions in March. As a reaction, the Hungarian government developed and introduced the first measures aiming to reduce the load of economic operators and to help them survive the crisis. The first larger volume measures to manage the economic situation were released in Hungarian Gazette on 18th March [1]. The measure affecting the most people is the moratorium, in sense of which no fulfillment of capital, interest or any other payment is required for loans disbursed until 18th March 2020 from neither private nor corporate debtors by 31st December 2020, unless the parties agree otherwise [2].

Like most other sectors, agricultural and food sectors were hit by negative financial effects of coronavirus pandemic. On 10th of April, as part of the Economic Protection Action Plan, the first package of measures targeting agricultural sector was released in Hungarian Gazette [3]. To remedy the situation as soon as possible, Hungarian National Bank and other public financial companies provide free or discounted sources for the banks so that they can provide preferential loans for the companies in trouble under certain circumstances. Hereinafter I go through the loan and warranty schemes established to soften the negative effects caused by coronavirus, without claiming completeness.

Crisis guarantees belong to bank guarantees. A bank guarantee is an instrument suitable for securing a contractual term. The type of guarantee in this sense is determined by the underlying transaction to be provided. The credit guarantee is primarily intended to secure the debtor's payment obligation as set out in the contract. The underlying legal relationship of a loan guarantee is a credit transaction in which the guarantee covers the risk of default of the debtor (in the latter case, the creditor expects the return on the loan from the amount of the guarantee). The process of its creation is as follows:

1. In order to establish a credit relationship, the creditor prescribes security for the debtor (this is the fundamental legal relationship, part of the credit contract).

2. The debtor instructs the guarantor credit institution to provide a bank guarantee against the creditor (this is an assignment contract).

3. The guaranteeing credit institution undertakes a bank guarantee for the debtor (the latter is the bank guarantee itself) in the guarantee statement issued by it. The content of the guarantee statement must comply with the terms of the loan agreement [4].

The required content elements of the bank guarantee statement are the following:

- a statement by the guarantor bank that it is aware of a credit agreement (or other commitment) of a specified amount and term between the debtor and the creditor and that a guarantee statement from the guarantor bank is required for the conclusion of the former contract;
- the guarantee is unconditional and irrevocable;
- the cases and manner in which the guarantee is called are fixed, as is the temporal scope of the declaration;
- the guarantor bank undertakes that, if the debtor fails to fulfill his obligations under the contract when due, the guarantor bank (i) on first demand, without examination of the fundamental relationship, or (ii) after submission of certain documents, pays the amount [5].

In the event of non-payment of the loan, the creditor must attempt recovery under the debt settlement procedure; the amounts to be recovered shall be borne by the guarantor up to the amount of the called-up guarantee.

In a contractual sense, a loan guarantee is the assumption of an obligation in the event of default by the obligor. The guarantor's declaration is an undertaking by the guarantor on the basis of which he is obliged to make payment to the beneficiary in the case of the conditions specified in the declaration. Thus, a guarantee is an irrevocable commitment by its provider, for a specified period, to pay a specified amount, under the terms of the guarantee, in the event that the contractor fails or fails to properly perform a contractual obligation to the beneficiary of the guarantee. The guarantor provides the loan guarantee for a fee, which must be paid jointly by the debtor or the debtor and the creditor. The amount of the fee depends primarily on the type of loan and the credit risk of the debtor.

1.1 MFB Competitiveness Loan Program

At the end of April 2020, Hungarian Bank of Development (MFB) announced MFB Competitiveness Loan Program, setting the reduction of losses of economic crisis caused by the virus as a main goal [6]. The preferential loan can be taken by resident micro, small, medium and large enterprises having domestic headquarters. The budget of the program is 150 billion forints, which can be provided by banks for the following credit purposes in HUF or EUR currencies [7]:

- **Financing investments**, which can be used for purchasing properties and related property rights, such as technical equipment, installations, vehicles, and for financing investments such as renovations, and other related intangible assets.
- **Financing working capital**, which can cover personnel expenses and operational costs.
- **Acquisition**, with the goal of purchasing financial assets and acquisition by capital increase.
- **Refinancing**, for the three above-mentioned credit purposes.

Based on the credit purpose the term can be between 1 and 15 years, the interest rate is based on the term and the type (fixed or variable interest rate).

1.2 NHP HAJRÁ!

The construction of Growth Loan Program (NHP) is not a novelty in the domestic financial market, Hungarian National Bank (MNB) started the program in 2013 to support companies of small and medium sized corporate (SME) segment [8]. The construction of NHP Hajrá was announced as a part of this program on 20th April, with the purpose of reducing the negative effects of the coronavirus pandemic. Monetary Policy Council declared the budget of the program in 1500 billion Hungarian forints, which is provided to the credit institutions with 0% interest rate and a maximum term of 20 years [7]. In contrast with MFB Competitiveness Loan Program, only SMEs can participate in this program. Total interest rates of the loan cannot exceed 2,5% during the full term, apart from the costs to be paid to 3rd parties (e.g. notary fees, valuation fees, insurance fees). Companies can use the loan for the following purposes:

- **Financing investments**, which can be used to purchase intangible assets or fixed assets, for the renovation, modernization or capacity enhancement of already owned or rented, leased assets. Furthermore, it can be used for purchasing permanent interest, with the constraint that transaction shall result in an ownership of at least 10 percent.
- **Financing current assets**, the amount of which shall not exceed the sum of unexpired assets, assets expired maximum 30 days ago, personnel expenses, and the already existing working capital loans. The limit amount must be checked on a yearly basis, as part of the company's balance sheet, or failing that, based on the trial balance. In case of exceedance, the company must prepay the loan with the amount exceeding the limit. The term of the loan cannot exceed 3 years from the time of the first disbursement.
- **Pre-financing support** can be provided for such already won support from European Union or national sources, which has not yet been paid out. The loan is effectively paid in one amount at the time of the payment of the support.
- **Refinancing** can only be provided for converting forint or foreign currency-based loan or financial leasing established outside of NHP until 1st January 2020, when the loan is disbursed in one amount. The term limitation of 20 years is applicable here as well, which is counted from the refinanced loan's contracting day.

1.3 Széchenyi Card Program – KAVOSZ Zrt.

As part of this program, four products were announced with the specific goal of financing needs caused by coronavirus pandemic [9]. Micro, small and medium-sized companies can utilize this construction, for managing their liquidity issues. The following products can be requested from 15th May:

- **Széchenyi Workplace Retention Loan** has a maximum amount of 750 million forints, with a term of 2 years and transaction interest of 0,1%.
- **Széchenyi Card Overdraft Plus** with a maximum amount of 100 million forints, can be requested in combination with Széchenyi Job Retention Loan for covering any type of operational cost of the company, with a fixed transaction interest of 0,1%.

- **Széchenyi Liquidity Loan** is a general-purpose loan with a maximum amount of 250 million forints, term of 3 years and a fixed net transaction interest of 0,2%.
- **Széchenyi Investment Loan Plus** with a limit of 1 billion forints, maximum term of 10 years for investment purposes with a net transactional interest of 0,5%.

1.4 EXIM Compensation Loan Program 2020

Hungarian micro, small, medium-sized or large businesses facing serious liquidity, continuity or survival hardships due to the breakout of coronavirus pandemic (after 1st February 2020) can join the loan programs of EXIM [10]. The amount of the loan can be twice the annual labor cost / 25% of 2019 sales revenue / in individual cases, based on a liquidity plan, it can even be higher. It can be requested in forint, euro or dollar currencies. In case of HUF, the preferential interest rate is between 0,10% and 2,30%, in case of EUR, it is 0,10-1,69%, and finally, 2,25-4,00% in case of USD. The following constructions are available in the announced packages:

- **EXIM refinanced compensation working capital loan and EXIM direct compensation working capital loan:** The budget of the product is 150 billion forints which can only be requested for the purpose of working capital financing, in form of revolving and non-revolving credit. The maximum term is 36 months, while in case of revolving loan it is 12 months.
- **EXIM refinanced compensation domestic investment loan and EXIM direct compensation investment loan:** This type of credit can cover investments related to producer or service provider activities, for purchasing equipment, facilities and machines. The maximum term of it is 72 months, the minimal required own resources is 10% in case of purchasing equipment, in any other cases, it is 15%. Repayment frequency and interest period are flexible, can be 1, 3 or 6 months.

1.5 EXIM Compensation Loan Protection Program 2020

In the loan protection program, those companies can participate which had to suffer from declining net sales revenue, order volumes, operating profit, shorter suppliers' payment deadlines, or increasing customers' payment deadlines, deteriorating liquidity ratios, delay in

investment projects, even operational closures or reduced shifts, cuts in staff and wages after 1st February 2020, due to the COVID-19 situation. For the participation, the company must demonstrably meet at least one of the listed criteria. The maximum loan amount can be up to twice the company's annual labor costs, or up to 25% of sales revenue in 2019, or, in individual cases based on a liquidity plan, the amount can be even larger. When it comes to suretyship, it is 80% of the principal amount in case of micro, small and medium-sized companies, while for large companies it is 50% of the principal amount. The annual fee of the product depends on the maturity of the related loan and the size of the company:

Annual fee	Year 1	Year 2-3	Year 4-6
Micro-enterprises and SMEs	0,15%	0,30%	0,80%
Mid-cap and Lar	0,30%	0,80%	1,75%

Table 1: Annual fee of loan based on maturity and company size

Source: [10], self-edited

1.6 Garantiqa “Krizis” Warranty Program

Government of Hungary decided to launch the Warranty Program in the government decree 1170/2020 (IV. 21.) “About the measures related to warranty constructions implemented by MFB Hungarian Bank of Development Ltd and Garantiqa Loan Guarantee Ltd for reducing the economic effects of coronavirus pandemic on micro, small, medium-sized and large companies, as part of the Economic Protection Action Plan” [11]. Institutional guarantee of Garantiqa can be requested for loans, bank guarantees, factoring and financial leasing with a total budget of 500 billion forints and state counter-guarantee for the domestic SMEs and large companies. The suretyship can be maximum 90% of the principal amount of the loan, but it cannot exceed 5 billion forints. The maximum term of the insured transaction is 6 years. The fee of the guarantee depends on the maturity of the related loan and the size of the company.

Guarantee fee with subsidy	Year 1	Year 2-3	Year 4-6
SME	0,25%	0,50%	1,00%
Large company	0,50%	1,00%	2,00%

Table 2: Fee of guarantee based on maturity and company size

Source: www.garantiqa.hu, self-edited

2. MATERIAL AND METHOD

The authors intend to present the effects of coronavirus through the example of a food company. The case study is the presentation of an option with the purpose of revealing the difficulties a corporate running a bakery chain has to face in the current situation, as well as to present the solutions commercial banks can offer for these difficulties making use of the above described preferential loan and warranty constructions.

Wunder Pékség Ltd is a company from Győr-Moson-Sopron county which makes its products in its own mill and delivers them frozen to its self-operated bakeries and local supermarkets to sell them after baking. Currently the company owns 6 shops in the region with excellent locations. Net income of 2019 was 500 million forints. This company, which was otherwise in a good liquidity position and had a high profitability, turned to its bank for financial help after the situation caused by the coronavirus developed. In the commercial bank, an action plan was established for helping the company consisting of immediate recognition of the situation, quick overview of existing loans and the submission of a new working capital loan called MNB NHP HAJRÁ!

3. RESULTS AND THEIR EVALUATION

In 2019, the summarized monthly income of the all the shops was 32 million forints on average, which slightly increased in the first two months of 2020 to 33 million. Based on the latest report from the customer, the income was 16,8 million forints by 27th March, which is 45% of loss compared 29 million forints of the previous month's same period. Three of their shops has already been closed, however, they cannot rule out the termination of further shops' operation if the situation worsens. The customer has accumulated stocks of goods of about 40,5 million fronts (6 600 cartons of frozen finished products, sufficient for 2-3 months at current demand), therefore the mill in Győr stopped its operation on 23rd March. The customer calculates with a monthly income of 8,8 million forints by end of August as their larger partners also pause or reduce their orders. Wunder Pékség Ltd does its best to reduce its monthly operational costs, which is about 25 million per months under normal circumstances, which consists of the following:

- VAT (1-2 million forints) – as per the government decree, they received a temporary respite
- Utility bills (1 million forints) – reduced by stopping the mill, closing the shops
- Shop rent (2 million forints) – they requested discount, not yet agreed
- Gross labor costs (9 million forints) – they pay 30% of the wages, employees work in reduced shifts and working hours, they try to avoid staff cuts
- Principal and interest payment to bank (1,23 million forints) – they take the opportunity of moratorium provided by the government decree
- Raw material costs (11 million forints)

This way, the expected monthly cost is about 5 million forints.

Raising prices is not justified based on the strong guarantee structure (contribution margin is 90%), EVA is positive on customer level, RACE remains above the expected limit. So, incomes of the company will cover its costs in the upcoming months according to the company's forecast. However, to get prepared for a worse scenario, they would like to request a working capital loan.

Loan status	Type of loan	Amount and currency of loan	Utilization	Comment
Existing	Current account	10 million forints	10 million forints	Commitment: 31-01-2021 Expiration: 31-01-2021 Not covered by moratorium
Existing	Investment	50 million forints	40 million forints	Expiration: 31-12-2025 Covered by moratorium
Existing	Guarantee facility	5 million forints	2 million forints	Commitment: 31-01-2021 Expiration: 31-01-2024 Not covered by moratorium
New	NHP Hajrá working capital	30 million forints	-	Commitment: 30-04-2021 Expiration: 30-04-2023 Guarantee: GHG crisis guarantee of 90%
Total		95 million forints	52 million forints	

Table 3: Already existing and new loans of Wunder Pékség Ltd

Source: own research, own editing

4. CONCLUSIONS AND SUGGESTIONS

An “NHP Hajrá!” working capital loan of 30 million forints was approved for the customer with a term of 3 years, and institutional crisis guarantee of 90% from Garantiqa. Thanks to the state support, the bank got a cheap source, therefore the profitability of the deal was compliant to the internal regulations of the bank, and to its risk appetite thanks to the crisis guarantee, despite the deteriorating financial results. As a result of the disbursement of the loan, Wunder Pékség Ltd could avoid firing its employees who they definitely wanted to keep due to the labor market situation, to avoid getting into a difficult situation after the normalization of the situation and the restart of shops and the mill. Furthermore, the loan can be used for purchasing stocks or paying taxes to reduce the temporary liquidity issues of the enterprise.

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SOCIAL IMPACT BONDS DURING THE COVID-19

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ABSTRACT

In this paper, the authors aim at clarifying how important is to know about Social Impact Bonds (SIBs) on avoiding social problems, but also its downsides as a form of financing and its positive impact on the current 'Covid-19' pandemic situation. In the authors' perception, providing capital for the public sector will lead to a better social outcome and therefore a higher welfare. This research is focusing on proving that SIBs are an important part in the overall economy and the costs following this financing method are less recognizable when we talk about the greater good. Furthermore, Covid-19 outbreak is not only a global pandemic and public health crisis, it has affected the global economy and financial market, thus, social bond played an affirmative role in providing new funding avenues to address the unforeseen economic and social disruptions.

Keywords: Social Impact Bond, COVID-19, responsible investing

1. INTRODUCTION

In order to understand the function of Social Impact Bonds (SIBs), first, we need to understand the idea behind this funding. There are a lot of poor and vulnerable people in the world and government spends billions to address their needs. New prevent of interventions exists with proven results, many developed by non-profit groups. The problem is that non-profit organizations don't have enough resources to meet the need and shifting large scale government programs can be sometimes difficult. In order to improve and allocate in the most efficient way all government expenditures to help prevent social problems are SIBs. These instruments raise funds to invest on new or existing projects with positive social outcome while shifting the financial risk away from government. SIBs reward successful results rather than just well-intentioned activity, so they get paid for their performance. In other words, they follow 'Payment by result model'. The intentions of the authors are connected to the fact, that funding with SIBs will be successful only if the intervention deliver meaningful result. [1, 2]

The paper is structured as follows: first, the creation of funding and its participating agents; then following with the acceptance by surveilling authorities, the purpose of innovation and the core of solution for this type of funding. Authors will end this research by providing actual examples/arguments regarding SIBs influence on the current situation.

