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From the Editorial Committee

We are giving you the next 27th (4/2020) issue of the Quarterly of the Faculty of Management of the Rzeszow University of Technology entitled "Modern Management Review".

The primary objective of the Quarterly is to promote publishing of the results of scientific research within economic and social issues in economics, law, finance, management, marketing, logistics, as well as politics, corporate history and social sciences.

Our aim is also to raise the merits and the international position of the Quarterly published by our Faculty. That is why we provided foreign Scientific Council, as well as an international team of Reviewers to increase the value of the scientific publications.

The works placed in this issue include many assumptions and decisions, theoretical solutions as well as research results, analyses, comparisons and reflections of the Authors.

We would like to thank all those who contributed to the issue of the Quarterly and we hope that you will enjoy reading this issue.

With compliments
Editorial Committee

Aliya N. CHUYEVA¹
Saira R. YESSIMZHANOVA²

LEISURE MARKETING COMMUNICATIONS: CONSUMERS' AWARENESS

In the context of a virtual transformation of consumer behavior, commercial offer switches play an important role in increasing customer awareness of the company's product and the recognition of the company itself. The study was conducted by sending online forms Google Form followed by data processing using Excel and SPSS. The purpose of this study was to identify the degree of consumer awareness of the horse-centered leisure activities in Almaty city and Almaty region. The survey was conducted by online sending out a Google Form with subsequent data processing by using Excel and SPSS. Novelty of this study is consideration of the significance of the awareness of the company's product (goods/service) in connection with the virtual transformation of consumer behavior is considered. As the result, study showed the levels of awareness degree about the horse-centered leisure activities in Almaty city and Almaty region the among interviewed respondents

Keywords: leisure, awareness, integrated marketing campaign.

1. INTRODUCTION

The research problem is the choice of adequate marketing communication in the horse-based recreational business. Questions to clarify are the people's awareness of the possibility of obtaining horse-centered leisure services in Almaty and Almaty region and the attitude of these consumers to the above type of recreation.

The aim of the study is to identify the degree of awareness of target groups about horse-centered leisure activities. The research relevance is due to an increase in consumer demand for recreational services in steadily dynamic urbanization (Carlino, Saiz, 2019). The 21st century consumer behavior is saturated with virtual exposure of emotions and impressions, and accordingly are transformed by switches of commercial offers (Kim, Lee, Jung, 2018). In this regard, the marketing management process is becoming more complicated and is becoming integrated.

2. LITERATURE REVIEW

The basis of promotion is an effective system of interaction with customers Philip Kotler has reduced four classical hierarchical models of consumer feedback to a three-stage

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scheme from cognitive through affective to behavioral highlighting a hierarchy of effects model. (Kotler, Keller, 2011). According to the model, the potential buyer's path to the final purchase lays primarily on the level of his knowledge of the company's product, including basic knowledge of the company, and in case of further favours and any preferences convinces to buy "must have products". Here in marketing mix the offline and/or online delivery of information about company's product to the consumers plays the key role in initial reading their environments (Smith, Paul, Zook 2016). Cultural, social, personal and psychological factors influence on the development dynamics of the customer behavior in the decision make process. (Yusniza Kamarulzaman, Nor Khalidah Abu, 2017).

Of course, bookmaking and expanding product awareness take time and require continuous communication with the consumer audience through an integrated marketing campaign (Camilleri, 2018). The campaign is aimed at escorting the buyers to the final purchase from the moment of contacting them with a unique selling proposition, while the entire team of the company works harmoniously and precisely according to the marketing integrated plan and program (Reevers, Rosser, 1961; Kotler, Armstrong, 2011; Laurie, Mortimer, 2019). In this regard, it is important to make a memorable impression on the buyers and thereby encourage them to search for information about the product and the company, while the degree of awareness increases. Innovative communication means play a huge role in expanding the customer's illumination field.

So there is a certain gap in the use of marketing communications for the formation of consumer loyalty to leisure activities with the participation of horses by representatives of equestrian recreation business. At the same time, the chain of the influence of the quality of the event on the emotions of tourist is significant, which in turn determines the value of the event and satisfaction with the final loyal attitude (Akhoondnejad, 2018).

3. METHODOLOGY

To identify the potential interest of residents of Almaty and the Almaty region to equestrian tourism, a survey was conducted by sending an online Google Form Application. This application is laborious in the creation process of a questionnaire, but is easy to use with a wide range of tools for creating and sending out a questionnaire. Questions are taken from previous done surveys, and adapted to the current research topic (Bruner, 2013; Weyland, Lattera, 2014; Trang, Lee, 2018). The questionnaire included "What geographical region do you live in?" for territorial observes of respondents because of the study is market-oriented for Almaty and the Almaty region.

A total of 22 prepared questions were included 15 in the questionnaire. Only 59 respondents replied out of 100, but in the analysis of the survey data was carried out using 57. Excel and SPSS were used in data processing and analysis. Initially, the survey data was automatically summarized in the Google Form Application in pie charts and Excel tables. In addition, the convenience of Google Form is in the update possibilities in case of grammar and stylistic errors, and there are other advantages. Then the data was entered into the SPSS program almost manually since the data could not be automatically digitized by the Google Form program.

4. DATA ANALYSIS

During the survey, the answers to the question "Have you heard about equestrian tourism?" were distributed as follows: 32% answered "no", affirmative "yes" gave 68% of

the respondents (Fig. 1). These indicators indicate that the category "equestrian tourism" is familiar to the population.

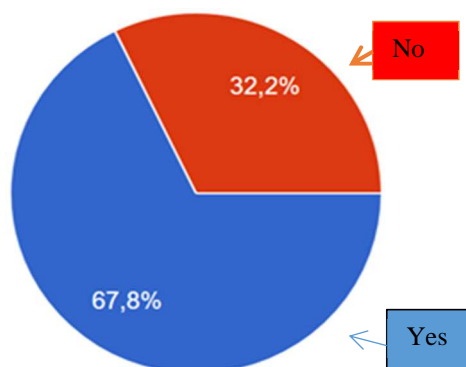


Fig. 1. Answers to the question: "Have you heard about equestrian tourism?"

Note: compiled by the authors based on survey data using the Google Form program.

However, to the question "Are there any proposals for equestrian tourism in Almaty and the Almaty region?" response statistics are disappointing: 39% of respondents answered negatively, 37% found it difficult to answer, and only 24% were aware of such proposals in Almaty and Almaty region (Fig. 2).

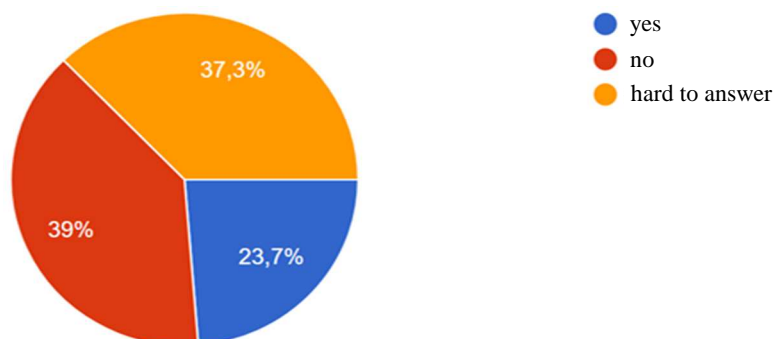


Fig. 2. Answers to the question: "Are there any proposals for equestrian tourism in Almaty and the Almaty region?"

Note: compiled by the authors based on survey data using the Google Form program.

According to the survey, 56% of respondents are interested in equestrian tourism or recreation. Actively involved in this type of recreation is 7%. 20% of respondents are not interested in this rest, which is slightly more difficult to answer the question by 3%.

As a result of using the SPSS program for data analysis, a generalized portrait of respondents was compiled (table 1). The age of the respondents predominantly ranges from 20–29 years and the female gender dominates. In addition, the proportion of single respondents predominantly living in an urban environment with higher education and with an income of less than 100,000 tenge.

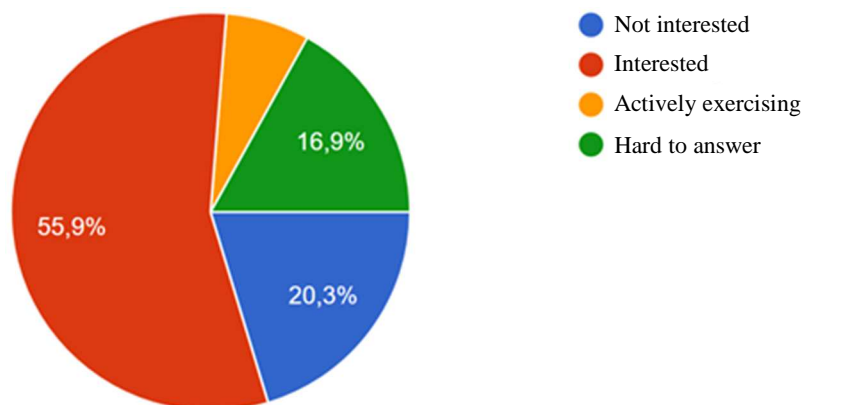


Fig. 3. Answers to the question: “What is your opinion about equestrian tourism or recreation?”