2. CONCEPT OF THE ISSUE OF SIBS

The purpose of social impact bonds goes beyond its financial component. The securities are intended to help align the interests of different entities, including governments, investors, social enterprises, and the general public, in order to develop effective solutions for public-sector problems. Even though the security is called bond, they still lack most of the features of typical conventional bonds. SIBs don't offer a fixed rate of return to investors, instead, the replacement of the bonds primarily depends on the success of the project that has been subsidized using the bonds. It means that if a project is successful, the investors are repaid by the government using the savings that have been created by the proj-

ect. However, if the project fails, the investors do not receive anything. Therefore, Social Impact Bonds come with high risks for investors. [3]

How does a Social Impact Bond Work? They are often differentiated from other fixed securities by the number of key players in the capital-raising process. In order to answer the question let's go through the steps that are involved in the process (Graph 1):

- **Identifying the problem and possible solutions**

Generally, first of all, the process starts when the government identifies a challenge in a public sector. Some of the problems include public safety, homelessness, rehabilitation of former prisoners, academic failure, health and family support services. Then, the government determines possible solutions, which can include a proven strategy or program that can be reproduced.

- **Raising funds for the project from private investors**

After the potential solution has been identified, the government works to attract private investors to the project. The parties determine the quantifiable metrics that will indicate the project's success.

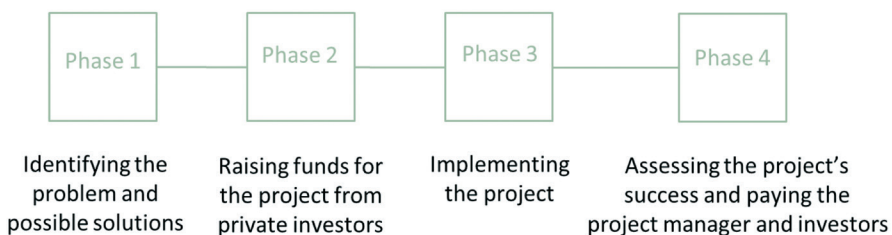
Interested investors provide the required capital to support the operations and execution of the solution.

- **Implementing the project**

The project manager uses the obtained funds to finance the project's operations, and the service provider begins the implementation of the program.

- **Assessing the project's success and paying the project manager and investors**

At the end of the fixed term, an independent evaluator completes the assessment of the project's success based on the predetermined metrics. If the project meets the criteria, the government pays the project manager, who then transfers the funds to the investors in the Social Impact Bonds.



Graph 1: Project implementation

Source: own from [4]

Social Impact Bond is a financial innovation, because it's the first mechanism combining a payment-by-result system based the achievement of social objectives while saving social costs for the public sector, private financing, and the outsourcing of social actions to non-public organizations. This kind of consortium had never been used for public services. But, like most of the financing systems we are familiar with, we would like to mention some of its downsides of this one as well. For years non-profit organizations have served people living in poverty and those with a range of other support needs. The neo-liberal economic model which has created super-wide income disparity is based on low or no taxes and small government. In order to replace the roles of tax-funded services, they came up with social impact bonds. Again, with a profit motive. Some things like human rights and supporting those less fortunate can never have a corporate solution because by definition they have nothing to do with making a profit. Churches and governments have solved these problems because if they don't, poor people fall further to the bottom. Tax increases on the super-wealthy are the only way to solve these social problems that essentially are the result of poverty. [5]

The progressing publicity around SIBs, their relentless expansion around the world, and the critical measures of cash speculators are placing into them would recommend that they are broadly viewed as the eventual fate of effect contributing. Notwithstanding, we battle that such uncritical excitement for the SIB model is a stressing pattern. There are huge specialized difficulties to defeat in setting up and working SIBs, which advocates inadequately recognize. As a result, be that as it may, SIBs on a very basic level change the idea of public and social administrations, adequately diminishing residents to products.

No one could deny the fact of the existing technical issues with Social Impact Bonds. As installment to speculators depends on conveying results, contracting courses of action require exact result estimation to dodge questions.

This raises various issues, including the choice and estimation of results, the attribution of what prompts and who caused changes in chosen pointers, and unreasonable motivating forces, for example, "stopping" more earnestly to-serve customers and "creaming" those simpler to help. Additionally, regardless of whether it could be demonstrated that SIBs legitimately added to future cost reserve funds, such impacts

are infrequently ultimate results. Or maybe, they are improvement measures that rely on continuing probably a portion of the exertion that achieved them, and not just getting the money for out after transient legally binding targets have been met. The area may have increased further understanding of these issues from the world's first SIB, at Peterborough Prison, which was initially finished a year ago. In any case, it was ended after just three years, because of the presentation of another public arrangement. While interval results demonstrated reoffending at the jail at first went somewhere around 8.4 percent, the genuine accomplishment of this SIB is difficult to pass judgment, and issues of attribution remain. This experience features another vulnerable side that appears to be trademark among SIB team promoters: the determinant impact of the dynamic, incidental approach climate, and political atmosphere on program results. [6]

Another big challenge faced by SIB is the qualitatively changing service delivery. These difficulties should give SIB advocates a cause to re-evaluate. The way that they don't take delay mirrors the philosophical, instead of evidential, reason for SIBs ubiquity. In any case, we accept of more prominent concern is the unexpected (or something else) impact of bringing the SIB model into the domain of administration conveyance recently mixed with a public-area ethos. This speaks to a limit move that significantly adjusts the personality of the administration. SIBs are without a doubt innovative. Yet, leaving aside their impressive, specialized issues, unmistakably more than being a simple technocratic and unideological advancement, they comprise a philosophical move in government assistance administration arrangement. SIBs are both an original "arrangement searching for an issue" and a representation of the social matchless quality of market standards into all parts of regular day to day existence, including legislative issues and strategy. [7, 8]

3. REASONS FOR THE EMERGENCE OF SIBS

Green, social, and sustainability bonds, though increasingly popular, still only make up a fraction of the overall of the bond market. And compared to green bonds, the social bond market is still in its nascent stage. Nonetheless, issuances have soar since the virus outbreak in mid-

2020, as social bonds have happened to expanding revenue to speculators hoping to accomplish positive social results along with a monetary return.

Why these bonds weren't so attractive to investors before the pandemic? Similar to green bonds, the initial interest in social bonds came from a pocket of investors who were not only pursuing financial returns from their investments but also looking to contribute to positive social outcomes [9]. The primary supply of social bonds was initially driven by multilateral organizations such as International Finance Corporation, and later by non-sovereign financial institutions.

While the Covid-19 outbreak has hosed the issuance of green bonds, it has additionally prodded the issuance of social and supportability bonds, as issuers were hoping to raise capital for COVID-19 related financial costs. Subsequently, social bond issuances have soar since the beginning of the pandemic, with the principal quarter of 2020 chronicle the most significant level of social bond issuances ever.

Stock exchanges around the world have quickly changed their strategies in regard to trading of securities as a component of their crisis balance. For example, the Luxembourg, London, and Nasdaq stock traders diminished costs on COVID-19 related social bonds. Bursa Malaysia in late March broadened its overview of edge financing vows to instruments, for instance, bonds.

As we went into all the details regarding the social bond, its benefits, downsides and the uncertainties these bonds face when there is a drastic change in the market, does a normal social bond have an impact/or different way of treatment while speaking of emerging markets?

These market economies require especially significant levels of venture to accomplish economical turn of events, which gives more potential to green, social, and supportability securities. Pre-emergency, Ecuador had quite recently become the main nation to give a Sovereign Social Bond. This \$400 million security underpins the administration's 'Casa para Todos' program, which gives reasonable lodging to in excess of 24,000 low-and medium pay families. [10]

Since the outbreak of the pandemic, many developing business sectors have been near the very edge of an equilibrium of installments emergency that has been exacerbated by capital surges and the breakdown of ware costs.

As a response, central banks around the world have dramatically expanded their money supply to encourage growth, which has scaled down loan costs and caused a rally in bond costs. However, credit ratings downgrades and negative outlooks kept foreign investors away from emerging market debt amid a flight to less risky and more liquid asset classes. Therefore, the issuance of green, social, and sustainability securities in developing business sectors added up to just \$7.7 billion in the principal quarter of 2020, its lowest since 2018. The primary COVID-19 securities were issued in early February on China's domestic bond market by actors such as policy banks, hospital builders, and pharmaceutical companies. By the end of February, Bank of China issued a social bond designed to support small and medium enterprises (SMEs) impacted by the pandemic.

While the COVID-19 emergency has prodded an abrupt expansion in social security issuances, securities remain basically a drawn-out financing instrument, however the current wellbeing and monetary emergency has quick, crisis subsidizing needs. Looking forward, building up a trustworthy COVID-19 social security market is imperative to backers and speculators the same.

The returns from such securities can be coordinated toward a profoundly different arrangement of ventures and projects, which makes them allure to a wide scope of market entertainers [11, 12]. Nonetheless, this additionally makes disarray about the motivation behind COVID-19 bonds, similar to the disarray that has frequently deflected financial specialists from thinking about green, social, and manageability bonds previously.

Consequently, straightforwardness and honesty in the social security market are basic to forestalling the danger of "social-washing", having continues utilized for causes other than those initially proposed. For the most part, the returns of COVID-19 related social bonds ought to be coordinated exclusively to social issues straightforwardly or in a round-about way coming about because of the pandemic. The guarantor ought to guarantee straightforwardness to financial specialists with respect to the utilization of continues and ought to obviously impart these.

This can be as a portrayal of undertakings that have just been distinguished as qualified or, on the other hand, the rules by which activities are to be recognized. In a perfect world, when setting up any Social

Bond Program, issuers should set up a Social Bond Framework that is agreeable with and follows the Social Bond Principles. Numerous issuers may find that their set up social bond structures are excessively barely characterized to oblige a COVID-19 reaction. Provided that this is true, they ought to rethink consideration measures to fit the motivation behind COVID-19 bonds, in congruity with the refreshed SBP distributed in July 2020.

As this situation is getting worst and worst, Issuers should investigate the normal effect of the tasks that are qualified to be financed with the returns from social bonds. Excellent subjective, and if conceivable, quantitative information will help fulfill financial specialists' requests for concrete, practically identical, and discernible information [13].

IMPLICATIONS FOR CENTRAL AND EASTERN EUROPEAN COUNTRIES' MARKETS

Social impact investment is perceived as a possible means of tackling key societal challenges. The Covid-19 widespread has had a critical impact on the SII markets. To begin with, and likely most importantly of all, policy makers and the society as an entirety, have started to expose more awareness of SII, seeing this approach as one of the foremost viable means to handle the challenges caused by the widespread effects of the pandemic. In order to mitigate the negative effects, governments and the private sector as well presented a variety of distinctive activities to bolster those hit by COVID. On the off chance that this 'compassion and proactive approach in taking care of those most vulnerable' does not blur completely after the pandemic, it is likely to cultivate the advance improvement of the SII markets further on. [14, 15]

CONCLUSIONS AND SUMMARY

The social security market might just follow the case of the green security market. IFC executed milestone exchanges for the green security market in 2013 with the issuance of two green obligations of \$1 billion each. These billion-dollar benchmark securities exhibited market pro-

fundity and generous financial specialist premium in the item. In this way, the market saw an expanding assortment of issuers and bigger volume exchanges.

From that point forward, private area entertainers have progressively been giving green securities and are presently driving this market. The climate for social bonds before 2020 mirrors these beginning of green bond issuances. At last, a more assorted arrangement of backers is expected to spike considerable development in the social security market. Corporates in businesses that are appropriate for countering the unfavorable impacts of COVID-19—drug organizations are a perfect representation—have just made the most of the occasion to give social securities.

Traders and a lot of market players are contemplating whether the fast development of premium in social securities, as driven by issuances by improvement account organizations and supranational foundations, might be the social security reminder expected to spike such turn of events. There is persuading proof for this direction. To begin with, the social security market was at that point of seeing an expansion in revenue before the pandemic outbreak.

Second, the current worldwide emergency has brought issues to light about the degree to which social bonds are valuable instruments that can uphold organizations' undertakings, plans of action, and venture proposals. Third, more first-time issuers have started to dispatch social bonds as a feature of a crisis reaction. There are difficulties ahead, including finding an adequate number of appropriate and bankable tasks, just as the topic of how bond continues will be estimated for sway. At last, the social issues tended to in the crisis reactions to the emergency were and are basic to accomplishing the Sustainable Development Goals. As the world misses the mark concerning financing the SDGs, social bonds may be an occasion to scale up. Provided that this is true, the allure of social bond issuances may well proceed after the pandemic has ceased.

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CROWDFUNDING PLATFORM: HOW IT HELPED ME PERSONALLY?

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ABSTRACT

Crowdfunding, a good tool in the modern era that shapes the financial institution completely and motivates the customer to invest in all kind of projects and it is very useful for small business to raise their funds, even for startup. These modern tools not only helpful in the businesses but also for raising funds for those who needs help financially for their personal causes. This paper concerns about the true event that happened with Rashid's cousin Shamsh Raza who was studying PhD from Szent Istvan university. He was found dead in the Danube river on 26 August 2020 as from the police report. So, the family had to send his body to India, but financial crisis in this pandemic situation made it extremely difficult. Then appeared a fund-raiser on GoFundMe website with a limit of 6000 Euro. Based on these events, this paper is about donation-based crowdfunding. Overall, we exposed all the problems in this paper that we faced during fund raising and we tried to find the loopholes so that it could be fixed in future. Regarding crowdfunding, many papers has been published, but only a few explain about the policy of the crowdfunding. The structure of this paper is, it starts with the introduction where it explains all the possible areas and the classification of crowdfunding. Then it gives some literature review to get some intuition. Further, it focuses on specific crowdfunding website namely,

GoFundMe and applies a scenario-based methodology to find the loopholes in this tool. Finally, it ends with conclusion and further discussion.

Keywords: crowdfunding, donation, GoFundMe

1. INTRODUCTION

Despite of the European Commission's regulation on crowdfunding, the scaling up of crowdfunding deals across the internal market to increase access to finance for entrepreneurs, start-ups, scale-ups and SMEs is still diverse across the EU Member States. In Central and Eastern European countries especially (and within, in Hungary), one can hardly find good examples for this means of financing on a large scale. The need for crowdfunding is visible, though. [1]

Crowdfunding is the way to collect contributions online through funding platform and to finance or capitalize a small business, donate a project, organise an event, and so on. According to these purposes, we may distinguish between reward-based, debt-based, donation-based and equity offering platforms [2]. In our study we deal with the donation-based crowdfunding. The next chapters will cover the descriptive characteristics of the donation-based crowdfunding and the case study of our personal experience. Finally, some conclusions and recommendations follow.

1.1 Classification of crowdfunding in accordance to its purpose

Reward-based crowdfunding [3] is something where they get some token gift in terms of items, dinner with a celebrity etc. Obviously, it cannot be company equity or loan. It is one of the popular because of its intrinsic value, social reputation, and shared identity. There is a problem with the entrepreneur because they must care about the project budget as well as the cost for the rewards while using reward-based crowdfunding. For giving a reward, it includes many factors such as taxes, shipping cost, payment processing fees, and other cost related to rewards. So, Entrepreneur must consider both project budget as well as the value of the rewards.