Note: compiled by the authors based on survey data using the Google Form program.

Table 1. Frequency tables

What is your gender?

		Frequency	percentage	Valid percentage	Accrued interest
Valid	Man	15	26,3	26,3	26,3
	Woman	42	73,7	73,7	100,0
	Total	57	100,0	100,0	

How old are you?

		Frequency	percentage	Valid percentage	Accrued interest
Valid	up to 20	12	21,1	21,1	21,1
	20-29	26	45,6	45,6	66,7
	30-39	12	21,1	21,1	87,7
	40-49	7	12,3	12,3	100,0
	Total	57	100,0	100,0	

Table 1 (cont.). Frequency tables

What is your current place of living?					
		Frequency	percentage	Valid percentage	Accrued interest
Валидные	город	41	71,9	71,9	71,9
	село	16	28,1	28,1	100,0
	Всего	57	100,0	100,0	

Your educational level?					
		Frequency	percentage	Valid percentage	Accrued interest
Valid	secondary/secondary special	9	15,8	15,8	15,8
	specialist	2	3,5	3,5	19,3
	bachelor	23	40,4	40,4	59,6
	master	19	33,3	33,3	93,0
	scientific degree	4	7,0	7,0	100,0
	Total	57	100,0	100,0	

What is your marital status?					
		Frequency	percentage	Valid percentage	Accrued interest
Валидные	not married	37	64,9	64,9	64,9
	married	16	28,1	28,1	93,0
	divorced	2	3,5	3,5	96,5
	widow/ widower	2	3,5	3,5	100,0
	Total	57	100,0	100,0	

What is the range of your total monthly income?					
		Frequency	percentage	Valid percentage	Accrued interest
Valid	less than 100 000 tenge	23	40,4	42,6	42,6
	100 000 – 150 000 tenge	5	8,8	9,3	51,9
	151 000 – 200 000 tenge	13	22,8	24,1	75,9
	201 000 – 250 000 tenge	5	8,8	9,3	85,2
	251 000 – 300 000 tenge	3	5,3	5,6	90,7
	more than 350 000 tenge	5	8,8	9,3	100,0
	Total	54	94,7	100,0	
Lost	System	3	5,3		
Total		57	100,0		

Note: compiled by the authors based on survey data using the SPSS program

Also, according to the frequency tables, a little more than half of the respondents (56.1%) considered themselves to be beginner riders, and if it was possible to order equestrian recreation services, they would choose horse riding (31.6%) and horse riding lessons (22.8)

Table 2 contains the main statistical indicators, such as averages, variances and correlations. Cronbach's Alpha coefficient depends on the number of scale of elements, this is an invalid scale.

Table 2. Reliability analysis

Observation summary report		N	%
Observations	Valid	54	94,7
	Exception ^a	3	5,3
	Total	57	100,0

a. Exception entirely based on all variables in the procedure.

Reliability statistics	
Cronbach's Alpha coefficient	N elements
,012	4

Statistics points against the total score				
	Scale average when excluding item	Scale variance when excluding item	Corrected correlation between item and total	Cronbach's alpha to the exclusion of item
What is the range of your total monthly income?	7,9815	5,452	,011	-,004 ^a
How would you rate your riding skills?	8,5556	5,723	,219	-,357 ^a
How would you rate the impact on your weekend plans if the equestrian club was in or near the city?	7,5556	7,195	-,013	,039
Estimate the current state of equestrian tourism in Almaty and Almaty region:	7,7407	8,762	-,171	,233

a. The value is negative because the mean covariance between items is negative. This violates the assumptions of the reliability model, may need to check the coding of the items.

Note: compiled by the authors based on survey data using SPSS software

The survey also characterized consumer needs, such as communication with horses in nature, relaxation and release from stress and tension, the presence of infrastructure.

5. RESULTS AND CONCLUSION

As a result of the study, it was found that more than half (68%) of the survey participants had heard about equestrian tourism, however almost the same time number of respondents had no idea about offers of such services in Almaty and the Almaty region. Thus, the degree of awareness of the respondents about the possibility of obtaining horse-centered leisure services is low. In this regard, in further studies, pay attention to how marketing management is carried out in the field of recreational services in Almaty city and the Almaty region. The Cronbach's Alpha coefficient in this study requires attention to the quality of the questions and requires their further theoretical and practical study with an expansion of the coverage of the respondents.

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PERCEPTION OF BIG MUSIC FESTIVAL BY ITS PARTICIPANTS – CONTEXT OF EVENT SPONSORS' MARKETING ACTIVITIES

Huge marketing events may be used by their sponsors to provide vast masses of people with extraordinary and memorable experiences that have a powerful impact on a brand image. Music festivals have a considerable potential in this respect. This paper demonstrates how participants of *Pol'and'Rock Festival* see this event in the marketing dimension and how they perceive activities performed by sponsors. The authors conducted survey research, the results of which showed that festival participants recognise and accept marketing activities carried out by the event organiser and sponsors. The majority of respondents are aware of the fact that they could not attend concerts free of charge without financial support provided by sponsors. The results of the research not only serve as a basis for further, in-depth scientific analyses, but also enable the festival organiser and its partners to gain knowledge of how to perform marketing activities in an effective manner.

Keywords: marketing, sponsoring, marketing events, big music festivals, *Pol'and'Rock Festival*.

1. INTRODUCTION

In the face of a huge mass of promotional information released on television, on the radio, in the press and on the Internet, contemporary enterprises seek effective solutions to reach both prospective and current customers in a direct way. One of the communication channels allowing for such close and memorable contact with a brand includes marketing events. They have the potential to create an extraordinary experience, use this experience to develop relationships with customers, link the brand to good causes, and build, change, reinforce brand image through association with the qualities of the event (Wood, 2009, p. 253). From among marketing events, those which are particularly useful for building an image of sponsors' brands may include music festivals, which are attended by people from distant locations of a country (and even from abroad) in order to have fun and

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experience strong emotions, while sharing a sense of community with other music enthusiasts. Music festivals have increased rapidly since the 1990s. These events have seen a surge in both size and numbers leading to a more business-oriented festival management. Thus, the knowledge regarding the music festivals deserves attention more explicitly than ever before (Kinnunen, Luonila, Honkanen, 2019).

Nevertheless, scholars' focus on huge music events is incommensurate with the paramount importance they may have to contemporary promotional activities. This observation refers specifically to the Polish literature on the subject. Hence this paper fills that gap to a certain extent – as regards the perception of event sponsors' brands. This publication – based on research conducted by the authors – aims to present how participants of *Pol'and'Rock Festival* see the event in the marketing dimension and how they perceive activities carried out by its sponsors. Empirical material was collected by means of a survey covering participants of *Pol'and'Rock Festival* (Poland's biggest music event and one of the greatest events all around the world).

2. MARKETING EVENT AS SPACE FOR BUILDING SPONSORS' BRAND IMAGE

A marketing event constitutes a promotional undertaking which is a communicative situation created with a view to attaining specific objectives – brought about at a particular place and time by an organiser and its partners/sponsors. The essence of such events is that they are unique and take the most attractive (which in practice means: novel) form (Jaworowicz, Jaworowicz, 201). A marketing event enables brands involved in creating it to appeal to all senses of participants and provide them with experiences they expect to enjoy. To this end, diversified, powerful means of expression are employed – such as lighting, music, stage special effects. A fundamental characteristic of event marketing is developing and strengthening emotional ties between promoted brands and customers. All events constitute an interactive tool for communication between companies and various groups of recipients of marketing activities from their environment (Gębarowski, 2007).

Contemporary marketing events take diversified forms. These include concerts, congresses, exhibitions, sports events, political rallies, happenings, open days and many more. These are not only mass events, but also smaller undertakings (e.g. road shows, presentations of new products) and they are not always held in an open space (like fashion shows, barman shows – so-called flairs). A given event becomes a marketing event when it is accompanied by a spectacular setting creating a 'wow' customer experience. During marketing events, one can observe a classic marketing communication process including such components as: sender, encoding, message, decoding, receiver; but also: response, feedback, noise and context. Such communication happens "here and now" ('live') and appeals to all receivers' senses. Key questions concerning that process are: who says? what does he/she say? through which channel does he/she say? to whom does he/she say? what is the outcome? (Dobek-Ostrowska, 1999; Jaworowicz, Jaworowicz, 2016). During events, the role of senders is occupied by sponsors (together with the organiser), receivers are prospective and current clients, whereas desired response includes, first and foremost, a permanent change in the perception of brands. The most important component of the process are senders, who initiate, plan and manage the event (which includes setting objectives, choosing means designed to attain them, as well as measuring effects obtained).

The scholarly literature defines categories of biggest marketing events that enjoy considerable popularity – both among those who participate in them personally and people watching media coverage. M. Müller developed a multidimensional, point-based classification scheme of large events according to size, distinguishing between major events, mega-events and giga-events (table 1). According to the author, in order to qualify as a major event, an event needs to have an L size on at least one dimension (Müller, 2015). *Pol'and'Rock Festival* meets the requirements which are necessary for this music festival to be categorised as a major event (the distinguishing features of *Pol'and'Rock Festival* are mentioned in the following chapter)³.

Table 1. Scoring matrix for event classes according to size

Size	Visitor attractiveness <i>Number of tickets sold</i>	Mediated reach <i>Value of broadcast rights</i>	Cost <i>Total cost</i>	Transformation <i>Capital investment</i>
XXL (3 points)	> 3 million	> USD 2 billion	> USD 10 billion	> USD 10 billion
XL (2 points)	> 1 million	> USD 1 billion	> USD 5 billion	> USD 5 billion
L (1 point)	> 0.5 million	> USD 0.1 billion	> USD 1 billion	> USD 1 billion
Giga-event	11–12 points total			
Mega-event	7–10 points total			
Major event	1–6 points total			

Source: (Müller, 2015).

Research performed so far has confirmed that the promotion of a brand through the sponsoring of marketing events (including also music festivals) may effectively shape a brand image – increase brand equity and brand involvement (e.g. Close, Finney, Lacey, Sneath, 2006; Martensen, Grønholdt, 2008; Rowley, Williams, 2008; Zarantonello, Schmitt, 2013). However, this requires the understanding of the uniqueness of respective events and the proper management of them. An important issue concerns sponsor-event congruence, because when event and brand are matched on either an image or functional basis the transfer process is enhanced (Gwinner, Eaton, 1999; Hutabarat, Gayatri, 2014). It must be emphasised that music festivals are unique marketing events and – apart from advantages associated with branding – bring additional intangible benefits, particularly fostering an appreciation of a music genre, increasing purchasing of music, and boosting music tourism (Kruger, Saayman, 2019). In addition to cultural influences, music festivals have also economic, social and environmental impacts (Andersson, Armbrecht, Lundberg, 2012). Music festivals exert also substantial influence on local communities. Increasingly those events have been promoted and created as tourist attractions (Andersson, Getz, 2008). Moreover, they may become a familiar and unremarkable – or even valued – part of residents' live (Han, Wang, Zheng, Zhang, 2017).

It must be noted that shaping an image of a brand among customers is only one of the objectives that marketing communication attempts to achieve by means of marketing events. Other important aspects of organising or sponsoring such events include: encouraging engagement among employees involved in sales and promotion (e.g. team

³ The authors of this paper decided to refer to *Pol'and'Rock Festival* as a “big event” instead of a “major event”.

building parties for sales representatives); popularising direct product purchases among customers (tasting, handing samples out, demonstrations, direct sales at booths); forging partnership ties with recipients (e.g. retailers, key wholesalers); consolidation with local communities (e.g. events organised for citizens of a specific regions or city) (Mruk, 2004). Events are thus a multifunctional form of direct communication which in a contemporary world of experience economy should be an important area of companies' marketing activity.

3. POL'AND'ROCK FESTIVAL – ONE OF WORLD'S BIGGEST MUSIC EVENTS

Pol'and'Rock Festival is Poland's biggest music event and one of the greatest events all around the world. It dates back to 1995, when it was organised for the first time by the *Great Orchestra of Christmas Charity Foundation* (Polish: *Fundacja Wielka Orkiestra Świątecznej Pomocy* – WOSP). This is the biggest non-profit, charity organisation in Poland, which supports public healthcare by purchasing state-of-the-art equipment for Polish hospitals and clinics. The leader of this organisation is a well-known journalist and social campaigner – Jerzy Owsiak, also *spiritus movens* of the festival. This event is gratitude towards around 120,000 volunteers of the *Great Orchestra of Christmas Charity*, who every year in January raise funds on the streets of Polish cities and villages to support hospitals treating children and elderly people. The festival is also gratitude to people putting money in special collection boxes (in 2020, over PLN 186 million – an equivalent of around \$50 million – was raised). Between 1995 and 2017, the event was held under the name *Woodstock Station* (in Polish: *Przystanek Woodstock*), which was a reference to the legendary American rock festival and a TV series popular in the 1990's *Northern Exposure* (in Polish: *Przystanek Alaska*). However, for legal reasons (the licence expired), after more than two decades of organising the event, its name had to be changed – in 2018, the name *Pol'and'Rock Festival* came into use. Since 2004, the event has been held in Kostrzyn nad Odrą – a city located at the border between Poland and Germany. Previously, *Woodstock Station* was hosted in Czymanowo, Szczecin-Dąbie, Żary and Lębork. From the very beginning, the festival's motto has been "Love. Friendship. Music".

Preparing *Pol'and'Rock Festival* requires great organisational and financial commitment. Therefore the Great Orchestra of Christmas Charity Foundation relies on support from many entities, including official sponsors and partners – such as media, music, medical, technological and Internet partners. Because of several dozen of sponsors and partners, participation in the festival is for free, and its programme contains many accompanying events.

The cost of organising *Pol'and'Rock Festival* is estimated at approx. PLN 10 million (i.e. around USD 2.65 million). The event is financed with money collected from sponsors and donors. Last editions of the festival (hosted for three days at the beginning of August) were attended by around 750,000 people. In 2019, there were more than 60 artists, who performed on five stages⁴. Throughout its twenty-six editions, the festival has featured almost all famous Polish singers and bands, as well as a lot of big names from abroad (*The Prodigy*, *Ugly Kid Joe*, *Within Temptation*, *Judas Priest*, *Die Toten Hosen*, *Shaggy* and many more). Although the main music genre includes rock, visitors may also enjoy other sounds ranging from folk and reggae, through metal and rap, to classical and electronic

⁴ In 2020, due to the COVID-19 pandemic, *Pol'and'Rock Festival* took an exceptional form – concerts were hosted in a television studio and broadcast on line.

music. Obscure bands go for auditions held by the Foundation, and those which pass, can perform for the festival audience. Apart from music concerts staged as part of the festival, there is also *The Academy of Fine Arts* (Polish: *Akademia Sztuk Przepięknych*), that is to say, meetings with famous people representing the world of politics, media, culture and arts. The festival also enables the promotion (e.g. by workshops) of many non-governmental organisations and other institutions involved in human rights, health, education, personal development, religions, ecology, culture, sport, social integration (during the last edition of the festival, these were: *Amnesty International*, *Greenpeace Poland*, *Polish Humanitarian Action*, *The Office of Commissioner for Human Rights*, *Vegetarians International Voice For Animals – VIVA*, *The State Agency for the Prevention of Alcohol-Related Problems*, and many more).

Pol'and'Rock Festival (formerly *Woodstock Station*) has been the focus of attention of very few researchers. Scholarly publications released so far examine the following aspects of this event: safety of mass event (Kaak, 2016; Moch, 2017; Kuglasz, 2019), recycling of waste (Rochowicz, 2012), manifestations of ritual process and the identity of event community (Lesicki, 2015; Żyła, 2017), the reasons behind participation (Rerek, Dłużewska, 2016), satisfaction and loyalty of participants – in the context of tourist product component (Nowacki, 2014), aesthetic reflections – event as a cultural performance (Węclawiak, 2016). *Woodstock Station* also received a detailed coverage, however, only in general terms (Chmielewska-Szlajfer, 2019). From the perspective of marketing, one should highlight – as an interesting fact – that participants of the festival took part in medical research – concerning the digestive health and abdominal pain (Skonieczna-Żydecka, Maciejewska, Czerwińska-Rogowska, Ryterska et al., 2018; Skonieczna-Żydecka, Stachowska, Maciejewska, Ryterska et al., 2018; Stachowska, Maciejewska, Ryterska, Baszuk et al., 2018). Furthermore, an article on medical security of the event was published (Hajduczenia, Kleszczyński, Braksator, 2011). There was a successful defence of a PhD thesis called “Rock Ethos of Young Generation on Example of Woodstock Station and in Context of Other Activities of Great Orchestra of Christmas Charity Foundation”⁵. Moreover, Polish students wrote many diploma theses relating to the festival (many of them were defended in *the Faculty of Philosophy* and *the Faculty of Management and Social Communication at the Jagiellonian University*). Hence a literature review reveals that publishing the results of the research into the sponsoring of *Pol'and'Rock Festival* fills the existing niche, as there are no scholarly papers that deal with the issue in question.

4. METHODOLOGY AND CHARACTERISTICS OF RESEARCH SAMPLE

An Internet survey was used as a research method⁶. Respondents were chosen purposely, and the basic criterion for inviting a person for the research was their participation in *Pol'and'Rock Festival* several times. The questionnaire comprised closed-ended and semi-open questions, as well as one open-ended question. Respondent profile was described by means of demographics questions. The research covered 770 people who participated in Poland's biggest music festival at least once.

⁵ The PhD thesis was defended in 2012 in the Institute of Cultural Studies at the University of Wrocław. The dissertation was authored by J. Teodorczyk, and her supervisor was prof. dr. hab. M. Kocur.

⁶ The reason behind choosing this method was that respondents were spread over a vast area and that there was the COVID-19 pandemic (and related restrictions on face-to-face meetings).