Debt-based crowdfunding is also called as peer to peer lending of funds. It is considered highly risky for those creditors who lend their

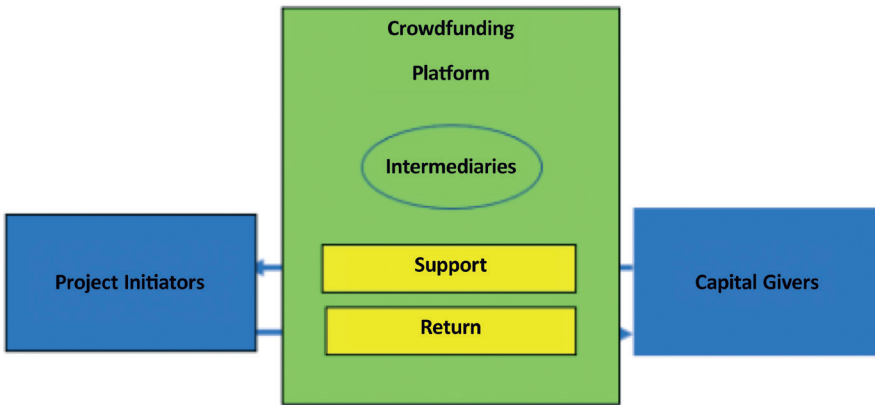
money through online platforms, where money got disbursed to the credit applicant companies. Creditors disburse the funding resources without any intermediation and collateral agreement so it could be of high risk. However, it is gaining recognition nowadays [2].

Donation-Based crowdfunding is also a popular means of financing for non-profit or civic organizations. They simply raise the funds according to their need where all the donors donate money online without expecting anything in return [4]. This paper discusses about donor-based crowdfunding where the fund was raised online through GoFundMe website.

Equity Offering Platforms promote equity and securities crowdfunding, mostly used by the shareholders when they sell their company share of ownership to public but under the regulation of SEC. There are some websites, namely the funder club, early share, startup valley etc. from where companies generate their equity capital through crowdfunding. Son Turan found that crowdfunding, especially equity crowdfunding, is useful for young and innovative firms for job creation and economic growth [5-6]. In other words, it is a kind of investment with public purchase of the company shares. It could be a game changer once the regulated and standardized practices applied. Equity crowdfunding should be transparent but still stakeholder faces higher risk.

2. FUNDING PORTALS

Crowdfunding uses internet platforms also called as funding portals [7-8]. So, this portal acts as intermediaries to draw or connect the investor or donor with the fundraisers. There are many intermediaries that are in the top list such as Indiegogo, Kickstarter, Crowd Cube etc. the main idea behind intermediaries is to increase the capital of the business where small company has the right to ask for the project capital. Intermediaries provides flexibility in terms of number of investors. It means there is a possibility of large number of investors, but small company can give the description about the quantity of investors how many investors they want. The block diagram of the crowdfunding is given below (Graph 1).



Graph 1: Principles of crowdfunding

Source: own

As we discussed, there are many intermediaries available in the market and fundraisers can raise their fund according to their requirements [9-10]. Here this paper discusses about the GoFundMe intermediaries.

GoFundMe is a profiting crowdfunding website that allows the audience to generate funds or money for events such as accidents, illness, and other purposes. This website has been launched on May 10, 2010 by two private individuals in Redwood city California. Basically, GoFundMe is an online independent fundraising platform that provides transparent way and it also supports tax-deductible donation to fundraisers. As from their report, in 10 years, 9 billion dollars has been raised from 120 million donors until now (<https://www.gofundme.com/>).

There are only 19 supporting countries where people can raise their funds and can withdraw the funds by providing documents according to the GoFundMe requirements, and it varies country to country. Once the fundraiser selects the currency during creating the campaign, then can not change the currency later. Moreover, the currency represents the location of the fundraisers. Well, Hungary is not the supporting country but anyhow one of the authors created the funds on GoFundMe by providing the address of one of their friends who lives in Vienna. So, the currency was in Euro. But we faced a lot of problem during withdrawing the money which has been discussed in “problem with the GoFundMe” section below.

This platform is used for many purposes such as general relief, small businesses, America food fund, Mental health fund, Frontline Workers counseling, Hourly wages workers. This platform works on three principle. By first we need to mention that the donor donates the money including tax for the cause. In the second stage, platform distributes the gift to many fundraisers. In the last step, it gives the funders regular update about the campaign where they helped.

These days, GoFundMe is working with many organization and individuals to help people who are impacted by the COVID-19 pandemic. Some of the organizations are General Relief Fund, Small Business Relief fund and other fundraisers supported by GoFundMe. Their funds solve all kind of problems such as health, education, youth sports, and funeral. GoFundMe uses secure payment that is encrypted where donor payment is done securely. Withdraw is made through bank transfer and there is a facility of issuing the cheque which is available in USA.

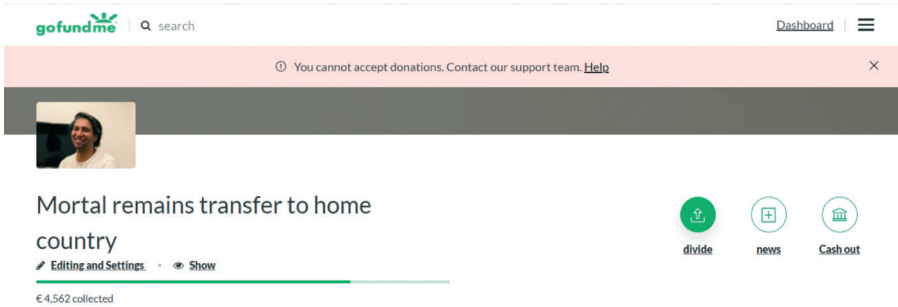
GoFundMe gives one extra feature to share the campaign on social media website such as Facebook and twitter. People donate according to causes through different means using debit or credit card and they can track the status of that campaign. There is a comment section available for donors if they wish to comment in relation to the support of the project. If the fundraisers collect the desired money then during withdrawal, GoFundMe charges 2.9% and 0.30 dollar from each transaction.

Business models are set up on GoFundMe website to allow donation for many purposes to fund such as musician, inventors, life events etc. It is also useful for those who can not afford their university semester fees. The main agenda of this intermediaries is to target social media website to encourage people to donate money and allow fundraiser to promote their campaign.

3. CASE STUDY FOR DONATION-BASED CROWDFUNDING

Creating a website on GoFundMe is very simple where user create their account by providing some information such as name, address, contact number. From that website, users can raise the money. During creating a campaign, a member can describe the reason to raise the

funds and they can set the amount what they hope to get and upload the photos as shown in the picture below (Graph 2).



Graph 2: Mortal Remains transfer to home country campaign
 Source: <https://www.gofundme.com/>

One of the author's cousin brother died on the 26th of August 2020 in Budapest. Police found his dead body in Danube river. He was pursuing Ph.D. from Szent Istvan University and he was the elder from his family. He was the main hope of the family. His father died when he was child. So, there were no hope except raising the funds to send his deceased to India so that his mother could see his dead body. So, we decided to raise a certain amount on GoFundMe portal with a quotation of 6000 Euro. Approximately 75% money got credited in GOFundMe soon within a week.

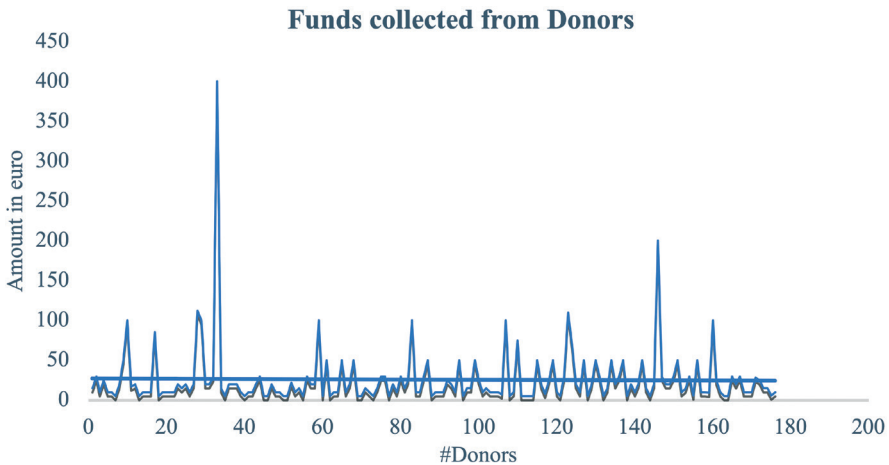
Facebook, as one of the social media platforms, played an important role in advertising the campaign "Mortal remain transfer to home country" by posting the description and attaching the link. But sometimes funder faces a lot of criticism on Facebook when a lot of questions are asked without caring about all the details.

One day later after posting we faced a lot of criticism with huge amount of questions. To answer those question and drawing attention to donor, we applied scenario-based methodology to solve the problem and sending body to India. And finally, we succeeded with this strategy.

So, we post a detail description in a group of Hungary Expat and we link the Embassy of India for transparency and authentication. This was the way to make understand everyone despite of giving explanation to individuals. After applying this approach, we got a lot of response from the donor.

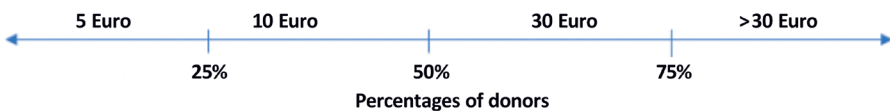
After solving this issue, an other problem came during withdrawal of the funds from the GoFundMe websites, as Hungary does not belong to the group of supporting countries and, on that time, we had no choice to raise money on other website. GoFundMe is the trusted crowdfunding platform, and it is aware by not only European people but also non-European people. So, we gave all the authority to Antea Funeral agency to deal with the GoFundMe because Antea agency has branches all over the Europe.

In this campaign, in total 177 donors participated, whereas half of them donated the amount of 10 euros. If we take it on average basis, it was approximately 25 euros, as it can be seen from the trend line parallel to the x-axis (Graph 3).



*Graph 3: Statistics of Mortal Remains transfer to home country campaign
Source: own statistics*

If we analyze it in quartile then 25% people donated an amount of 5 euros whereas 75% people donated 30 euros. By summing up all the amount, it was 4562 euros whereas we had to reach 6000 euros (Graph 4).



*Graph 4: Statistics of Mortal Remains transfer to home country campaign
Source: own statistics*

As from the above, there were 177 donor who participates on this donor-based crowdfunding where they donated money on average approximately 25 Euro to reach the goal of 6000 euros. The money got collected rapidly within a week on GoFundMe website. After that, we were able to send the deceased to home country (India) through Antea agency.

CONCLUSIONS AND RECOMMENDATIONS

It can be stated from our experience as well that to generate donation-based crowdfunding, fund amount should be less than 1000 dollars for the suitability of the projects [11], being aware of the financials of an average household [12-13]. During generating the funds on GoFundMe, we faced a lot of problem in terms of trust, transparency of the campaign, giving clarification to each donor despite of providing all the information on GoFundMe websites. To tackle these problems, we applied scenario-based approach where we shared all the genuine documents on social media websites such as Facebook, Twitter etc. to generate the necessary funds. As from the GoFundMe analytics, the link of the campaign was shared 1130 times on Facebook that helped a lot to collect the fund in a very short time.

In a nutshell, crowdfunding is the emerging tool not only for company but also it is used for different projects or campaigns to raise the funds. Some policy must have been changed by policy maker to authenticate and prevent the investor or donor from fraud [14-15].

SUMMARY

It was discussed in this paper how we succeeded in generating donation-based funds. In the process we faced many problems in drawing the attention of the audience and turning them into investors. This task was quite challenging for the fundraiser who is newbie in the market. Anyway, we got helped from social media such as Facebook and Twitter where we share the link of the GoFundMe with description and money got collected in one week. That was the great achievement for us.

Crowdfunding is the recent and new tools in the financial market that completely change the concept where investors invest the money to raise the funds of the project without knowing the fundraiser. It necessitates the feasibility of the project model.

Crowdfunding is the future of the financial sector as well, since people prefer it more than the standard banking because it is quite easy for the entrepreneur to gather the audience just providing information of the projects.

Crowdfunding sometimes faces a problem with fraud, and it happens mostly because of the lack of regulation. So, some security measures are needed in crowdfunding because it is the new tools for the investor and funders to raise the money.

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THE EFFECTS OF INDUSTRY 4.0 ON THE GLOBAL FINANCIAL SECTOR. A HISTORICAL VIEW

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ABSTRACT

The social and economic activities are largely dependent on financial sector in any economy. Banking and finance have been got through many changes ever since its inception. Financial sector is considered the most adaptative sector globally, which change itself as per industry requirement. Importantly, finance is the key driving force for healthy industrial development and economic growth. In this paper, we analyzed the recent development made in global financial sector to address the revolutionary changes caused by fourth industrial revolution. Literature concerning Industry 4.0 reveal that major breakthrough occurred in global financial sector. The influence of artificial intelligent (AI) require many financial service providers to develop FinTech, blockchain and cryptocurrency. the globalization and these revolutions have greatly changed the dynamics of financial products and players globally.

Keywords: FinTech, Cryptocurrency, Financial Inclusion, Industrial revolution

1. INTRODUCTION

Ever since the beginning of mankind, industries play an imperative role to drive economy by producing goods and services. The continuous process of improvement, which constitute the development of industrial processes is commonly described as Industrial Revolution. The first industrial revolution occurred in Great Britain in 1760 with the advent of mechanization [1]. Moreover, the breakthrough of electricity in 1870 enabled industries to work on mass production, later described as second industrial revolution [2]. Similarly, third industrial revolution occurred with automation and robotics in 1969 [3]. The term of fourth industrial revolution also referred as Industry 4.0 was first coined by Schwab [4] – the founder of World Economic Forum. Industry 4.0 includes the vertical and horizontal integration of all economic units embedded with Cyber-physical systems, Cloud Computing, Artificial Intelligence, Internet of Things, big data, and advanced analytics. Researchers defined Fourth industrial revolution in couple of different ways. It is mostly referred as the blurring the distinctions among digital, physical, and mechanical processes [5].

Industry 4.0 also referred as cohesive, modified, optimized industrial processes cointegrated with artificial intelligence, big data, advanced analytics, and cloud computing [6]. Notably, the attributes of digitalization and decentralization of Industry 4.0 have spread over almost every sphere of industrial, production and virtual environment [7]. Similarly, according to Cividino, Egidi, Zambon, and Colantoni [8], digitization in Industry 4.0 has affected almost the every field of society (production, services, communication, finance and banking). In Addition, the radical change happened due to extensive development in big data, artificial intelligence and digitization of the processes involved with in a value chain. The pervasiveness of digitalization among the end-to-end process have changed the service and manufacturing industries dramatically, and the banking sector is no exception. Furthermore, the ecosystem of financial sector is one of the mostly influenced industries in response to fourth industrial revolution [9].

1.1 Study Objective

Industry 4.0 revolutionised every sphere of economic life, and banking and financial sector is no exception. This study aims to analyse the development in financial sector driven by fourth industrial revolution. Secondly, we tried to map the historical evolution of financial sector development and industrial revolutions. Furthermore, with the help of literature this study attempts to analyze the biggest changes happened in financial sector in wake of industrial fourth revolution.

2. INDUSTRY 4.0 AND FINANCIAL SECTOR DEVELOPMENT

Globally, banks are ready to re-adjust their models to e-banking in order to achieve technological advancement and operational effectiveness [10]. Similarly, Ślusarczyk [5] claimed operational efficiency and productivity as the prime objective of Industry 4.0. In connection to this, banking industry is considered one of the most technologically adaptive industries around the globe. Since, the central objective of modern banking lies on creating digital accounts, online payments, digitization of credit and asset products, which is also in-lined with the Industry 4.0. Furthermore, Industry 4.0 and digitization in financial services strongly advocate big-data analysis, Cyber-physical systems, and end-user customization [11]. As a result, financial sector is striving to offer innovative financial products. Further, personalized services have become common practice all around the world with enhanced high-tech interface. According to Shkodina et al. [9], revolutionary changes happened in several sector but the biggest change occurred in payment, investing, and banking projects through financial technology and cloud computing. According to Harjanti et al. [12], enhanced customer experience, efficiency, high speed transactions, and high mobility is evident in banking system through digitalized transactions. Further, many authors asserted that there is a strong influence of Fourth Industrial Revolution on financial sector development [11], [13], [14].

Fourth Industrial Revolution and technological advancement in financial services triggered a new arena of Financial technology, which is referred as FinTech. However, banking and Non-banking institutions started providing financial services using FinTech and opened a new

paradigm for banking revolution. Lopes and Pereira [15] argued that the drivers of Fourth Industrial revolution i.e., Artificial intelligence, Big data, and Machine learning are the major incumbents of FinTech startups. Since the innovation in financial services using FinTech is one of the biggest shifts that occurred due to contributing factors of Industry 4.0. However, there is an unprecedented relationship that inevitably exist between FinTech and financial inclusion [16]. Financial innovation initiated by AI, machine learning and, enhanced technological advancement is bridging the gap between the financial services and unbanked in the world. Moreover, the application of Industry 4.0 (Internet of Things, Cyber-Physical system, AI, Machine Learning, Big data analysis) is evident from real-time interaction of millions of smart devices to perform fast and easy transactions without human interaction [17]. This revolutionary change is referred as Blockchain or Distributed Ledger technology, which enables transparency, stability, reliability, and fast financial solutions for public or private enterprises within no time.

The foundations of every segment of life are trembled by the fourth Industrial revolution, and finance sector is no exception. Increased emphasis on customer's choice, ease of service and innovation in financial solutions make major changes in Financial development globally. Studies showed that introduction of FinTech, Financial Inclusion, and Blockchain technologies were the major breakthrough in financial world. This essay will further elaborate how technological advancement changed the dynamics of Financial world in terms the following aspects:

- 1) FinTech
- 2) Financial Inclusion
- 3) Blockchain.

2.1 FinTech Evolution

Financial sector is building their ways to develop digital business models with extensive use of Artificial Intelligence (AI) to enhance customer experience. Notably, the fourth industrial revolution is one of the key drivers to make banking sector to think about financial technology. According to Mamoshina et al. [18], the term FinTech refers to the use of advanced technology to implement an innovative business model that can transform the banking industry. Additionally, Industry 4.0 is pro-

viding a supplementary base of AI, cognitive computing, and machine learning to help financial sector to use digitized solutions [15]. However, Levin, Waltz, and LaCount [19] argued that the need of e-trading and growth of financial technology is felt after 1960's crisis. Furthermore, the global importance of development of financial technology is emphasized by Hotchkiss and Chuen [20], the authors further highlighted that 52 million people from Myanmar gained financial access through digitized modes.

FinTech has revolutionized every domain of financial world which includes credit, deposit, payment settlements, investment management, Insurance and capital raising services [21]. Milne and Parboteeah [22] asserted that P2P lending is becoming desirable in the US and Europe after the credit crunch (2007-2009). According to BCBS [21], P2P lending is often termed as "marketplace lending", which works without intermediary between the lender and borrower. Furthermore, FinTech transformed the payment and settlement mechanism in the financial world. There have been lot of new technologies for settlement of financial transactions, which includes but not limited to Mobile wallets, digital currencies, peer-to-peer transfers, B2B point of sale, FX wholesale, digital exchange programs [21]. Also, the advent of FinTech has changed the dynamics of investment management. According to BCBS [21] copy-trading, robo-advising and e-trading have become the central part of investment services by many FinTech companies. Also, D'Acunto, Prabhala, and Rossi [23] argued that the adopters of robo-advising ended up with higher performing assets portfolio.

Nonetheless, insurance services are being offered using InsureTech services which are connected through digital devices such as mobile phones, computers, laptops, and watches [24]. Although the growth of InsureTech is not big enough but the market revenue reached at \$532.7 million in 2018 [24].

2.2 Financial Inclusion

Beck, Demirgüç-Kunt, and Levine [25] defined financial inclusion as the use of formal banking services by the unbanked or poor population. Whereas digital financial inclusion refers to the use of banking services by the underserved population through FinTech services [26]. Financial inclusion has become even more famous since FinTech startups started

using AI technology to spread the banking services to the underprivileged masses. Also, Mhlanga [14] argued the importance of AI tools to capture the group of people who are not financially active and let them participate in banking activities using FinTech tools. Though the concept of financial inclusion was first introduced in Bangladesh by Grameen bank, the model was based on field-based operation to give small loans to farmers [27]. As a result, AI and FinTech is keeping unbanked group in the loop of financial services. There are several tools through which FinTech can channelize financial services to the excluded groups which includes, mobile banking, electronic payment systems, plastic cards, point of sale devices, electronic money using cellphones and many others. Furthermore, financial inclusion through FinTech is helping the poor to raise their living standard, which result in poverty elevation in the long run.

2.3 Blockchain and Cryptocurrency

It is not surprising that evolving technology, artificial intelligence, and machine learning have led us into fourth generation. The increased use of technological cognition is paving the way for advanced analytics and big data, which provides a necessary framework for improving blockchain technology. Blockchain technology was introduced to work on decentralized model where transactions are executed and recorded without any central authority, agent, or central contract. Nakamoto [28] invented blockchain that works under distributed ledger technology (DLT). Distributed ledger technology was the key driver to enable cryptocurrency to make transactions among peer-to-peer without any central authentication [29]. Bitcoin, which is invented by Nakamoto [28] is closely associated as the first cryptocurrency issued and circulated on electronic world. However, the popularity of cryptocurrency is evident from the report of Barontini and Holden [30], which states that minimum 40 central banks around the globe have started using cryptocurrency to digitize the financial sector. The use of bitcoins is profitable for finance industry as it provides end to end low cost and efficient transaction without any restriction. It provides cost reduction in terms of processing, operations, and transactions. However, it enables digital existence of currency without centralized authority which is based on P2P model.

3. CONCLUSION

Digitization and fourth industrial revolution have emerged as a driving force to change the business models of banking sector around the globe. Literature showed that advancement in technology played a key role to transform banking and financial sector in response to Industry 4.0. However, fourth industrial revolution immensely changed financial models in many ways, but three developments have transformed the dynamic of financial sector. Firstly, advent of FinTech and associated companies started many advanced products which enable consumer to make, receive, transfer, and borrow money using online platforms. Also, investment advocacy and insurance coverage are being provided using FinTech. Secondly, FinTech acted as a catalyst to boost the process of financial inclusion, which resulted in poverty alleviation and standard of living. Moreover, the invention of Blockchain and cryptocurrency revolutionized the banking sector within no time, which enable cost effective, decentralized, and P2P secure transfer of electronic money.

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PREFERENCES OF INVESTING THROUGH CROWDFUNDING

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ABSTRACT

Crowdfunding is one of the solutions created by Fintech, to help businesses get funds through fundraising from a large group of people by using internet platforms. Small businesses and firms are the most benefited from crowdfunding as it is simple, convenient and inexpensive. The main objective of this paper is to investigate the preferences of people in investing through crowdfunding. It also sought to examine the two main processes and to address the overall composure, managerial consequences and future considerations of this means of fundraising. The creation of funds, actuality of crowdfunding as well as the pros and cons and the risks related. This paper also shows the results of data collected and provides some data analysis on peoples' understanding of crowdfunding and their investment preferences through this financing method.

Keywords: crowdfunding, FinTech, fundraising

1. INTRODUCTION

Crowdfunding is marked as a source of capital for new ventures that is widely used. It has conquered to be a huge industry in providing financing with a market value of more than \$10 billion. It is less complicated and costly to get the donors from crowdfunding compared to get funding from the banks. Crowdfunding has provided opportunity for the project initiators to expose their ideas and creativity through production and distribution together with gain profits from selling them. Therefore, it brings convenience to the society and improve it indirectly.

Knowing the operation and mechanism of crowdfunding is an advantage for both the entrepreneurs and donors. Thus, the authors examine the understanding and propensity of people toward crowdfunding, focusing on donors or backers.

1.1 Research methodology

As this study seeks to explore the desires of making an investment through crowdfunding platform, we have conducted a survey via google form and accepting responses. Our target group had no limitations of ages and occupation. Everyone could participate in answering the questionnaire.

The survey questions are as follows:

1. What is your gender?
2. What is your age?
3. What is your educational level?
4. What is your occupation?
5. What is your monthly income in USD?
6. Have you ever done any investments?
7. How satisfy are you with investment you made?
8. Have you heard of crowdfunding?
9. Through which platform(s) did you know about crowdfunding?
10. Crowdfunding is a method of raising small amount of money from large amount of people to finance a business. Are you interested in investing in it?

11. What type of crowdfunding would you prefer?
12. You prefer investing in long term, midterm or short term?
13. Have you ever invested in/ donated to crowdfunding?
14. How much money would you like to invest?
15. How much money would you like to donate?
16. What kind of business would you like to invest/donate through crowdfunding platform?
17. Would you like to get funds from crowdfunding if you open up your own business?

2. CONCEPT OF CROWDFUNDING

Crowdfunding is like sponsorship or donation. A group of people helps donate a small amount of money, by using online platforms, to the fundraisers for supporting businesses, activities, campaigns, projects, etc. Some successful crowdfunding campaigns include medical expenses, educational costs, funeral costs, non-profit causes like “Save the Children East Africa”, and many more [1].

Funds can be received internationally. People from everywhere in the world can donate as long as they can connect with the internet and access crowdfunding websites. Crowdfunding is a good option for small businesses and entrepreneurs who do not have enough capital to finance their business operations and those who are not able to borrow money from the banks [2]. Crowdfunding allows people to access funds in different ways rather than through financial intermediaries or institutions which requires a lot of time, paperwork, provisions and regulations. This method of accessing funds are widely used as it provides an opportunity to individuals who have ideas and creativity to be able to produce their products, sell them and generate profits. For instance, people can help raise funds by pre-ordering the products or investing in the stock of the company.

Nowadays there are many websites dedicated to crowdfunding. Kickstarter and Indiegogo are the most famous and commonly used websites in the crowdfunding industry. With only Kickstarter, \$3.47 billions of funds could be raised for start-ups [3]. One of the most successful projects is ‘oculus VR’. The campaign started in 2012 and it could raise more than \$2.4 million with over 9500 crowd-funders then

it was purchased by Facebook at the value of \$3 billion in 2014. Beside the amount of funds raised, the time factor is also worth mentioning. A start-up called Drivebot is a device that works alongside a mobile application to help check the car's condition. It raised funds through the Indiegogo website and was able to reach \$100,000 within 6 days. Also, there was a record that 40% of donors of Drivebot were international investors [4], which showed that people from anywhere can participate in and contribute through crowdfunding.

Apart from being a financing method, crowdfunding can also be helpful in marketing as we can identify the demand of the market and how people will respond to the product. The projects that proceed with the anticipated funds and receive lots of attention have high potential in becoming a successful business that meets the needs of the consumers. In contrast, if the project does not raise funds to the amount expected or there are a few donators, it means that the products may not suit the demand of the market [5]. Therefore, crowdfunding is able to help entrepreneurs to predict the consumers' needs and prevent risky decisions for the new businesses that can lead to a loss of money and capital.

2.1 The participating agents

The basic participants in crowdfunding involve those who need funds and those who provide funds. Fundraisers or capital-seeking ventures seek funds from crowd-funders or backers, including creditors, sponsors, clients, lenders, etc. Backers are outside investors who decide which businesses to donate or invest in, or in another word to 'back'. The business will generate information and PR and backers will do a payment to support the funds seeker. Nowadays, crowdfunding is done through online platforms which act as crowdfunding intermediaries. Crowdfunding websites exchange information and communication between the fundraisers and backers. The platforms also facilitate the payment procedures by interacting with the banks and micropayment providers which accommodate the crowd-funders in sponsoring the project. The crowdfunding intermediaries gather commitments from backers while the backers anticipate rewards from the project initiators.

Newly started businesses are eager to attract backers in a platform in order to get funds. However, it is never easy to get people interested in the business and backing the project. There are three common networks

of crowdfunding that everyone needs from the start of the fundraising. They are personal networks, friends of friends and potential customers. Personal networks are the most essential factors to raise funds through crowdfunding as they are family members, friends and those people who are close to you who are ready to support you on whatever you are doing. Friends of friends also play an important role in crowdfunding. These connections will help spread your campaign in a larger range easily through social media or verbally. People who are interested in our products and willing to buy them at the start of the campaign are potential customers. They are usually attracted by advertisements published in social media as marketing or the public relation your business created. The three aforementioned networks need to be approached simultaneously to reach the highest potential engagement of people and to pursue the fundraising goal. [6]

2.2 The creation of funding

The steps of gathering the fund in crowdfunding websites are well known as creating a campaign. Crowdfunding websites have their own individual rules. For example, Kickstarter does not permit value crowdfunding and has a restricted-things list that the investors are not permitted to include in their campaigns. It is savvy to pursue these standards altogether prior to picking a stage so the investors do not need to stop their mission before it begins. If the investors are careless about the rules and skip into their crowdfunding campaign, the probability of accomplishment will fall.

The investors have to satisfactorily explore the distinctive crowdfunding websites so they can comprehend which stage turns out best for their businesses. Thus, prior to picking a crowdfunding website, previews ion is significantly needed for every investor. To guarantee that their mission is suitable in crowdfunding websites. [7] In this regard, Chen and Yi (2016), by preparing a questionnaire survey among university students in China, found that students' entrepreneurship crowdfunding Web site provides support for them to overcome the difficulty in funds and management [8].

What happens when the crowdfunding campaign closes, one of the three things occur: in the concept that the fund did not hit the financial goal, the money reserves are gotten back to the supporters. Some

crowdfunding sites actually permit the investor to gather all the cash the investors raised in the event that the investor neglects to reach their campaign, however frequently at an extra cost. If the campaign was accomplished, the investor will be able to get the aggregate sum of cash that raised, subtract processing expenses. For instance, Kickstarter charges a 5% expense for facilitating the pledge drive and a rate-based expense for instalment preparation. These instalments are just needed for an effective crowdfunding campaign and would not be charged to any that do not hit their financial fund.

For Equity crowdfunding projects, the ending process is different. As the investors have a commitment to the supporters. that commitment relies upon how the gifts play out. While crowdfunding does not ensure the achievement of an undertaking or the infirmity of the organization, it enables numerous businessmen or businesswomen to pick up business encounters and make connections for different chances.

To conclude, If the campaign does not reach the financial target, the crowdfunding stage for the most part restores the cash to contributors, however a few destinations let the investor save the assets for a charge. Be cautious about any preparing and facilitating costs. [9]

2.3 Advantages and disadvantages of crowdfunding

The advantage of crowdfunding is mostly to raise a fast fund and convenience. The investors can invest in a small amount of money but it has a high chance of getting returns. The project allows new or small business owners who cannot trade from the IPO to have capital to operate their business.

Doing a campaign or business to raise funds through the online stage can be an important type of showcasing and result in media consideration. Campaign online sharing also helps the investor to get criticism and master guidelines on the best way to upgrade it.

Furthermore, it is a decent method to test the public's response to the investor idea or item - if individuals are quick to contribute it is a decent sign that the idea could function admirably on the market place. The investors also can keep tabs on their development - this may assist them with advancing the image of the campaign through their organizations.

The ideas that may not engage ordinary speculators can frequently get financed simply without any problem. Your speculators can frequently turn into your most faithful clients through the financing cycle.

The disadvantage of crowdfunding may not be a good fit for investors who want to take an active role. To manage their campaign, Investors in crowdfunded assets often have little control and must trust the developer or operator to succeed in managing the property.

Another problem is the fact that project investments in the form of investments are not smooth and there is no trading. This means that in an emergency it may not be possible to withdraw before the property is disposed of.

The crowdfunding platform is complicated in contrast with the traditional methods of raising finance - not all the campaigns that apply to crowdfunding stages get onto them. At the point, when the investor picks the platform, the investor has to do a ton of work in working up enthusiasm before the task dispatches - important assets like cash or time might be needed.

The investor will get nothing if the campaign does not hit the financial goal, any money that has been sworn will normally be gotten back to their financial specialists. The risk of project failures harms the standing of their business and individuals who have vowed cash to them. The copyright or patent is a must for securing the investor businesses, it may be stolen by posting on crowdfunding sites. Getting mistake returns or prizes can mean parting with a lot of the business to speculators.

In case of crowdfunding, a special risk may also occur, i.e. the overfunding or the underfunding.