The following research problem was framed as part of exploration: how *Pol'and'Rock Festival* is perceived by event participants in the context of actions taken with a view to building a sponsors' brand image. In view of such a question – and also based on many years' observations of the co-author of this paper, who participated in the music festival several times – the following hypotheses were put forward:

- H₁: Participants of *Pol'and'Rock Festival* discern and accept marketing activities performed by the organiser and sponsors of the event;
- H₂: Sponsors of *Pol'and'Rock Festival* are seen in a positive light by event participants;
- H₃: *Pol'and'Rock Festival* is considered by its participants to be an integrated product in terms of marketing.

Empirical data was gathered between April and May 2020. Table 2 shows the structure of a researched sample. Out of all respondents, the majority were women, people aged 18-25, those who received secondary education and living in cities with over 100,000 residents and professionally active.

Table 2. Characteristics of research sample

gender	women	67.8%
	men	32.2%
age	under 18 years	3.2%
	18–25 years	50.1%
	26–35 years	34.4%
	36–45 years	9.6%
	46–55 years	1.7%
	56–65 years	0.7%
	over 65 years	0.3%
education	primary school	1.3%
	junior secondary school (<i>gimnazjum</i>)	3.6%
	basic vocational school	4.3%
	secondary school	50.5%
	higher education	40.3%
place of residence	village	18.7%
	city with under 100,000 residents	32.9%
	city with over 100,000 residents	48.4%
professional status	students	10.6%
	undergraduates / postgraduates	11.7%
	undergraduates / postgraduates and employed	16.6%
	employed	56.4%
	unemployed	4.2%
	pensioner	0.5%

Source: own elaboration.

Data obtained from the respondents were aggregated, processed and then analysed. This delivered results based on which the hypotheses were verified and which revealed the assessment of *Pol'and'Rock Festival* participants – concerning both the marketing dimension of the entire event and sponsors' branding activity.

5. RESULTS

As regards the evaluation of aspects attracting researchers' attention, the respondents' experience related to participation in *Pol'and'Rock Festival* was of key importance. The fact that a person being surveyed had observed this event many times was enough to assume that they would give fair answers to questions. Half of the respondents attended the festival four or more times. Those who participated in the event once, two or three times accounted for approx. 16% in each of these groups (table 3).

Table 3. The percentage breakdown of answers to the question: "How many times have you participated in *Pol'and'Rock Festival (Woodstock)*?"

once	16.6%
two times	16.0%
three times	16.9%
four times	8.8%
more than four times	41.7%

Source: own elaboration.

Almost all people – as many as 96.5% – who were surveyed, declared that they would come to *Pol'and'Rock Festival* in the future. Only 0.4% of respondents did not intend to participate in the event, whereas 3.1% had no opinion on that matter (table 4).

Table 4. The percentage breakdown of answers to the question: "Will you attend *Pol'and'Rock Festival* again?"

yes	96.5%
no	0.4%
it is difficult to say	3.1%

Source: own elaboration.

Results obtained showed that overwhelming majority (87.4%) of respondents were aware of marketing activities performed by the festival organiser and sponsors. Whereas no such activity was discerned by only 1.3% of those surveyed, and 11.3% was not able to adopt any position on that issue (table 5).

Table 5. The percentage breakdown of answers to the question: "Are you aware of marketing activities taken by the organiser and sponsors of *Pol'and'Rock Festival*?"

yes	87.4%
no	1.3%
it is difficult to say	11.3%

Source: own elaboration.

Majority (69.9%) of *Pol'and'Rock Festival* participants being surveyed were aware of the fact that without sponsors and activity they carried out during the event, participation in concerts would not be free of charge. Only 7.4% of respondents were convinced that admission to the festival could be possible for free without sponsors being involved, while 22.7% were not able to adopt any position on that issue (table 6). Therefore the first hypothesis – suggesting that participants of festival discern and accept marketing activities performed by the organiser and sponsors of the event – has proved to be correct.

Table 6. The percentage breakdown of answers to the question: “Do you think that *Pol'and'Rock Festival* could be for free in the form known today if sponsors’ activity was no longer carried out?”

yes	7.4%
no	69.9%
it is difficult to say	22.7%

Source: own elaboration.

Survey respondents were asked what marketing activities they experienced during *Pol'and'Rock Festival* (table 7). Most frequently, the answer referred to the limited series of products with a logo of the event (87.0%), competitions/quizzes/games (78.1%) and freebies with the festival logo handed out to visitors (76.1%). Moreover, the following answers were given: the promotion of charitable organisations (67.7%), the availability of footage from the event (56.9%), the samples of sponsors’ products and leaflets handed out to festival goers (47.0% and 46.1% respectively), price discounts on sponsors’ products (24.2%).

Table 7. Marketing activities which the respondents experienced during *Pol'and'Rock Festival*?

availability of limited series of products with the logo of <i>Pol'and'Rock Festival</i>	87.0%
competitions/quizzes/games	78.1%
freebies with the <i>Pol'and'Rock Festival</i> logo handed out to visitors	76.1%
promotion of charitable organisations	67.7%
availability of footage from <i>Pol'and'Rock Festival</i>	56.9%
product samples handed out to festival goers	47.0%
leaflets handed out to festival goers	46.1%
price discounts	24.2%

Source: own elaboration.

The overwhelming majority of respondents (86.2%) were of the opinion that the sponsorship of *Pol'and'Rock Festival* had a positive impact on the image of brands supporting the event. On the other hand, 6.5% of survey respondents did not see such a correlation, whereas 7.3% of those polled had no opinion on that matter (table 8). The second hypothesis – concerning the fact that the sponsors of *Pol'and'Rock Festival* are perceived by festival-goers in a positive way – has proved to be true.

Table 8. The percentage breakdown of answers to the question: “Do you think that the sponsorship of *Pol’and’Rock Festival* has a positive bearing on the image of brands supporting the event?”

yes	86.2%
no	6.5%
it is difficult to say	7.3%

Source: own elaboration.

As many as 81.3% of respondents indicated that zones organised by the sponsors of *Pol’and’Rock Festival* increased the attractiveness of the whole event, while 8.4% of those surveyed answered to the contrary, and every tenth person had no opinion on that matter (table 9).

Table 9. The percentage breakdown of answers to the question: “Do you think that entertainment zones arranged by sponsors of *Pol’and’Rock Festival* increase its attractiveness?”

yes	81.3%
no	8.4%
it is difficult to say	10.3%

Source: own elaboration.

Respondents pointed out that they were keen on attractions provided by sponsors of *Pol’and’Rock Festival* (table 10). Nearly 60% of festival goers always, very often or rather often took part in attractions offered by the owners of various brands.

Table 10. The percentage breakdown of answers to the question: “How often do you take part in attractions provided by sponsors of *Pol’and’Rock Festival* (e.g. *Play*, *Allegro*, *Lidl*, *mBank*, *Mastercard*, *Coca-Cola*, *Red Bull*)?”

always	15.6%
very often	19.6%
rather often	24.3%
neither often nor rarely	24.2%
rather rarely	10.6%
very rarely	4.0%
never	1.7%

Source: own elaboration.

The survey questionnaire included a question which was asked to find out how important selected marketing activities performed by sponsors during the last edition of the event were for respondents. They responded that what they valued most was: the possibility of charging up their mobile phones in the *Play*'s zone, the possibility of purchasing t-shirts and promotional items in *SiemaShop*, reusable cups offered in the *Lech*'s zone. On the other hand, according to festival goers, the following were of marginal relevance: a free Internet

and free calls package offered by *Play* for the duration of the event; the possibility of collecting special stamps with the *Pol'and'Rock Festival* theme (which allowed visitors to send postcards promoting *Lubusz Voivodeship* to any location in Poland free of charge); an opportunity for shooting a photograph with friends with a *RICOH* photo camera (table 11).

Table 11. The percentage breakdown of answers to the question: "How relevant are the following sponsors' activities to you? (1 – the least relevant; 5 – the most relevant)?"

	1	2	3	4	5
possibility of enjoying a "Big Wheel" ride in the <i>Allegro's</i> zone	20.1%	17.8%	24.7%	18.6%	18.8%
charging up the mobile phone in the <i>Play's</i> zone for free	10.7%	11.2%	13.5%	13.8%	50.8%
free internet and free calls package (for four days) offered by <i>Play</i>	29.6%	16.0%	16.9%	12.6%	24.9%
rest and relaxation in the <i>Lidl's</i> zone	15.7%	18.2%	23.6%	22.9%	19.6%
possibility of collecting special stamps with the <i>Pol'and'Rock Festival</i> theme and sending postcards (prepared by <i>Lubusz Voivodeship</i>) for free	29.3%	17.5%	19.5%	16.3%	17.4%
possibility of buying t-shirts and promotional items in <i>SiemaShop</i>	2.3%	4.4%	13.0%	16.7%	63.6%
reusable cups offered in the <i>Lech's</i> zone	4.1%	6.7%	14.7%	16.4%	58.1%
opportunity for shooting a photograph with friends with a <i>RICOH</i> photo camera	23.9%	20.6%	21.1%	16.2%	18.2%
possibility of buying footage recorded by <i>KręciolaTV</i>	17.2%	18.3%	23.6%	16.8%	24.1%

Source: own elaboration.