In order to create a competitive atmosphere for donors and fundraisers, many existing crowdfunding sites use occasional campaign overfunding. It is easy to encourage or avoid overfunding on your website and relies solely on your vision and policies. In contrast to other people, overfunding indicates greater campaign support and extra financial performance for fundraiser enterprises. It also suggests, however, that a corporation is now obligated to pay back somehow to customers.

If we are talking about equity crowdfunding, the new equity or shares can be issued by a company, while existing inventors are reduced proportionally. The scale-up enterprise could not be preparing to do so quite yet.

It's up to you to set up the rules and allow overfunding on your website as an admin of a crowdfunding site. If you plan to encourage overfunding, you can choose whether to approve or refuse additional funds and return commitments to donors of fundraisers.

The consequences of being overfunded: Managing transfers takes more time, puts fundraisers in danger of failure to produce the results, in the event of equity crowdfunding, it needs fundraisers to unlock equity, increases the aspirations of buyers.

Overfunding may also be facilitated in the event of donation-based crowdfunding, when fundraisers are not supposed to contribute back to donors, whereas contributors give only to feel happy and impactful. Thus, facilitating overfunding depends solely on the type of the website for crowdfunding. For donation-based investing sites, overfunding is fully risk-free and optional for equity-based or reward-based ones.

Underfunding, if a campaign does not take off, what happens. A campaign that has struggled to take off or accomplish its targets is not only terrible for fundraisers but also for the credibility of the crowdfunding site if there is no risk reduction strategy in place. It is obvious that a campaign that struggles to get funding is unattractive to promoters and VCs, talking about other people behind the venture's bad business policy, plan, luck or competence.

The higher the number of failed projects on your website, the greater the risk of individuals reporting "the bad luck when crowdfunding on your platform". It's up to you to make a decision on who you want to make happy.

All-or-nothing (AON) is a practice to which Kickstarter adheres to and protects investors. If a campaign fails to hit the funding goal, investors get a refund and fundraisers get nothing.

Keep-it-all (KIA) is a practice that aside from AON, is provided by Indiegogo. Keep-it-all is the sort of support that safeguards fundraisers and lets them get some support and determine what to do with it.

Arguably, it may be argued that Indiegogo plays it smart, and passes the burden to the fundraisers for the current and potential viability of the initiative. Indiegogo keeps its hands clean by making fundraisers pick the fundraising type. Investors who want to support KIA ventures assume full responsibility for their account at the end of the day. Bear in mind that donors and fundraisers are allowed by law to be informed of the risks. The warning that no payments are secured and the money is at stake should be shown during the registration process and elsewhere on the website.

One should closely check backers (background, credit score, revenue source) and creditors (business concept, bootstrapped funds, marketing strategy, team, etc.) to handle a crowdfunding site securely and dynamically. For private crowdfunding platforms and any crypto-related ventures, comprehensive KYC/AML verification procedures may be particularly useful.

3. RESULTS OF THE QUESTIONNAIRE SURVEY

Question number 1 to number 5 are the basic demographic information of the respondents, for the purpose of gradients of gender, age, education level, occupation and monthly income provide us further sufficient analysis information. The surveyor expected 40 responses, however the final result appeared with totally 44 responses. Most of our respondents are female, which conduct 35 people. Differently, there are only 9 male respondents in this survey.

The target group of the responders were university students studying in Hungary with Stipendium Hungaricum scholarship. The majority of respondents are in the 18-25 years of age, most of them are having undergraduate degrees, which covers 90.9% of our respondents are students or college students and nearly half of them are having less than 200 USD as their monthly income.

The following questions are focusing on the personal investment experience of respondents, specified to the understanding and satisfaction through crowdfunding platforms. From question 6, Have you ever done any investments, the answer is break even. 47.2% of respondents say that they are neutrally satisfied with their investment.

From question 8, only few people have not heard about crowdfunding before which can calculate as 13.6% of all respondents, while 68.2% have heard of the term. The respondents say they heard about crowdfunding mainly from social media, study, family and friends platforms.

After clarifying the definition of crowdfunding, the result of people who want to invest is still moderate as 50%. Greatest of respondents are interest in donation-based and investment based as 5.1% and 54.5%. Thus, 3 people do not want to make an investment.

The majority say that they prefer investing in the long term and mid-term more than short term. However, only 52.3% or 23 out of 44 people have invested. Moreover, even people tend to be interested in long term investment, but they are still afraid of it. As they do not prefer to put a big amount in any investment nor donation. This is probably because majority of our respondents are college students which have less income, thus less money to invest.

From question 11, respondents are focusing on investing in education up to 77.3%, following with healthcare and social without regard to how much money they would like to invest. Furthermore, showing their untrustworthy through the system by only 15 people that would like to get funds crowdfunding if they open up their own business.

Even though the number of people who heard about crowdfunding are high, somehow people still have a barrier toward it. As we can see, the majority of the respondents are welcoming to invest in every type, term and platform. The surveyor recognized the issues that we should promote crowdfunding through the social media platform as a trustworthy investment source, hence, people will be familiar and lower their barrier down as the following.

Through conducting a questionnaire, we have come to a conclusion with preferences of investing in crowdfunding. It is significant that a lot of people actually knows about crowdfunding and they prefer donation-based method. Similar results have been derived by Cho *et. al.*, stating that university students, being aware and comfortable with on-line giving, can be perceived as potential donors in crowdfunding [10]. Although knowing the meaning, crowdfunding seems to be skeptical and unreliable to invest in or donate to. We have also known that social media has a big influence on getting information on crowdfunding and probably the campaigns. It is quite predictable that people would want to invest in midterm and long term as they want stability. Despite the proportion of people prefer investing at less than \$50 is high in this survey, we are convinced that the amount invested will rise with the increase of income earned. We have also explored that the preferable campaigns that they are willing to back are education, healthcare and social in general, where small-medium enterprises falls a little behind [11, 12]. It is surprising that people still have some hesitation in getting

funds through this platform. The reasons might be that they have not studied the operations of crowdfunding in depth and that they are aware of the riskiness. We believe that if people have fundamental knowledge of crowdfunding, they would consider this financing method a good opportunity and use crowdfunding platform to raise funds for their businesses.

SUMMARY AND CONCLUSIONS

This paper focuses on crowdfunding as a multi-faceted term. The paper was targeted at shedding light on the dynamic essence of crowdfunding to get a deeper understanding of its complexity. It also sought to examine the two main processes and to address the overall composition, managerial consequences and future considerations. The study question raised turned out to be fitting for this particular set-up of a research report, since it could be answered. The surveyor asked what are the fundamental principles of crowdfunding and how do they affect the respondents that have been evaluated in this sheet of paper. As a result, crowdfunding has become an increasingly common means of collecting much-needed money for individuals and corporations alike. The comparatively low entry cost and usability of common sites for crowdfunding have fueled this funding movement.

In the end of the day, the crowdfunding campaign is just as successful as the time, commitment, and excitement you poured into it. As other ways of fundraising, crowdfunding is a powerful choice if the product is feasible, appropriate and popular with the target audience.

LIMITATION OF THE STUDY

The authors acknowledge that the sample size of the responders for the questionnaire is rather low; therefore, the results of this paper is only suitable for drawing cautious conclusions.

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ANALYSIS OF BANK CROWDFUNDING POTENTIAL

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ABSTRACT

In this article, the author aims to study the nature, development, and prospects of bank crowdfunding, an innovative financial method. As an institution in the traditional financial industry, how can banks make changes and achieve success in an era of both challenges and opportunities? The author believes that bank crowdfunding is a new financial method that is already in the development stage and has great potential. To get more scientific and credible conclusions, this article uses literature analysis and questionnaire survey methods. The structure of this article is as follows: First, the concept, source, and specific implementation content of crowdfunding are explained. Then, it analyzed the current situation and prospects of crowdfunding from the

perspective of banks. In particular, after literature research, a detailed questionnaire was used to conduct interviews with the public on the level of “crowdfunding understanding”, and the interviewees’ opinions on bank crowdfunding were obtained.

Keywords: crowdfunding, bank crowdfunding, internet finance

1. INTRODUCTION

The emergence of Internet financial services has revolutionized the situation that wealth is in the hands of a few rich people.

Firstly, the coverage of customers is wider, and the service targets are extended from high-income groups to small and micro enterprises and disadvantaged industries, so that low-income groups, start-up entrepreneurs, and small and micro enterprises can obtain more direct or indirect financing opportunities, thus truly providing financial services to all social strata and groups effectively and comprehensively.

Secondly, Internet financial products and their functions show the trend of diversification. At present, Internet finance can provide almost all products and services other than deposits. Such as credit, payment, settlement, leasing, insurance, pension, etc., have already realized the “online + offline” two-tier business model, and the consequent network and mobile advantages of this model have become increasingly prominent, and has become a new business growth point of traditional finance.

Crowdfunding, as the most consistent with the concept of “inclusive” Internet financial financing, has the broadest potential user base, and its emergence has brought about a major change in financial philosophy. Inclusive finance is different from policy-oriented finance and from other universal financial services. It is not government poverty alleviation, but a new type of business service that fulfills social responsibility and follows commercial sustainability principles [1].

In particular, return-based crowdfunding and equity-based crowdfunding have become more and more popular among entrepreneurs due to their low barriers to participation and flexible approach. In North America and Europe, where social and personal credit systems are well

developed, this new financing model has gained explosive growth as soon as it emerged. In this article, we introduce and analyze the current situation and prospects of crowdfunding, and boldly infer that, with the aid of social networks, the crowdfunding model will be able to play a larger and more prominent role in financial inclusion and micro-enterprise financing as well as innovative enterprise ecology in the future.

This study is structured as follows: the forthcoming parts introduce the purpose of crowdfunding, alongside with its innovative nature as compared to traditional bank-based funding.

1.1 What is crowdfunding?

Crowdfunding, sometimes called Crowd investing in the United States, generally refers to a collaborative act of people on the Internet that connects sponsors and proposers through an online platform. Crowdfunding supports a diverse range of funding intentions, from fanatical artist support to political campaigns, from disaster donations to book publishing, raising money to start a business, and more.

The role of participating agents of crowdfunding is grasped from three aspects, these are sponsoring, supporting and setting up the platforms. The sponsors are those who are creative but lack of funds, or need to sell products quickly; those who are interested in the story and return of fundraisers, and those who invest in financial support are supporters or crowd funding participants; while the third-party platform refers to the Internet terminals connecting sponsors and supporters, such as crowd cube.

1.2 The core of the solution

Crowdfunding is widely recognized because of the development of reward-based crowdfunding. If further classified, the following types of crowdfunding are recognized by the public.

Equity crowdfunding is similar to equity investment, that is, investors can get shares of the creative people's new venture or other derivative instruments with equity nature after investment.

Fundraising is a simple act of donation, that is, the creator does not need to provide any form of feedback to investors, and investors are more concerned about the psychological satisfaction brought by creative projects.

Borrowing crowdfunding is similar to that the creator borrows money from investors for future creative projects, that is, both parties have a loan relationship. When the project is completed or there are phased achievements or after, the borrowed items must be returned to investors, and interest can be added.

Product crowdfunding, after the completion of the project to give investors a certain form of feedback or souvenirs. Most of the feedback products are the products after the completion of the project, which are often based on the coupons and pre-sale priority of the investors for the project products.

The crowdfunding financing model has the characteristics of low threshold, low cost and high efficiency. From the financing point of view, crowdfunding increases the financing channels of enterprises and improves the speed of financing. On the other hand, from the investment point of view, crowdfunding meets the more personalized investment needs of investors. Crowdfunding represents the future trend of disintermediation in the financial market and poses a challenge to the traditional lending business of commercial banks.

1.3 Its presence in European countries

During the past decade crowdfunding has experienced fast development in a few EU Member States. Be that as it may, domestic predisposition by financial specialists and administrative boundaries anticipate the swarm and the venture from moving openly over borders. Crowdfunding has, for the foremost portion, remained a marvel of those Western and Northern European Member States that 'draw a crowd', with a population huge sufficient to create a crowdfunding site an financially attainable undertaking. In turn, crowdfunding has remained a primarily national issue, inciting the European Commission to conclude that there's no require for a harmonization of crowdfunding rules in Europe. [2]

Given that no European passport is tailor made or fits crowdfunding, this source of financing is destined to stay national. In addition, with diverse regulatory requirements in Member States, European law prevents the advancement of cross-border crowdfunding inside the locale. This is often especially genuine for CEE Member States whose populates are insufficient as well to constitute 'a crowd'.

2. CROWDFUNDING, DISRUPTING THE TRADITIONAL FUNDING

Compared to traditional credit financing methods, crowdfunding is more open and livelier. From the above-mentioned two dimensions of banking, the crowdfunding business has two obvious benefits:

- building the brand through crowdfunding, maintain customer stickiness, and attract new potential customers.
- promoting bank transformation through the participation of crowdfunding and achieve profit growth.

Under the situation of slowing growth in the banking and continuous rise in Internet finance, it is a foreseeable and inevitable trend for various banks to develop crowdfunding businesses.

Banking institutions actually have an incomparable advantage over Internet financial companies. That is the secondary crowdfunding model of banks, which is based on the original credit. It's an initiative that responds to the complex and diversified needs of financial products.

To explain further, banking institutions have a large number of old credit customers, who often not only get funds through bank financing channels [3-6]. Although some banks have measures such as revolving loans to develop customers, they are quite restricted and risky. And "crowdfunding" can be a useful supplement to the lack of credit. Since the bank has already conducted a risk assessment of the old customers during the credit cooperation process, they can better dig out valuable projects and customers. Then helping them take part in crowdfunding. It can not only mobilize the power of public evaluation and capital, but also enhance the understanding of the project, realize further diversification of risks, and increase the stickiness of customers. Finally creating a win-win situation with many objectives [7-8].

All in all, traditional banks and Internet finance are definitely not a single competitive relationship, but a process of embracing each other. The same is true of banks and crowdfunding. In the effective integration process, it will inevitably involve abandonment and reconstruction, but it is like "breaking the cocoon into a butterfly." In the constant collision and integration, the prospect of bank crowdfunding is promising [9].

2.1 Future development prospects of the crowdfunding model

First, there will be definite legal norms to define and protect. In our view, a clear legal definition and legal protection for crowdfunding is the recognition of crowdfunding development, and it is also indispensable in crowdfunding development.

Second, the risks faced by crowdfunding development will continue to increase. No matter how it changes and develops, crowdfunding is a financial activity, after all, dealing with financial capital, which naturally cannot get rid of the risks of the financial market itself. At the same time, crowdfunding is based on the Internet as a platform and the Internet as a virtual space. There are multiple risks. In this way, after crowdfunding combines the dual risks of financial capital and the Internet, its own risks will naturally increase. In the future development, the more developed crowdfunding is, the more applications will increase, and the risks it faces will naturally continue to increase.

Third, the application scope of crowdfunding will continue to expand in the future. Judging from the current development status of crowdfunding, most small companies or projects that have just started to develop through Internet platform application crowdfunding, while those with stable development have very few applications for crowdfunding, but in the future with the intensification of competition, enterprises' demand for crowdfunding will gradually increase, and the scope of crowdfunding applications will continue to expand [10-12].

3. OWN SURVEY RESULTS

Our research aim was to detect what was the public's perception and understanding of this new and dynamic phenomenon. It has been our common concern to understand the psychological characteristics and behavioral orientation of the public towards crowdfunding and prepare for the further promotion and popularization of crowdfunding by banks.

By carrying an own survey of questionnaire, we wanted to analyze the perceptions and understanding of crowdfunding among different levels of the surveyed groups. Through the website "WJX" the authors conducted a web chat survey among 100 responders. Random and dif-

ferent age groups of consumers have been reached to chat response and let them fill out the questionnaire.

The authors analyzed the questionnaires according to the recovered networks, with the following information.

- (1) According to the numerical characteristics of the distribution of the sample, such as the nature of the work, the mean of the distribution of the distribution of the participating platforms, the preliminary results of the understanding of the general public of different ages, occupations and education levels of the banking crowdfunding, and then infer the popularity of crowdfunding;
- (2) Analyze the development trend of bank crowdfunding according to the public's demand for the function of bank crowdfunding.

From the answers of our own questionnaire we found that most of the people surveyed have heard of crowdfunding, but not many really know very much about it, and very few don't, which shows that crowdfunding is popular but the quality of popularity is average. Besides we found that although most people are aware of crowdfunding, only about half of them have participated in it. It is clear that what most people call or what they think of as crowdfunding is of the public good type of crowdfunding rather than crowdfunding that can bring welfare and generate economic benefits. The public has a very narrow understanding of what crowdfunding is and what it means. Moreover, 20% of the population has never participated in crowdfunding before.

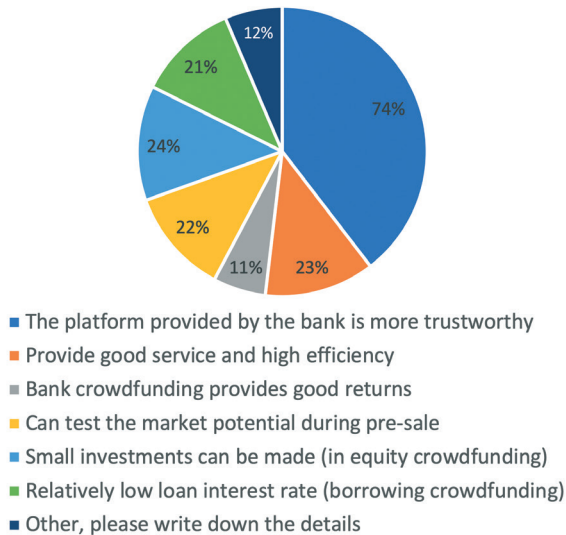
We wanted to know which method is the most popular and common that people know about crowdfunding. Then, we investigated the question further, and therefore, we focused on bank crowdfunding, asking how many percent of participants have heard about bank crowdfunding.

According to our questions, we were able to absorb a basic information about how the participants know about crowdfunding from which platforms or means, and most of them know about crowdfunding from social media. However, over fifty percent of participants did not hear about bank crowdfunding, and therefore, only one out of one hundred of our participants did participate in bank crowdfunding. Thus, we highly recommend to introduce bank crowdfunding to the public through social media, because it is the most popular way.

Based on the conclusions of the literature analysis, we provided 7 options and 1 free fill-in for three questions. To ask the respondents

what they think about the advantages, problems, and future changes in bank crowdfunding. In Graph 1 the results of 100 respondents are seen. In accordance with the advantages of the banks mentioned above, we concluded that people tend to believe that the crowdfunding platform provided by the banks are more trustworthy. In this multiple choice question, this answer has a 74% approval rate. Contrasted with the “second place” answer (small investment), who won 50 votes.

What do you think are the advantages of bank crowdfunding?

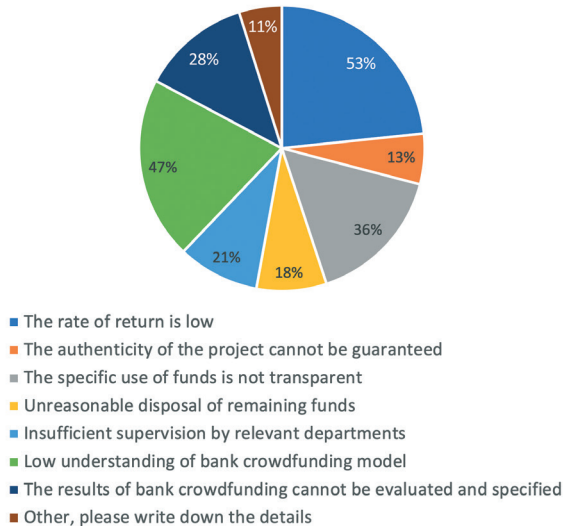


Graph 1: What do you think are the advantages of bank crowdfunding?

Source: own

The support rate distribution of question 16 is more even. “not high returns” received a clear 53% support rate, and 47 people chose “don’t understand the bank crowdfunding model”, 36 responders chose “the specific use of funds is not transparent enough.” Bank crowdfunding should pay more attention to improvements in these three areas. Question 17 is a derivative of question 16. The respondents most agree with “increase the rate of return and profit”, which won 62 votes. It is interesting that the two options of “perfect risk supervision” and “make funds safe and transparent” won 53% And 52% of the votes. Finally, “guarantee user information security”, got the support of 42 people.

Which of the following problems do you think currently exists in "bank crowdfunding"?



Graph 2: Which of the following problems do you think currently exists in "bank crowdfunding"?

Source: own

It is not difficult to find that the answers to the question 17 respond well to the ones of question 16. People are most concerned about the rate of return, which is also the most basic criterion of investment: people always expect higher returns. The issues of supervision and information echo the current disadvantages of crowdfunding proposed by the authors in the literature research, which requires banks to improve supervision and ensure the transparency and openness of information.

Which aspect of management do you prefer bank crowdfunding to strengthen?



Graph 3: Which aspect of management do you prefer bank crowdfunding to strengthen?

Source: own

SUMMARY AND CONCLUSIONS

This study illustrated the development of crowdfunding, the development and shortcomings of successful cases in recent years, and the prediction of prospects. Then, out of the literature as well as the results of the questionnaire survey method, our conclusions have been confirmed: crowdfunding is booming, and bank crowdfunding is being accepted and known by people.

Crowdfunding can make up for shortcomings with the help of banks, and banks can seize opportunities with the help of crowdfunding to meet the challenges of new types of finance. We can say that the combination of banking finance and crowdfunding is reasonable and beneficial. The collision of tradition and innovation will keep the financial industry full of vitality.

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IMPACT OF PROCESS MODEL ON MANAGEMENT INTEGRATION

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ABSTRACT

Establishing proper communication and information flow between professionals with different expertise can be considered a constant challenge. Just as in everyday life the native language, in business, the process model is able to package the information in such a way that the recipient can decode it.

The integration of management within the organization or even among the members of the supply chain is essential for efficient operation. In my research, I examine the different process modeling tools from the aspect of their impact on the flow of information and thus on operation.

My research is based on secondary research, including literature review, which is theoretical material in practice, which I will use to put it into practice.

Integration and information flow are indispensable concepts nowadays, so developing them can greatly contribute to a company's productivity.

Keywords: process model, management integration, information flow

1. INTRODUCTION

Information and its importance have grown amazingly. As technology advances, the impact of information flow permeates the entire supply chain and the organizations that hold it.

In today's economy, information as a raw material has come to the forefront, whose role is irreplaceable. Measurability carries with it the

possibility of improvement, so if we can measure the operation of a company divided into different parts, we can analyze the results of the organization with the data. In today's world where companies have to compete against each other in the global marketplace, gaining a competitive advantage is paramount.

Measurability and various performance indicators are indicators of the components of an organization that are used to judge performance. The operational efficiencies of the various components do not always match the operational efficiencies of the company, so economists have recognized the need to integrate corporate processes.

Coordinating the operation of the subdivisions is a strategic management task, as part of which the definition of the strategy and the coherence of the functional strategies of the organizational units is what can mean the setting of a common direction.

The flow of information is of paramount importance in logistics - within the company walls, between organizational units - and between members of the supply chain - beyond the company's borders - which can be the line between profitability and loss in a company's operations. It is therefore necessary to apply the right process model in the operation of the company

The main question of the research is how the application of process models can be applied to the operation of the company.

In the first step, based on secondary research, I examine the development path of process models affecting the operation of companies, including supply chain management and lean.

Hypotheses:

- H1 The tools of lean and supply chain management can be applied in the processes of the examined company
- H2 By making corporate operations more flexible, better service can be provided to consumers

2. LITERATURE REVIEW OF PROCESS MODELS

2.1 Supply chain management

Logistics - and its extended interpretation, the supply chain - is not just a supporting activity of today's successful companies, which is nec-

essarily present in the processes, but one of the basic elements of efficient operation. Through material flow processes, a company is able to gain a competitive advantage in the market, operate more efficiently than its competitors, and even provide added value to consumers, which is why the area must be treated as a priority. The emergence of supply chain management as a separate functional management area and the incorporation of the approach into the organization of successfully operating companies is a shining proof that the inevitable concept and efficient operation of the supply chain can ensure the successful operation of the organization.

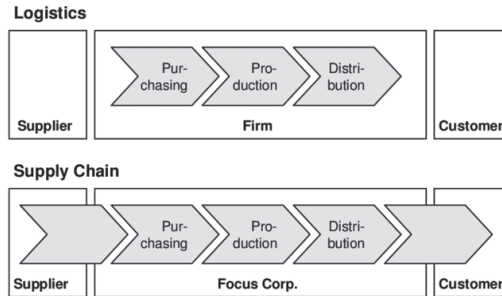
The use of the term supply chain management can be linked to consulting firms, when it began to be used in the 1980s to achieve the benefits of integrating its internal business functions such as sourcing, manufacturing, sales, distribution. Then, in the narrow sense, it focuses on the company's processes within the organization; the main emphasis is on how the functions, activities, processes within the organization can be coordinated in order to ensure the smooth flow of materials. Later, the interpretation of supply chain management expanded and extended beyond the walls of the organization, with a focus on relationships and operations outside the organizations. In a broad sense, the scope of the supply chain includes both the supply chain and the supply chain. This interpretation also refers to the difference in interpretation between supply chain management and logistics (the degree of focus on internal and external processes and how it is addressed at the decision-making level). [1]

Thus, supply chain management achieved efficiency gains by consolidating processes within the company and later extending material flow and information systems across company boundaries. The terms logistics and supply chain are often used interchangeably, so I find it necessary to draw attention to the differences.

While logistics, as part of supply chain management, is the process of planning, implementing and managing the efficient and cost-effective flow of raw materials, semi-finished and finished products, and related information from place of origin to place of use, with the intention of meeting customer expectations. [2]

The concept of classic logistics encompasses sourcing, storage, distribution of assets in order to get the right products to the right user,

at the right time, at the designated location, in the expected condition, in the ordered quantity, and at the right cost, i.e. fixed in the contract. price (this is what the English literature calls the seven Rs of logistics: right product, right customer, right time, right place, right condition, right quality, right cost). [3]



1 Figure: Logistics and Supply Chain Comparison
Source: Delfman, W., Albers, S. (2000)

In contrast, the supply chain is a series of material suppliers, production facilities, distribution services, and customers that are interconnected through the flow of goods and information. [4]

According to Chikán, the supply chain is a series of value-creating processes across cooperating companies, which creates products and services suitable for satisfying customer needs. [5]

According to Houlihan's definition, supply chain management covers the flow of goods from the supplier through the manufacturer and distributor to the end user. [6]

The first figure also shows the difference between logistics and the supply chain, while logistics focuses on material flows within the company, while the supply chain transcends company boundaries and spans the entire product / service and information pathway from supplier to consumer.

In order for companies to be able to acquire and apply a supply chain management approach, they need to unify processes primarily in their own operations. They then need to select from among the business partners those with whom they can coordinate their processes and develop their operations together through information sharing.

Supply chain management was created by linking several activities. Economists have recognized that by consolidating areas, they can achieve more efficient operations at the corporate level as a whole than by focusing on separate indicators for each area. This is because meeting the metrics for each department can sometimes harm the interests of associate departments.

The development of supply chain management required a decades-long process of integration, driven by the ever-changing needs of consumers and the increasing challenges facing supply chains. Of course, the figure illustrates the development of supply chain management, there are many of today's companies that have already reached the desired state, but there are also those who are in the development stage.

All in all, it can be said that nowadays it is no longer products and services that compete with each other, but entire supply chains, which can now be interpreted as a criterion for gaining competitive advantage, with the main goal of the supply chain maximizing value and meeting customer needs. [7]

The development and scope of supply chain management is influenced by several factors, which I mention in the following list: [8]

1. Network structure, competitive environment
2. Globalization
3. Availability
4. Cost effectiveness
5. Customer expectations
6. Information and technological development
7. Process-based systems approach
8. Integrative management approach
9. Outsourcing
10. Extended Business
11. Cooperation

It can be seen from the listed factors that they can have a serious impact on the supply chain of any one company, but these 11 factors can coexist at the same time. Supply chains provide a service, so their competitiveness is determined by the quality of customer service, of which two determinants are coordination and integration. [9]

Collaboration and integration between partners is key to matching the value chains of different actors from supplier to consumer. It re-

quires deepening business relationships with participating companies. There are a number of benefits for actors who apply a supply chain management philosophy:

- Thanks to the high degree of cooperation, the division of labor between the chain members is improved.
- Capacities can be used much better.
- Reduces product ordering and product development lead times.
- What's more, the risk is shared among the chain members.
- Thanks to the high degree of cooperation, the chances of the whip-lash effect are reduced.

On the other hand, the disadvantages are:

- The chain links are interdependent.
- They cannot make decisions on their own, even change prices.
- This will make them inflexible, more difficult to respond to environmental changes.
- It can be difficult for individual chain members to break out of a given supply chain.
- Technology and knowledge transfer can have a negative effect on individual chain members.

Overall, market demands and environmental changes have posed an enormous challenge to companies in the material flow sector, to which integration, collaboration, and a cross-corporate mindset have responded to what we call supply chain management. Despite the disadvantages, there are advantages to using this concept without which a company can hardly be successful today, so it cannot be ignored.

What sounded utopian for a few decades is now a necessity for companies with long-term goals.

The concept of supply chain management seeks utopian performance in commerce: all activities in the supply chain at the upper and lower levels of the supply chain, coordinated and coordinated within the chain (as if they were a single unit), to synchronize supply and demand at all levels, share information and technologies to increase innovation and shorten product development cycles to reduce the ordering cycle. Inventories are replaced by flow, efficiently and effectively. Responding efficiently and effectively to customer needs, reducing costs and increasing customer satisfaction. [10]

This is called supply chain management.

2.2 Lean management

The constant changes in the environment, external factors affecting the supply chain and the constant changes in consumer needs have placed another task to be solved on the shoulders of economic professionals. The consumer wants perfect quality, at a low price and almost immediately, with no lead time. It was necessary to move from mass production to meeting individual needs while maintaining supply chain flexibility, improving quality and reducing lead times. It was along these guidelines that lean was born.

Lean management came into the public consciousness in the 90s. It was based on the Toyota Production System, whose main guidelines are:

- continuous production principle,
- standardization,
- continuous development,
- kaizen and just-in-time,
- automation.

At the lean level, the word is of English origin, meaning slender, lean, but this lean manufacturing is only used to leave out losses. There are several definitions in the literature, some of which I have collected:

According to Demeter: The goal of lean management is to eliminate all forms of waste. Waste-free processes are faster, more reliable, and result in better quality, but perhaps most importantly, they can be operated at a lower cost. Waste-free processes on the supply side create higher customer value on the demand side. It got its name from its comparison with the traditional, i.e. the classical mass production system. With fewer employees, fewer devices, less time and less space, a lean system provides (more) value to the customer. [11]

Tóth believes: Lean minimizes or eliminates non-value-adding operations in the process, using only the most necessary resources by delivering the given product, service or information in the quality, price and deadline required by the customer. [12]

Németh also responds to the Hungarian meaning of mirror translation: The Lean body is not lean or anorexic, but fit and flexible, free from unnecessary burdens, and manages its strength well, which it develops through training. The meaning of Lean stems from the constant effort to create more and less by eliminating losses. [13]

Weak et al: Lean is more than a set of tools, as for proper application, philosophy must permeate the entire organization, and these tools do not belong exclusively to any principle or implementation stage. Each device can even affect the entire system. [14]

Overall, based on the definitions, lean manufacturing is said to be a philosophy that must permeate the entire organization. Its main feature is that it tries to eliminate unnecessary or wasteful elements, which are not able to contribute to the value-creating processes, thanks to continuous improvement, the end result of which is to produce more added value from fewer resources.