More than 70% of respondents admitted that *Pol'and'Rock Festival* was an integrated offer. Only 6.4% of those polled responded differently. Every tenth person was not convinced whether the event constituted a coherent product in terms of marketing. Also, every tenth person had no opinion on that matter (table 12). Hence these results corroborate the last hypothesis.

Table 12. The percentage breakdown of answers to the question: "Do you think that *Pol'and'Rock Festival* is an integrated (comprehensive) product in terms of marketing?"

yes	32.7%
rather yes	39.0%
neither 'yes' nor 'no'	11.6%
rather no	2.9%
no	3.5%
it is difficult to say	10.3%

Source: own elaboration.

When answering the open-ended question, respondents pointed out that marketing activities carried out by sponsors during the event were appropriate. Nevertheless, apart

from these opinions, there were also some dissenting voices relating to the *Play's* zone (a mobile network brand), which provided an atmosphere differing from the *Pol'and'Rock Festival's* climate. There was too loud and music emanating from *the Small Stage* and *the Big Stage* was drowned out. Moreover, the music genre offered by *Play* was of a different nature than rock concerts performed on both stages. This created the negative perception of this brand. Some people, when answering the open-ended question, stated that such sponsors' activities made the festival commercial and therefore every year it is attended by more and more "casual" visitors. However, only very few respondents asserted that sponsors and their activity diminished the attractiveness of this event. Marketing activities which are not aggressive, but at the same time are innovatory, are acceptable by people arriving at *Pol'and'Rock Festival* every year. Furthermore, some of those surveyed were of the opinion that sponsors' TV commercials featuring information about the festival or presenting what Jurek Owsiak (the main organiser) was saying had a positive bearing on the perception of the festival and effectively encouraged people to attend it. Moreover, as regards the values it promotes, such as: love, friendship, music, tolerance and concern over the natural environment, the event was seen by respondents in positive terms. They also emphasised that a unique feature of *Pol'and'Rock Festival* was that it could be attended free of charge, but at the same time, was perfectly organised and safe (despite considerable number of people participating in it).

6. CONCLUSIONS

Pol'and'Rock Festival is an exceptional event, which every year is attended by hundreds of thousands of people – not only from Poland, but also from many other countries. Even though the event has considerable potential for the promotion of sponsors' brands, so far, there have been no academic publications presenting the results of research exploring this issue – the results which, in practical terms, could be useful for both the event organiser and sponsors, and from the scientific point of view, could provide an introduction to more in-depth analyses.

This paper releases the results of a survey which covered people participating in *Pol'and'Rock Festival*. An overall score that the event received from respondents was very high, as almost all of them declared their participation in future editions of the festival. This provides evidence that festival goers' expectations regarding entertainment and building social relationships have been met, and demonstrates that they derived deep satisfaction from participating in the event as direct observers.

All research hypotheses have been proved. It was found that participants of *Pol'and'Rock Festival* discern and accept marketing activities performed by the organiser and sponsors. The majority of people arriving at Kostrzyn nad Odrą are aware of the fact that admission to concerts would not be free if there was no support from brands using – for their own marketing purposes – the area where hundreds of thousands of people enjoy their time. Furthermore, respondents declared that sponsors were seen by festival goers in positive terms, and the event itself was an integrated (coherent) product from the marketing point of view. According to respondents, in most cases (during the last edition the exception to the rule was *Play*), marketing activity was tailored to the festival climate – e.g. *Lidl*, a chain store brand, sold in its "field" shop, which was erected for the duration of the festival, products suitable for the needs of concert audience at attractive prices. Respondents noticed many marketing activities that were taken both by the organiser alone (e.g. the sale

of products with the logo of the event) and its partners (e.g. product samples handed out to festival goers). Moreover, according to survey respondents, offerings provided in sponsors' zones (among other things, the possibility of charging up their mobile phones for free) are of relevance to them and increase the attractiveness of *Pol'and'Rock Festival*. Such zones have a powerful effect on a sponsors' brand image, as they offer entertainment, are a place of rest and relaxation and enable festival goers to integrate with each other. Every person can enter sponsors' zones free of charge and spend time before concerts, which start in the afternoon.

Results obtained by the authors revealed that the organiser of *Pol'and'Rock Festival* managed to create an event which has the broad masses of loyal followers. An exceptional atmosphere of the festival stems from its professional management and a perfect combination of non-commercial aspects (the form of gratitude to volunteers and donors of *the Great Orchestra of Christmas Charity Foundation*, free admission) and an indispensable commercial dimension (the activity of many sponsors which provide financial support for the organisation of such a huge event). The research results showed – as a key managerial implication – a need for sponsors' activities being continuously adapted to the exceptional festival atmosphere encapsulated in a slogan "Love. Friendship. Music". As already mentioned, the survey dealt with the issue which has been given no coverage in scholarly literature yet. Hence the research was innovatory, and therefore general in nature. In further explorations, researchers should – taking into consideration bigger samples – examine in detail the determinants of the event sponsorship (inter alia, investigate the congruence of the festival and sponsors).

Ever-changing needs of contemporary customers, who to a greater and greater extent expect brands to take active promotional activities, appealing strongly to all their senses, induce companies to use experience marketing more broadly. In this context, special significance is assumed by the sponsorship of big concerts (such as *Pol'and'Rock Festival*), which gives an opportunity for reaching many people directly – amidst the atmosphere of entertainment, with deep emotional commitment. By performing diversified activities in the place where such events are organised, sponsors seize an excellent opportunity to deliver meaningful and memorable experiences. It is important, however, that marketing activities taken are innovatory, on the one hand, and correspond to the nature of the festival (an open-air event, the atmosphere of fun and peace, rock music), on the other. As a matter of fact, sponsors' activity not only supports specific brands, but also contributes to creating an image of *Pol'and'Rock Festival* – one of the world's biggest music festivals.

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CONDITIONS FOR USE OF LIQUID FUELS IN STATE ECONOMIC SYSTEMS

This paper aims at structuring and popularisation of knowledge concerning the functions of the Polish market of liquid fuels in terms of interest of small and medium-sized enterprises. It should provide a measurable value to all concerned parties by streamlining and increasing efficiency of the decisions related to an assessment and a selection of liquid fuel suppliers. The purpose of the study is to determine the attributes of the analysed market. These question, being the essence of the research problem, may be further developed in detailed questions regarding the subsystems of liquid fuels supply, production and distribution. The goal of the study will be fulfilled by determining the current knowledge in terms of the described problem, specifying the conditions for operation of the global oil market, characterising the national system of liquid fuels and formulating the conclusions. The research method involves analysis of available statistical reports. The scope of presented data will regard the period from 2010 to 2018 and the global and Polish market of liquid fuels. The analysis will include basic balance sheet values, i.e. documented assets, supply, demand, trade and prices. Additionally, the objective and subjective structure of the described market will be analysed. Individual values will be assessed using basic statistical analysis measures.

Keywords: market, energy, Poland.

1. INTRODUCTION

In the recent years, globalisation processes, as well as political, economic, social and technological integration determine most transformations in contemporary organisations environment. Enterprises in many industries urge to adjust their activities to the constantly growing market requirements. Mechanisms that boost competitiveness in all functional aspects are gaining popularity. Activities taken in this field focus on increasing cost-effectiveness, improving quality of products and services and accelerating individual operations. It is worth noting that over the last few years, the share of liquid fuels costs has increased in the global cost structure of Polish enterprises. It is mainly linked to the growing importance of road transport in business activity and high prices of transport fuels. Consequently, major requirements of the enterprises include reliability of liquid fuel supply and guarantee of acceptable prices.

This paper aims at structuring and popularisation of knowledge concerning the functions of the Polish market of liquid fuels in terms of interest of small and medium enterprises. It

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should provide a measurable value to all concerned parties by streamlining and increasing efficiency of the decisions related to assessment and selection of liquid fuel suppliers. The purpose of the study is to determine the attributes of the analysed market. These question, being the essence of the research problem may be further developed in detailed questions regarding the subsystems of liquid fuels supply, production and distribution.

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2. THEORETICAL BACKGROUND

The term of „energy” is broadly used, but it is not easy to describe using the language of theory (it is a primitive notion). It can be analysed in different aspects. In physics, it is a scalar physical value denoted in work units that determines the capability of an object or a system of objects to perform work related with transition from one physical state to another (Dubisz, ed., 2003).

Energy cannot be produced *ex nihilo*, it can be delivered in various ways, using energy carriers. In the literature, the concept of „energy carrier” refers to a product that participates directly and/or indirectly in the processes of transmitting various forms of energy from its sources to the usage sphere (Górzyński, 2017). Assuming the energy transformation criterion, these energy carriers are classified as primary (natural form) and secondary (derivative, processed). Considering their renewability in the natural environment, we can distinguish renewable and non-renewable energy carriers. In terms of physical state, energy carriers divide into solid fuels, liquid fuels, gaseous fuels and electric energy.

Crude oil, as a liquid fuel, is critical for global economy. It is a natural mixture of liquid hydrocarbon and non-hydrocarbon compounds. Its basic mass, i.e. 80 to 95% are liquid compounds with dissolved paraffin and naphthenes. Beside that, it contains resins, asphaltenes, sulphur compounds, nitrogen compounds and naphthenic acids (Grzywa, Molenda, 2000). It is worth mentioning that no general petroleum classification exists, as its chemical properties differ and depend from geographical location of oil accumulation or its depth. Knowing these features is essential when it comes to determining the method and directions for use of this resource.

Almost entire oil is used by petroleum refineries. In this regard, the demand for oil is secondary and depends on the demand for petroleum products. These products are widely used as fuel for combustion engines and to a lesser extent, for starting up steam boilers and heating or process purposes. Quality of petroleum products is assessed based on parameters, i.e. calorific value, combustion heat, density, ignition temperature, boiling and setting point, viscosity, sulphur content and water content (*Zasady metodyczne...*, 2006).

In the literature, the term „system” is widely used and refers to phenomena, items and issues that are perceived and described in a comprehensive way. Depending on the purpose and type of considered system, there are many different definitions. In most general terms,

it is a separate part of reality, that is an arrangement of interrelated elements with specific structure and forms an ordered entirety following accepted rules (Dubisz, ed., 2003).

The system of liquid fuels is a subsystem of state economy. It includes any business activity conducted by specialised entities, in material production and services segments, involving available productive powers to provide access to liquid fuels to all parties concerned, in proper quantities and quality, in a specific location and time, and at acceptable cost. The most general division of liquid fuels system is based on the institutional criterion, fuel stream trading phases and fuel types. It is commonly used in the literature.

Assuming the institutional criterion, liquid fuels subsystems would be distinguished in micro approach (intra-organisational system, covers a subsystem operating within a given organisational unit), meta approach (inter-organisational system, reaching beyond the boundaries of individual enterprises, involves cooperation of several entities in trading a given type of fuel) and macro approach (complex system with general economic character, composed of multiple correlated meta and micro energy systems).

Considering the phase criterion, liquid fuel supply, production and distribution subsystems can be distinguished.

Finally, classification by fuel type distinguishes energy products subsystem (including petrol, kerosene, oil and gas) and non-energy products subsystem. General scheme of liquid fuels system is presented in Fig. 1.

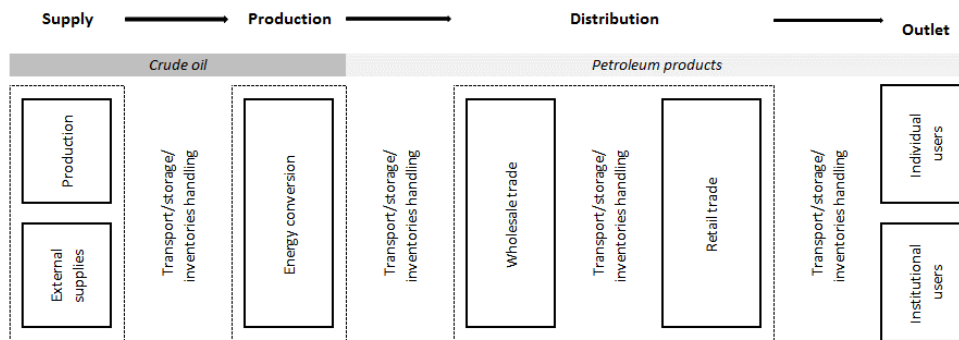


Fig. 1. Liquid fuels system scheme

Source: own work.

3. GLOBAL CONDITIONS

In 2018, documented global petroleum inventories reached 1,729.7 billion barrels. As compared to 2010, it was 5.4% more (88.2 billion barrels). High oil inventory increase was recorded in Iraq, Saudi Arabia and USA (91.6 billion barrels in total) (*Bp Statistical Review...*, 2019). As at the end of the analysed period (2018), inventory coverage index, based on the current demand, was more than 18 years.

In the analysed period, oil accumulations were highly concentrated in terms of entities and geography (shares of OPEC in 2018 reached 71.8% and the Middle East 48.3%) (*Bp Statistical Review...*, 2019). It must be pointed out that significant petroleum inventories were located in regions with unstable social and political situation (i.e. South America, Middle East, West Africa). Oil resources kept by the largest global consumers of liquid

fuels (USA, China, EU and Japan) were limited in relation to their demand. The global balance of petroleum inventories is presented in Tables 1 and 2.

Table 1. Global petroleum inventories balance in the period from 2010 to 2018

Type	2010	2015	2016	2017	2018	2018/2017		2018/2010	
[Thousand million barrels]									
Inventories	1641	1684	1691	1727	1729	2.2	0.1%	88.2	5.4%
[Million barrels per day]									
Supply	83.2	91.5	91.8	92.5	94.7	2.2	2.4%	11.5	13.8%
Demand	88.7	95.0	96.7	98.4	99.8	1.4	1.5%	11.1	12.5%
Import/export	55.3	62.5	66.5	69.6	71.3	1.7	2.5%	15.9	28.9%

Source: individual work based on: (*Bp Statistical Review...*, 2019, *World Oil...*, 2019).

Table 2. Global petroleum balance structure in 2018

No.	Inventories	%	Supply	%	Demand	%	Import	%	Export	%
1	OPEC	71.8	OPEC	41.5	OECD	47.5	Europe	21.2	OPEC	34.5
2	OECD	14.7	OECD	27.8	USA	20.5	China	15.5	Russia	12.8
3	Russia	6.1	USA	16.2	China	13.5	USA	13.9	USA	10.0
4	USA	3.5	Russia	12.1	EU	13.3	India	7.3	Canada	6.3
5	EU	0.3	EU	1.6	India	5.2	Japan	5.5	Europe	4.8

Source: individual work based on: (*Bp Statistical Review...*, 2019, *World Oil...*, 2019).

In 2018, global daily petroleum output reached 94.7 billion barrels. As compared to 2010, it was 13.8% more (11.5 billion barrels). Over 67% of that increase in petroleum supply was recorded in the USA. The major global oil producer was OPEC (41.5% in 2018). Petroleum output in the USA and Russia was also significant (28.3% in total) (*Bp Statistical Review...*, 2019).

Global daily usage of petroleum in 2018 reached 99.8 million barrels, which was a 13.8% increase (11.5 million barrels). In general, the quantitative increase in fuel demand could be attributed to countries not belonging to the OECD. The demand coverage index in that period was 94.0%. In the global usage structure of particular groups of products, the share of Middle Distillates amounted to 36.1%, Light Distillates 36.9% and Fuel Oil 3.9% (*Bp Statistical Review...*, 2019).

In the recent period, petroleum industry was concentrated in highly developed countries, with high growth potential. It developed most rapidly in the USA, EU, China, Russia, India, Japan and South Korea. At the end of the analysed period, total production in those countries reached around 70.2% of the global output. It means that the major petroleum suppliers to global markets act only as exporters.

The discrepancy between the geographic location of oil accumulations and areas of highest petroleum consumption, determined the directions in global trade in the period from 2010 to 2018. At the end of the analysed period, average daily import of petroleum, in a global scale, reached 71.3 million barrels, which was a 28.9% increase in relation to 2010

(15.9 million barrels). In the recent period, the largest petroleum buyers were European countries, China, USA, India and Japan (63.4% in total in 2018). It is worth noting that the degree of diversification of supplies to individual countries differed. Considering the export directions, the largest amounts of petroleum were supplied by the OPEC countries (34.5% in 2018) and Russia (12.8%) (*Bp Statistical Review...*, 2019).

Petroleum prices were quoted on global commodities markets. The quotations concerned not only selected types of products - they serve as a reference for other items. The analysed period marked a highly dynamic increase and uncertainty in petroleum prices. The highest prices were quoted in the period from 2001 to 2014. It was said to be caused by two factors. The first was a fundamental factor, i.e. the relations between the demand for petroleum and its supply. The second was market speculation. It is worth noting that no stable trends in yearly price changes were recorded in the recent period. Additionally, the discrepancy between oil price in the USA and other regions of the world has consolidated (Kaliski, Jedynak, Białek, 2013). Oil prices in the analysed period are presented in Fig. 2.

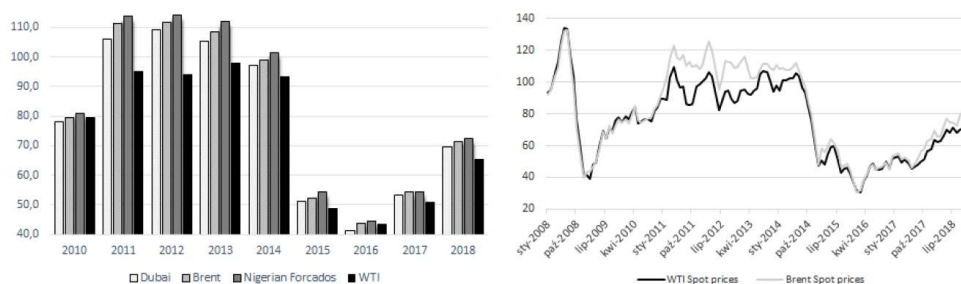


Fig. 2. Global oil prices from 2008 to 2018 and daily oil prices - Brent Spot Prices from 2015 to 2018 [USD per barrel]

Source: individual work based on: (*Bp Statistical Review...*, 2019, *Petroleum and Other Liquid...*, access on 10 Oct 2018).