The five strategic principles of lean management were summarized by Womack and Jones, which are as follows: [15]

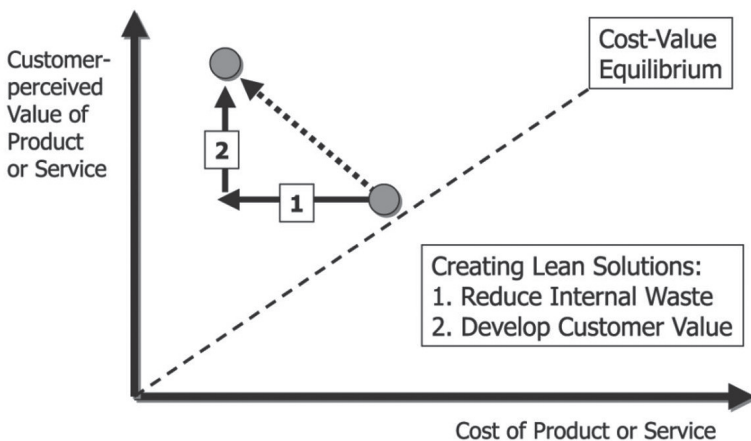
- Value: determine the value provided by the company;

The first step is to map out what is in our product or service that represents value in the eyes of the customer for which they are willing to pay. It only makes sense to talk about value if the given good or service satisfies the needs of the buyer at the given price and time. [16]

There are two ways to create value in lean management:

One is to reduce costs by reducing waste, the buyer's cost value judgment is improved.

While the other is realized through product development in a direction that the buyer values: it creates consumer value at no extra cost.



2 Figure: Value-cost diagram

Source: Hines et al., 2004 p. 4

From Hines' figure, we can see the two value-adding possibilities of lean, which clearly show how to reduce costs or increase value, but these two can even be brought about simultaneously by the company when applying lean management. This is also confirmed by Demeter: In the lean system, the basis of customer value creation is provided by the sources of competitive advantage (cost, quality, flexibility), which improve in several dimensions in parallel. [17]

The extent to which the financial benefits of these developments are realized also depends on the industry situation and the bargaining power and strength of suppliers and customers, which may cause some of the financial benefits to appear in other members of the chain. [18]

Once we have managed to map out what is of value to the consumer, we can move on to the next strategic point, which is to map the value stream.

- Value stream: list value-creating activities in the best order;

Based on customer values and needs, the processes in operation can be defined in other words, the value stream, which represents added value according to the consumer in the final product and is willing to pay for it as well.

A value stream is the sum of all the specified actions required to produce a particular product. In this sense, value is what the buyer pays for and the loss is any resource-using activity that does not convey value to the buyer. [19]

To map the value stream, activities can be divided into three parts, depending on how much you contribute to value creation. According to Monden, the three groups of activities are as follows: [20]:

1. Value-creating activities: Activities that create value for the end user.
2. Necessary non-value-creating activities - which do not create value but are unavoidable in an existing institutional and technological environment and therefore need to be maintained. This includes support activities and legal compliance.
3. Non-value-creating activities, waste - All activities outside the first two categories, all for which the buyer is unwilling to pay.

When examining the value flow, the most important task is to reduce and eventually eliminate the processes that do not create value. Necessary but non-value-creating activity only needs to be provided at a level that is essential to the operation of value-creating activity.

Value stream mapping explores the value flow of products and product families, which is ultimately a process map in which activities, processes, their steps, relationships, material, labor, and information flows are plotted.

Value flow analysis helps to identify critical points, correlations, and conflicts of interest in a company's operations.

- Flow: to perform value-creating activities without any interruption;

The lean flow philosophy should strive to ensure that the flow of materials, resources, and information within the value stream is consistent with the evolution of customer needs. Typical methods used to try to achieve the right flow: Just-in-time, one-piece flow, balanced production, or rapid transition.

Subprocesses representing value need to be assembled so that the flow of product and services is continuous. In the value stream, the creation of a continuous flow can be achieved by performing the following steps one after the other: [21]

1. Select the target value stream
2. We eliminate the "muds" in it, ie the elimination of all obstacles to the continuous flow of the given product or service
3. We support continuous flow with Lean devices

The optimal flow is to produce as small a series size as possible in lean terms - preferably a one-piece series - which allows for an immediate response to customer needs. This requires smoothing the production plan and keeping inventory levels low.

Pull system: act only on customer demand;

When designing tensile production, it is necessary to ensure that the customer's needs control the production processes, thus avoiding harmful surpluses and overstocking. Only that and as much should be produced as and as much as the buyer orders. [22]

If it is possible to get the product to be pulled by the buyer instead of pushing, almost complete elimination of the stocks is possible, which results in huge savings, despite the fact that the company's financial resources are not tied up in the stocks.

Buyers are most often unwilling to wait, yet they expect fast and flexible (e.g. in volume, composition) delivery. A consumption-driven system is suitable for managing such an environment. This system satisfies the customer from a regulated inventory point (in lean terminology

from a supermarket). Customer demand can be met immediately from a regulated inventory point. [23]

Typically, the implementation of the strategic principle of the traction system can be achieved by pulling production, kanban and supermarket methods. Continuous improvement is an endless cycle within lean management, as the approach requires the correction of errors and the improvement of processes.

Continuous improvement (kaizen in Japanese) means nothing more than providing even more. We create the framework for how lean works by applying the first four principles. The framework needs to be continuously improved: to better understand the needs of customers (value); to find out the “hidden” wastes in the value stream; remove obstacles to flow; further refine the traction system. [24]

The application of the principle is facilitated by the application of standardized workflows, Kaizen and 5S.

Also within lean management, the strategic level can be well separated, where the development of principles takes place, while at the operational level, the necessary tools for implementation are used to achieve the strategic goals.

3. MATERIAL AND METHOD

Developing a supply-side management approach requires companies to interpret the performance of the various components as a large unit in addition to the performance of the various components. This requires the introduction of a process model that stimulates the flow of information between components within a company or even between companies.

In my research, I examined the supply chain of a clothing company with the help of an in-depth interview, in which I searched for signs of process model application and management integration and the benefits of their application.

My research is based on an in-depth interview with the management of a clothing company. The survey was conducted within a company, so it can be stated that the research was done as a case study. Interviewees were selected within the company to best cover the company’s supply chain. Interviewees work in the following positions:

- Logistics Manager
- Warehouse manager
- Warehouse department manager
- Purchaser
- Delivery manager

The interviews were conducted by me, before which we made the following stipulations:

- There is no wrong or good answer
- The interviewer who asks and the interviewee answers the questions
- The interviewer reports back the answers but does not rate them
- The interview is conducted on the basis of a pre-written guideline, yet in a more casual style

My special task was to keep the interviewees close to the topic during the conduct of the interviews, and the guideline was a great help in this.

I used to be lucky enough to spend 3 years in the company, so there was no need to introduce myself to the interviewees. The interviewees immediately communicated with me in a more direct style, which was a great relief for me.

The company examined was a Hungarian-based company engaged in the distribution of Hungarian-owned clothing products, which has been on the market since 2004. In parallel with the conquest of the Hungarian markets, the company is also trying to penetrate the surrounding countries. It currently employs more than 300 people and its annual net sales exceeded HUF 5 billion.

The interviews were as follows:

Interviewee (by position held)	Interview venue	Interview duration (minutes)	Interview date)
Logistics Manager	Skype	45	26. 01. 2021
Warehouse manager	Personal meeting	75	28. 12. 2020
Warehouse team leader	Personal meeting	65	29. 01. 2021
Buyer	Skype	40	31. 01. 2021
Delivery manager	Messenger	40	02. 02. 2021

1 Table: Interview data

Source: Own editing

It can be seen from the table that it was possible to hold the interviews both in person and in the virtual space, which lasted 40-75 minutes. The dates of the interviews can be made between December 2020 and February 2021.

Key questions for interviewees:

- What tasks do you have?
- How does planning and preparation determine your work?
- How long do you usually fix production processes in advance?
- How do you share expected volume data with other actors in the supply chain?
- What are the cornerstones along which you build your sessions?
- Is the analysis-planning-implementation-control fulfilled?
- Do you apply the principles of LEAN in your work?
- What would the LEAN approach change in workflows?
- What indicators are used to measure the effectiveness of your department?

With the questions asked, I tried to explore the workflows and connection points as much as possible.

Based on the answers to the questions, I prepared a summary table about the material flow of the interviewees and the company:

Interviewee	Planning time period	Communication	Possibility to use LEAN
Buyer	1,5 years	Logistic manager	yes
Logistic manager	3-6 months	buyer, warehouse manager	yes
Warehouse manager	1 day-6 months	logistic manager, delivery manager	yes
Warehouse team leader	1 day-1 month	warehouse manager	yes
Delivery manager	1 week	warehouse manager, shops	yes

2 Table: Summary table of interviews

Source: Own editing

From the summary table, it can be seen that along the supply chain, planning thinks ahead in an ever smaller time interval, which can be a corporate or industry specificity. It can also be said about communication that it works only with the related chain members. Pre-planning is a process in the operation of a company that shows forward

thinking, but the flow of information across the company is currently lacking.

According to their current operation, the actors in the supply chain do not apply the principles of LEAN, which, based on the literature review, would give the company several advantages over its competitors.

It can also be seen from the communication interfaces that the different departments communicate with the chain members around them. By sharing information more effectively, you can more accurately plan and coordinate processes across departments.

In many cases, the indicators of the different departments are not related to each other, so their results are also interpreted separately instead of looking at the company as a whole.

4. LEAN APPLICATION OPTIONS

With the help of the interviewees, a number of areas can be identified that may be suitable for the application of Lean principles.

At the beginning of the logistics process, during the procurement, instead of the currently operating pushing sales, it would be necessary to move in some way towards pulling sales.

This may be limited by the size of the order units, which can be measured in a container.

Traction manufacturing (contract manufacturing) can pose a serious challenge to a company's supply chain, as it requires a high degree of flexibility. Less stock that spins faster would tie up fewer resources for the company, while they could respond more quickly and flexibly to changes in fashion (environmental factors) with fewer sticking stocks.

With the introduction of pull manufacturing, in addition to reducing inventory, which means cost reduction, a higher level of customer satisfaction could be achieved. This would require closer cooperation with suppliers and manufacturers, so the flow of information should be extended not only within the company, but also outside it. Of course, supplemented by an examination of what data needs to be filtered out, which would be considered a trade secret.

Sharing information could also mitigate the potential whiplash effect, which would currently mean that procurement could be ordered in

smaller units, knowing that suppliers will deliver in the right quantities and on time.

In inbound logistics, the possibility of introducing denser but fewer orders can be explored as an alternative to container unit cargo. The study would cover the balance between economies of scale and flexibility.

With regard to the logistics center, the greatest development potential would be to focus on value-creating processes and eliminate non-value-creating, unnecessary activities. There is definitely an opportunity for technological development, which would focus on value creation. At the same time, the processes could be simplified and the work could become more efficient. Eliminating surpluses under Lean principles could also boost efficiency.

However, a further development opportunity is to reduce waiting times by developing tools.

There is also scope for improvement in the flexibility of delivery logistics, which is primarily responsible for the inventory of the store network that is connected to customers. Thus, the flexibility of in-store inventories could be provided by deliveries and in-store transfers.

Also, an important factor in inbound logistics is to adapt transport unit packages to consumer needs and to create a pull principle. Of course, economies of scale are an important consideration. Outsourcing delivery with courier services would also be an interesting option, as it would provide the opportunity to deliver to all stores, even every day. Depending on the depletion of stocks, replenishment could be accomplished from a week to a day with smaller store stocks, yet better availability of goods.

Following the implementation of lean, it would be possible to apply the tools and mindset of supply chain management in the operation of the company. The company would benefit from a number of benefits, which would increase efficiency and reduce costs while meeting customer needs at a higher level.

5. SUMMARY

Based on the case study, it can be stated that a number of areas have been identified that can be developed to make the company more efficient. Of all these, the flow of information is the factor that is most

worthwhile for company leaders to address, all the more so because nowadays information has become the most important raw material.

The application of lean can lay the foundation for the supply chain management approach, with which the supply chain appears not only as a sales support function in the company's operations, but also as a value-creating activity.

Lean as a process model may be able to increase the effectiveness of the analyzed company through management integration and closer collaboration.

From the point of view of the examined company, it can be observed that they do not apply a process model in their operation. The sharing of information between actors working together directly is not always automatic either. Based on these, the introduction of a process model should also be considered in terms of information flow.

Regarding the nature of the company's case study, I do not have the opportunity to generalize, but in the course of continuing the research I plan to examine other companies from different industries, during which I plan to map general focal points during the company's operation.

As the first part of the research, I accept my two hypotheses as thought-provoking.

	Hypotheses	
H1	The tools of lean and supply chain management can be applied in the processes of the examined company	Accepted
H2	By making corporate operations more flexible, better service can be provided to consumers	Accepted

3 Table: Classification of hypotheses

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THE PERSPECTIVES OF PEER-TO-PEER LENDING

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ABSTRACT

New financial innovations flood us in the 21st century from the new financial intermediaries to effective data processing. The motivation of these improvements besides others could be a lower cost, lower administration requirements, or the effective use of modern technologies as the internet or mobile phones. Peer-to-peer lending combines some of them: it makes it possible to individuals to borrow or lend real money without banks with the help of online platforms. The method is like the ordinary lending process, the interest rate is the cost of borrowing money, but the financial intermediary is not a bank and multiple actors can be involved on both sides. This fintech solution is presented in this article from the perspective of university students majoring in finance. The main purpose is to give oversight and brief knowledge about the innovation: peer-to-peer lending, its overall process, advantages, disadvantages. Furthermore, the objective is to show what impact it makes on a person's life and its effect on banks, and its possible future growth.

Keywords: finance, non-bank financial institutions, financial innovation

1. INTRODUCTION

The main purpose of this paper is to give the readers oversight and brief knowledge about innovation, peer to peer lending. P2P's overall process, advantages, disadvantages, what impact it makes on a person's life, how much effect it has on banks, and possible future growth. The economy is all about being up to date. Innovations are happening every day on every side of the world. To a businessman every second is precious.

If somebody asks you about where you save your money, it is not a secret that the majority of the people will say "bank". And if somebody asks where to lend a big amount of money, most of us will say "bank" again. But have you ever wondered how people borrowed money way before the bank was even invented? Naturally, people lend money one to another, with interest or without interest depending on the individual and amount of the money. It existed much earlier when things started to being valued monetarily. A definitive example would be the local non-notarized credit markets in 18th century France. The neighborhoods were a circle where the market functioned exchanging cash and goods. More know examples across Europe are the credit cooperatives from German and Irish loan funds.

So, what is P2P? Peer-to-peer lending means exactly as it says, people can lend money from individual to individual. In 2005, UK, Zopa was the first company to provide peer-to-peer lending. Following up with Lending Club and others, in 2006, US [1].

2. HISTORY

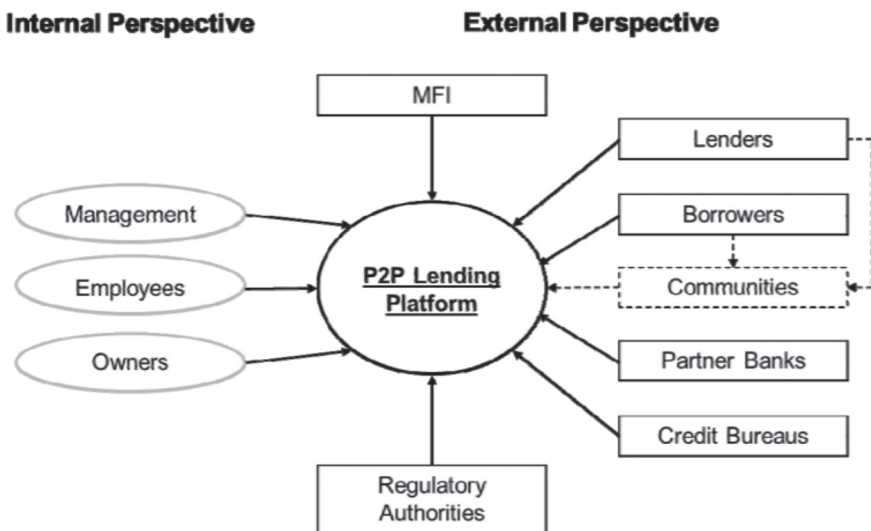
During the financial crisis on the western side of the world in the late 2000s, peer-to-peer lending's popularity strikes up as banks were unwilling to propose new loans with minimum interest rates. Therefore, people in need of money had to search for other possible sources [10].

Entrepreneur Giles Andrews has brought up this idea over a decade ago to get rid of Britain's banking industry's flaw. Customers regarded as unsecured loaners, looking to borrow money from banks had to go

through extensive application processes, and disappointing customer services was very visible to him. Therefore, Giles Andrews came up with this amazing idea of connecting borrowers to lenders directly and immediately; without going through so much work and wasting time, eliminating the third party-the banks [3].

As the following graph illustrates, the P2P lending market has more participants. Internally the platform needs management, employees, and owners, but from the external point of view, the banking sector could play some role as lenders or partners. Microfinance institutions could also play an important role in this market as the regulating authorities cannot be forgotten [1].

This notion gave huge inspiration to Zopa, as it became the world's first peer-to-peer lending site, which is to influence the worldwide market. P2P is interpreted as a different financial service because it does not suit the other three traditional types of financial institutions definition: banking term deposit, investment, and insurance.



Graph1: External and internal stakeholders in P2P lending
 Source: Bachmann (2011) [1]

Due to statistics of 2018, in Europe and North America, the two leading companies held 57% and 96% of the market share discretely. Regardless, other companies are rising fast in this field, especially con-

tinental Europe, which is stimulated by the new EU law proposals and related restrictions in the banking sector. Ready and minor Nordic and Baltic states present spectacular increasing rates and the rate per capita is the highest in the world. In developing countries, there is more amazing growth of peer-to-peer lending [3].

The Global Alternative Financial Markets benchmark report [4] shows annual market growth between 2017 and 2018, totally outstanding 574% in Southeast Asia, in Africa 102%, 131% in the Middle East, and 173% in Latin America separately. It is not a surprise that China has quickly become the world's largest P2P lending market, despite entering the competition late in 2012. Following the swift rise, however, China's peer-to-peer lending industry has encountered an even more substantial decline, reduced by close to 40% between 2017 and 2018 on account of new government regulations, constraining the formerly thriving sector [3].

This particular lending system has been introduced to a whole new level by supplementing the marketplace platform regular in electronic commerce, through the emergence of technology and comprehensive expansion of e-commerce, buying and selling over the internet. By using this platform, one individual borrower can obtain funding from many people at one time. The borrower and lenders are most of the time strangers that are no need of meeting face to face, as the lending happens online on peer-to-peer lending companies' websites using numerous distinguished lending platforms.

Unsecured personal loans take up the majority of the loans in peer-to-peer lending. Of course, the businesses lend a larger amount. Further types of peer-to-peer lending involve student loans, real and commercial estate loans, payday loans, factoring, and leasing. Secured loans are proposed in some platforms that usually take property and luxury products, jewels, gems, and goods as collateral. Nonetheless, these models are not frequent because expandability matters.

Peer-to-peer lending platforms embrace mainly three kinds of transaction procedures [8]:

- **Pure Marketplace**

In the pure marketplace model, lenders and borrowers are openly put their intended interest rates. For a given number of days, loans are open for auction and borrower places their wanted interest

rates. Then later it is lenders' turn to give away their price amount and interest rates.

At the final of the auction period, the system searches and finds the best-priced bids and gathers them into the funds for the borrower, whilst the remaining bids are repaid to lenders. In this case, the rate paid by the borrower is the weighted average of the bidden prices. This model also permits the borrower to close the auction earlier if he or she wants to pay the current interest rate.

- **Fixed interest rate**

In this model, the platform usually sets the interest rate based on the level of the risk. Then the lenders buy their favourite part of the loan until it is completely exchanged. The fixed interest rate model presumes that the platform has good professionals and can help and guide the lenders in deciding the risk and determine the reward of each loan. The matching of this model occurs much faster than the pure marketplace model.

- **Fully Managed Funds**

In the company of the fully managed funds model lenders give the platform entire complete power to manage their money, which is then managed as a source of directories. No worries! The lender decides which loans to get financing from and assign the funds. In some countries, this model could be considered as illegal activity, except if the platform got a fund management license. However, this model offers superiority in the form of faster loan financing and the platform assists the consumer with reinvestment of their inactive funds.

In many countries, peer-to-peer lending is still a reasonably new service especially in south-eastern Asian countries like Indonesia. Thus, regulations and norms were put into the industry by the government. Nonetheless, it means that they accept this field in the market has a certain promising future and constructing the basis for an appropriate fit regulatory supervision. Present platforms are forming their businesses, products, and services evolving from the existing regulations correspondingly [10].

So, we talked about what is likely to be expected on the peer-to-peer lending sites. Now let us focus more on what exactly the borrower would go through to get their desired money.

The processes may alter for different platforms, here is the general process [9].

1. The person applying for a loan would come to the website, register, and fill out the application form.
2. Depending on the platform, they identify and examine borrowers' worth of credit.
3. If the platform decides you are certified, then the loan is published on the platform and lenders now can begin to fund the desired loan.

As you can see very easy and simple steps. Some websites may their decision of borrower's creditworthiness solely based on online reputation. Some platforms may even depend on external service providers to conduct basic inspections of the borrowers, which sometimes could be considered illegal in some countries.

As it was mentioned, entrepreneur Mr. Andrews, the businessman who came up with a plan of P2P is in a new investment that could involve cooperating with the very industry he embarked to throw into disarray! Gilbert Andrew has been assigned, like other peer-to-peer lending websites focused on providing small businesses that are desperate for financial support, "MarketInvoice" chairman. He is targeting to expand the business while trying to maintain its "fintech" groundwork. MarketInvoice guarantees companies faster, more explicit, and frequently a low-priced source of working capital than banks, by allowing companies to sell their invoices in for cash.

Since its inception in 2011, the site has expanded speedy, providing more than £ 1.1 billion in financing to small businesses, of which half of it are from the previous year. This year Anil Stocker, MarketInvoice's founder has in view to pursue to make £2bn of overall lending. His plan is to be helped by the setup of a new service, "finance secured against all of a company's invoices", instead of a person's basis. P2P fintech companies and banks are partnering up to a big collaboration, to give access to platform "grey label service"; where banks can offer their small business clients a product that has the feature of both companies. The banks would get more open wide entrance to more innovative light technology while helping their customers [3].

As for P2P websites, joining forces with banks will give them a more rooted and sizeable number of customers. It is a possible win-win for

both parties. Whatever the future may hold, Mr. Stocker and Mr. Andrew knew that they were signing up for a bright future. It is predicted P2P lending will exceed \$897bn by 2024; it is sure to come true with statistics, P2P lending surpassed \$26bn in 2015 [2].

2.1 P2P lending in Eastern Europe

According to the Global Alternative Finance Market Benchmarking Report, Poland, Czech Republic, Slovakia, and Hungary reached \$414 million as the alternative market volume in 2018. Compared to the \$10,368 million of the UK's alternative finance volume, it is a relatively low amount, but the growth is more significant 104% from 2017. In these countries, Donation-based Crowdfunding has dominance, and the regional leader in this field is Poland, accounting for 80% of regional volumes where the flat tax rate is levied on the interest earned from investing in loans. In these countries the regulations does not everywhere support these kinds of alternative finance, for example, in Hungary, the law doesn't allow individuals to lend at interest more than once a year [11] - and as a consequence P2P lending platforms are not working in this country.

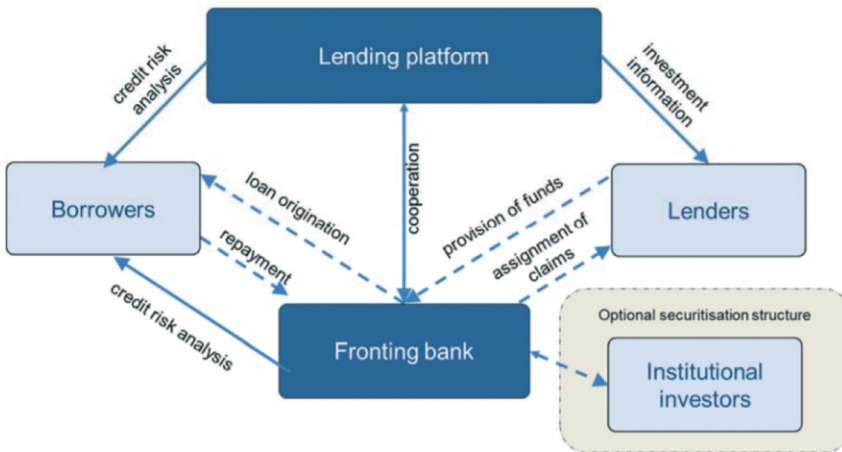
3. RESEARCH METHODOLOGY

To look at peer-to-peer lending overall, I read numerous articles and news. Searching for any new information and insights that it may bring. Compared few articles and papers to see the advantages and disadvantages it might bring to the marketplace.

3.1 Comparative literature study

In the comparative literature study section, two main sets of studies of peer-to-peer lending will be overlooked: Peer-to-peer lending: Business Model analysis and Platform Dilemma [7] and Online peer-to-peer lending: A literature review [1]. It seems that both take some way similar yet different approaches in critiquing and describing P2P. The main, crucial points of each one will be shown and evaluated. Peer-to-Peer Lending: Business Model Analysis and the Platform Dilemma describes the P2P mostly of what kind of factors are included in the process, who

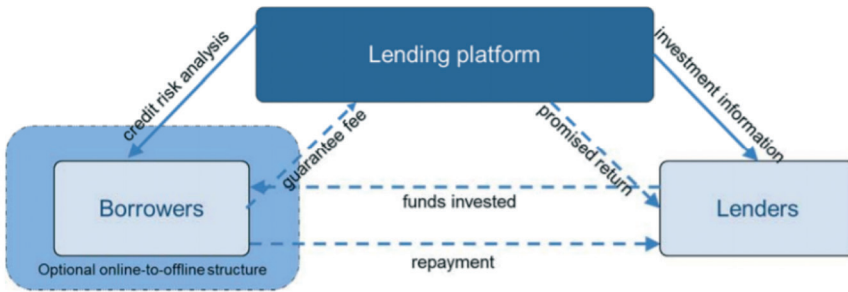
plays what role, the types of P2P lending, and their advantages and uniqueness. It shows models, similar to the following graph, which illustrates the detailed notary model of the P2P model, where the online platform acts as an intermediary between the investor and the borrower and indicates the tasks of the participants and the risks of the process.



Graph 2: Notary model

Source: Committee on the global Financial System, Financial Stability Board (2017) [5]

This paper gives more insight into the fintech companies' growth, and their participation and involvement are explained in detail. As for reasons for the possibility of a decline in growth of this field, they explain by "demand must equal supply theory". To have more companies to provide P2P lending there should be enough customers to lend from P2P. The authors draw attention to the possibility and the importance of guarantees, which could improve the success of these kinds of platforms as it is visible on the next graph.



Graph 3: Guaranteed return model

Source: Committee on the global Financial System, Financial Stability Board (2017) [5]

Online Review explains the reason for choosing and not choosing this platform by considering social and demographical tendencies. For example, depending on where you are located, where you come from some lenders might not give you the amount of money that you need. They also present some lending platforms according to the type of loans they offer as is shown in the following table.

Type of loan	Name of the Platform
General Loans / Personal loans	LendingClub
	Prosper
	Avant
World Poverty reduction loans	Kiva
	Zidisha
Family & Friends Loans	TrustLeaf
	LoanKin
	National Family Mortgage
Other: Business loans Platform Loans Student loan	Funding Circle
	Kabbage
	Mintos
	SoFi, Common Bond

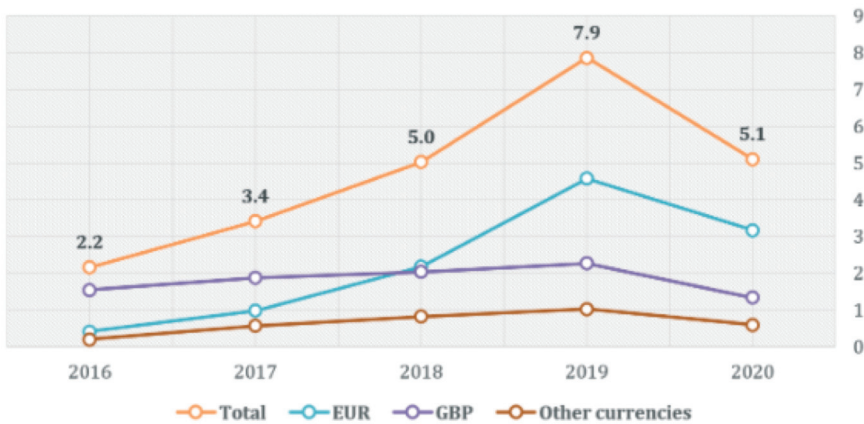
Table 1: Types of loans: some example

Source: Omarini (2018)

Deloitte's report [6] pointed out of previous year evaluation that UK's P2P will be approximately £35.5bn. Which is equal to six percent of the small businesses, retail, and individual lending market of 2025. Hence, based on information gathered, from banks, P2P was not a "considerable threat". Even so, it is better to think about the figure from P2P Finance Association, in the UK reached £7.3bn last year.

4. RESULTS AND DISCUSSION

So, the question is what is the future of peer-to-peer lending? Despite being invented in the early 2000s, P2P lending innovation is not considered to be old compared to other long-lasting services. Over these few years, the P2P lending sector has been widespread globally as well as growing throughout the years. Here are few important things to note.



Graph 4: Annual funding volumes of P2P market (Billion €)

Source: p2pmarketdata.com

Future growth in the sector. It began only with individual to individual, borrower, and lender relationships. As it can be seen in the previous section of this paper, there is already a distinguished variety of peer-to-peer lending evolved during the years. The number of websites and fintech companies that are focusing on this field is increasing every year. Each one with its specialized field like invoice trading. Balance sheet business lending, property lending, etc.

Organizational investors are progressively using P2P loans to finance their investment strategies. Approximately fifty percent of P2P lending globally is financed by organizational investors like “banks, trusts, brokerage firms, investment dealers, insurance companies and pension funds.”

Lending to the business itself is already accomplished governing field in the marketplace and it looks like it is going to have a more remarkable part of all peer-to-peer lending markets for the long run. For example, most likely to seek out different financial supporters are small to mid-sized enterprises, because of the soaring limit in getting bank credit.

As it is new to many countries, some countries did not put any regulations and laws according to the P2P lending system. Right law and norms should be put for any illegal or violation of right like a scam.

Policymakers are working hard to design and develop new regulatory frameworks for the new sector like “EU crowdfunding regulation” or trying to incorporate the platforms in the already remaining old mechanisms (“UK, Financial Conduct Authority”).

CONCLUSIONS

This innovation in the marketplace has brought many advantages to the customers, especially those who do not meet the certain, defined, and strict requirements of banks. Of course, with new things, risks and disadvantages are still not fully known yet. The major disadvantage it might have is not having enough regulated groundwork to fully carry out the process. Because in some countries, it is restricted very harshly or not managed right. Thus, depending on the country’s regulations, the processes could vary. In the case of Central and Eastern Europe, a common European regulation could solve the problem.

Also, it is right to mention the whole “notion” of P2P lending. Although the idea started with including no third parties, there are still policymakers and websites that sort of act “in-between party”. Additionally, it must be acknowledged that the sites try their best to eliminate third parties being involved.

Thus, in conclusion, it is critical for financial experts and fintech companies to acquaint themselves with this innovation, P2P, even if

their direction is not correspondent to peer-to-peer lending. The point of considering P2P is very plain and simple. Businesses must be ready for the future and even sometimes predict the possible outcomes. As a possible outcome of this article, it could be stated that it will not be so long until every part of the market industry includes this new technology to a certain extent; even though right now, it is not acknowledged as a “major threat” to banks.

Above in the middle of the paper Mr. Stocker's - the founder of MarketInvoice plan - the idea was mentioned, to combine forces with banks, which is very possible brilliant future growth to both P2P lending and banks.

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