4. NATIONAL SUPPLY AND PRODUCTION SUBSYSTEM

At the end of the analysed period, balance petroleum inventories in Poland were low, amounting to 23.5 million tonnes. In 2017, national fuel demand coverage with documented inventories was 0.94 years.

Most significant in the recent period were petroleum inventories located in the Polish Lowlands region (65.7% of total inventories in 2018) and in the Baltic region (29.7%) (*Bilans zasobów...*, 2011–2017). Table 3 presents changes in the Polish petroleum inventories balance.

At the end of the analysed period, oil output in Poland reached 0.937 million tonnes. The inventories coverage index, considering the demand scale, was 23.6 years in 2017. Petroleum production structure was largely determined by oil supply from the Polish Lowlands (75.6% in 2018) and the Baltic region (20.5%) (*Bilans zasobów...*, 2011–2017). Inland oil production was mainly conducted by PGNiG S.A. (71.88% of share capital held by the State Treasury), branches in Sanok and Zielona Góra (*Raport zintegrowany...*, 2019). Offshore production activities were performed by Lotos Petrobaltic S.A., an entity of the Lotos S.A. Group (53.19% of share capital held by the State Treasury) (*Zintegrowany raport...*, 2018).

Table 3. National oil balance in the period from 2008 to 2018

Type	2010	2015	2016	2017	2018	2017/2016		2017/2010	
[Million tonnes]									
Inventories	25.2	22.8	22.0	23.6	23.5	1.6	7.3%	-1.6	-6.3%
[Million tonnes per year]									
Supply	0.667	0.898	0.957	0.939	0.937	0.0	0.0%	0.3	43%
Demand	22.8	26.1	25.8	25.1	no data available	-0.7	-2.7%	2.3	10%
Import	22.7	26.5	24.6	24.6	no data available	0.0	0.0%	1.9	8.4%
Export	0.2	0.3	0.2	0.2	no data available	0.0	0.0%	0.0	0.0%

Source: individual work based on: (*Bilans zasobów...*, 2011-2017, *Gospodarka...*, 2011-2018).

In Poland, petroleum supply covers only a small portion of documented demand (coverage index amounting to 3.9% in 2017), which results in high import dependency. The current import directions were established in the 1970s. In the recent period, both inland and offshore infrastructure was used for these purposes. The inland infrastructure was the Polish section of the “Friendship” pipeline, controlled by PERN S.A. (owned by the State Treasury). It was divided into two parts: eastern, from Adamów to Płock (yearly throughput of 43 million tonnes) and western, from Płock to Schwedt (yearly throughput of 27 million tonnes). Additionally, the reversal flow Pomeranian Pipeline allowed two-way transfer of oil – from Płock to Gdańsk (yearly throughput of 20 million tonnes) and from Gdańsk to Płock (yearly throughput of 30 million tonnes) (PERN SA, access on 10 Oct 2019). The offshore infrastructure, controlled by Naftoport Sp. z o.o. (owned by PERN S.A.), included marine transshipment terminal at the Northern Port of Gdańsk. It was composed of four transshipment facilities suitable for handling liquid fuels (total yearly capacity of 34 million tonnes) (Naftoport SA, access on 10 Oct 2019). The location of logistic infrastructure used for liquid fuels in Poland is presented in Fig. 3.

In the analysed period, oil supplied from Russia (REBCO) dominated in the Polish petroleum import structure. In 2018 its share amounted to 76% of total supplies. The rest of imported petroleum was delivered mainly by the Middle East countries (*Paliwa ciekłe*, access on 10 Oct 2019). The predominance of supplies from the east was determined by long-term contracts, prices, Polish refineries’ technological compatibility with REBCO and benefits of using long-range pipelines (*Przemysł i handel...*, 2019).

In 2017, the demand for oil reached 25.1 million tonnes. Compared to the base year, it was a 10.1% increase (2.3 million tonnes). It is worth noting that consumption of transport fuels increased in the period from 2010 to 2017 (in particular – LPG 8%, motor gasoline 6%, diesel fuel 37%) (*Gospodarka...*, 2011–2018). The percentage of diesel fuel in the Polish liquid fuels usage rates of 2018 was 60.7%. For motor gasoline it was 18.2%, for LPG 14.4% and for light heating oil 2.3% (*Przemysł i handel...*, 2019). A major driving force behind that increase was the lasting economic growth, increasing number of vehicles participating in road traffic and significant reduction of grey market. The balance of liquid fuels in Poland is presented in Table 4.

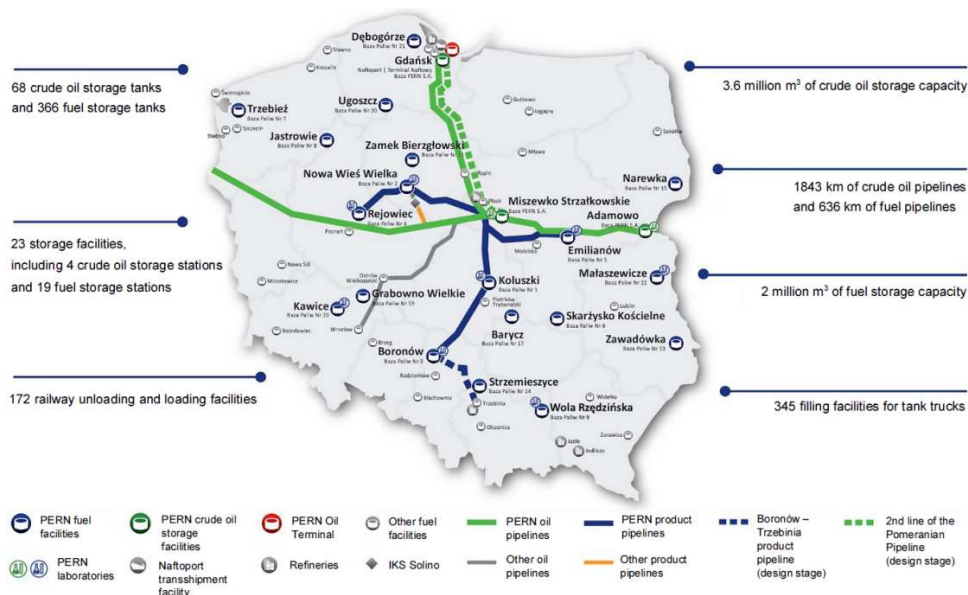


Fig. 3. Liquid fuels logistic infrastructure in Poland, operated by PERN S.A.

Source: (PERN SA, access on 10 Oct 2019).

Table 4. LPG balance in Poland in the period from 2010 to 2017 [thousand tonnes]

Fuel	Type	2010	2015	2016	2017	2018/2017	2018/2008	2018/2008	2018/2008
LPG	Supply	424	575	601	545	-56	-9%	121	29%
	Total usage	2395	2420	2525	2588	63	2%	193	8%
	Import	1982	2035	2196	2488	292	13%	506	26%
	Export	60	196	259	448	189	73%	388	647%
Motor gasoline	Supply	4210	4155	4178	4159	-19	0%	-51	-1%
	Total usage	4141	3777	3994	4384	390	10%	243	6%
	Import	415	363	345	481	136	39%	66	16%
	Export	463	762	509	221	-288	-57%	-242	-52%
Diesel fuel	Supply	9742	11814	11325	11678	353	3%	1936	20%
	Total usage	12006	12084	13791	16436	2645	19%	4430	37%
	Import	2355	2050	3779	5209	1430	38%	2854	121%
	Export	43	1790	1087	239	-848	-78%	196	456%
Light heating oil	Supply	1147	486	536	726	190	35%	-421	-37%
	Total usage	1145	658	639	679	40	6%	-466	-41%
	Import	12	11	2	0	-2	-100%	-12	-100%
	Export	0	0	0	0	0	-	0	-

Source: individual work based on: (Gospodarka..., 2011–2018).

In the analysed period, oil refining industry was mainly concentrated in refineries owned by PKN Orlen S.A. (27.52% of share capital held by the State Treasury) (plants in Płock, Trzebinia and Jedlicze in Poland, foreign refineries in Lithuania and Czech Republic) and the Lotos S.A. group (Gdańsk refinery). Total yearly production capacity of the PKN Orlen S.A. group in 2018 reached 35.2 million tonnes (16.3 million tonnes produced in Poland alone) (*Raport zintegrowany...*, 2018). In the Lotos S.A. group it was 10.5 million tonnes a year (*Zintegrowany raport...*, 2018). It must be mentioned that almost entire technical capacity of Polish refineries has been used by the end of the analysed period. In 2018, production of liquid fuels in Poland was dominated by diesel fuel with the share of 56%, followed by motor gasoline reaching 22% (*Przemysł i handel...*, 2019). In 2017, LPG, motor gasoline, diesel fuel and light heating oil delivered by Polish producers satisfied the demand in 21.0%, 94.8%, 71% and 106.9%, respectively (*Gospodarka...*, 2011–2018).

Fuel shortages on the national market were supplemented with imported fuel. Import to Poland in 2017 covered 96.1% of used LPG, 10.9% of motor gasoline and 31.7% of diesel fuel (*Gospodarka...*, 2011–2018). The share of diesel fuel in the type structure of fuels imported in 2018 was 55.1%, while for LPG it was 36.8%, for motor gasoline 6.1% and for light heating oil only 1.0%. Russia was the major importer, with the rate of 45.1% in 2018. Import from Germany reached 22.9%, from Lithuania 14.3% and from Belarus 12.0%. Motor gasoline was mainly imported from Slovakia – 38%, Germany 38%, Hungary 9.0% and Czech Republic 8.0% (*Przemysł i handel...*, 2019).

At the end of the analysed period liquid fuels introduced to the Polish market fulfilled all quality standards and ensured reliable operation of vehicles. It was confirmed by the tests conducted by the Trade Inspection. For instance, in 2017 Polish Energy Regulatory Office (URE) received 69 reports concerning entities in which inspections revealed violation of valid legal regulations (*Paliwa ciekłe*, access on 10 Oct 2019).

It is worth noting that major amount of motor gasoline and diesel fuel produced in Poland for the local market in the analysed period was mixed with biocomponents in order to execute the National Indicative Target (in 2018 it was 7.5%) (Regulation of the Council..., 23 July 2013).

5. NATIONAL DISTRIBUTION SUBSYSTEM

In the period from 2010 to 2018, wholesale of liquid fuels in Poland relied on services of companies buying fuels produced in the country or abroad and reselling them to subsequent intermediaries. According to the Polish Energy Regulatory Office, the most frequent model was participation of at least two entities in supply chain before the end user. The retail of transport fuels was conducted both at petrol stations and liquefied gas stations. Liquid fuels were transported to the wholesale and retail markets using restricted sections of product pipelines, supported by storage and handling infrastructure as well as rail and road transport. Services in transfer and storage of liquid fuels were provided by PERN S.A. Additionally, an important role on the market of logistic services belonged to specialised entities operating under the brands of PKN Orlen S.A. and Lotos S.A.

At the end of the analysed period, 9448 filling stations selling at least one type of fuel operated in Poland. Products sold by these entities were mainly motor gasoline, diesel fuel and LPG (in 2018 sales of these three types of fuel was 66.0% of all sales, considering only motor gasoline and diesel fuel – 83.3%, LPG 12.6%). Almost half of the diesel fuel sales to end users took place outside commercial filling stations and were carried out at industrial

and container filling stations belonging to fuel recipients (*Paliwa ciekłe*, access on 10 Oct 2019). Considering the geographical structure of sales at filling stations in 2018, 5 regions of Poland surpassed total sales in the rest of the country. These were: Mazovian Voivodeship (15.0%), Silesian Voivodeship (12%), Lower Silesian Voivodeship (10%), Greater Poland Voivodeship (9%) and Lesser Poland Voivodeship (8%). Considering the capital criterion, 29.4% of filling stations belonged to Polish companies, 19.5% were run by international corporations, while independent operators owned 48.7% (*Przemysł i handel...*, 2019). As regards particular ownership structure, the highest number of stations belonged to PKN Orlen S.A. (23.0%). Lotos S.A. owned 6.4% of stations. The most significant foreign corporations were BP Europa SE - Polish branch (running 7.1% of filling stations), Shell Polska Sp. z o.o. (5.4%) and Circle K Polska Sp. z o.o. (4.5%). In the analysed period, the number of filling stations belonging to retail chains increased (in 2018 their proportion reached 2.5%). The three major retail chains were: Auchan Polska Sp. z o.o., Tesco Polska Sp. z o.o., Carrefour Polska Sp. z o.o. with the total of 95 out of all 192 filling stations run by chain stores (*Paliwa ciekłe*, access on 10 Oct 2019). In the segment of independent chain filling stations, the highest growth rates were recorded by Moya, Huzar and Aviva (*Przemysł i handel...*, 2019).

The filling stations market shifted in the analysed period towards the shopping and services centre model. It means that petrol stations offered not only the possibility to fill up the car, but also to do basic shopping, take a rest during the travel, use financial services, have a snack or perform simple maintenance or repair. Major determining factors were large-scale road investments, changes in location, acquisition by Polish corporations and independent networks. Poland's Sunday trading ban also largely contributed to the dynamic growth of these facilities.

At the end of the analysed period, Polish corporations still operated under four brands (PKN Orlen S.A. – Orlen, Bliska, Lotos S.A. – Lotos, Lotos Optima). It must be explained at this point that recent policy of Polish fuel corporations shifted towards unification of brands and offering a new standard of customer experience.

The offer of filling stations included normal and premium fuels. Sales of premium fuels, under own names given by individual operators, were mainly driven by fuel corporations. A small part of that market was also supplied by independent vendors. In the analysed period, sales of premium quality fuels was largely affected by their prices and season of the year. At the end of the described period, their share (both for motor gasoline and diesel fuel) was 7.0% in total sales (*Przemysł i handel...*, 2019).

Non-price factors have been gaining significance in the recent times. Customer loyalty programmes have appeared in the offer of filling stations. Loyalty cards have been addressed to various groups of enterprises. Beside cashless payment possibility, they offered many other functionalities, from mobile application, collective invoicing and deferred payment to highway toll payment. These programmes also enabled cashless payment at filling stations abroad.

In the analysed period both wholesale and retail prices of fuel were high. As in the previous years (2013 to 2016), at the end of the analysed period, prices of standard transport fuel maintained at the level of PLN 5 a litre. Most frequently, the price of motor gasoline exceeded the price of diesel fuel. These relation reversed towards the end of the analysed period. In comparison with the EU prices, the average price of BS95 in Poland was around 87.0%, while ON (EN590) 93% (*Przemysł i handel...*, 2019). Variability in prices of selected liquid fuels in Poland in the period from 2006 to 2018 are presented in Figures 3.

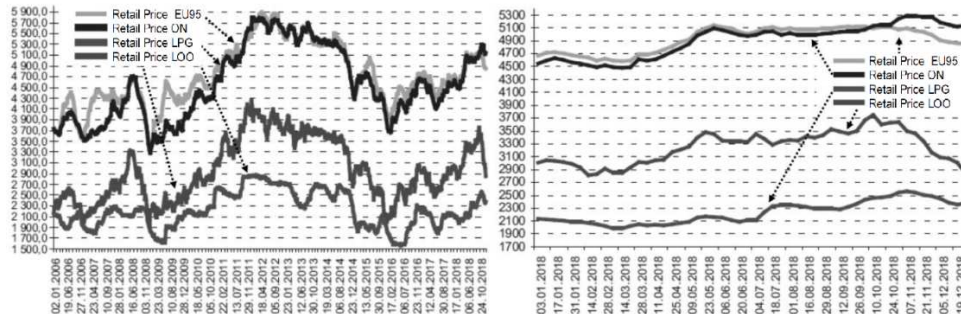


Fig. 4. Liquid fuel prices in Poland in the period from 2006 to 2018 [PLN/1000 litre]

Source: (*Przemysł i handel...*, 2019).

At the end of the analysed period, prices of liquid fuels in Poland were not adjusted by the Energy Regulatory Office. They were set according to the market rules, based on the so-called import parity, major components of which were prices of crude oil and ready-to-use fuels, US dollar exchange rate and tax rates in Poland. The price structure contained the following fixed components: excise (in 2018 – 24% of price on average for diesel fuel, 31% for motor gasoline and 17% for LPG) and fuel surcharge (BS 6%, ON 3%, LPG 4%), as well as variable components, including VAT rate (19%), margin (BS 3%, ON 2%, LPG 9%) and net price (BS 44%, ON 49%, LPG 51%). Retail price determinants in different regions of Poland remained unchanged in the recent period. Of course, documented demand and the scale of competition between operators were crucial (*Przemysł i Handel naftowy 2018...*, 2019). The regions where fuel prices reached the highest levels at the end of the analysed period were: Mazovian, Lesser Poland, Subcarpathian and West Pomeranian Voivodeships (*Przemysł i handel...*, 2019).

6. CONCLUSION

High degree of geographic and subject concentration of oil accumulations and reported fuel demands is observed on the global petroleum market. There are large geographical distances between the site of production and the place of highest consumption. Significant petroleum resources are located in areas with reduced social and political stability, which affects the safety of supplies. However, global output and consumption levels remain stable. The largest petroleum producers restrict supply. In developing countries, a close relation between the economic growth and increasing fuel demand is observed. Highly industrialised countries are characterised by stable usage of individual fuels. There are large fluctuations in oil prices on global commodities markets, which results in uncertainty. Non-economic factors are among the major price determinants. Despite this situation, the degree of geographical and subjective diversification of petroleum supplies to individual countries is varied.

In Poland, the capacity of documented oil inventories is limited in relation to the reported demand. It results in a strong dependency from import of petroleum. Oil supply is still at risk in Poland, due to a strong relationship with a single unpredictable producer. It should be noted that Poland has a well-developed logistic infrastructure, that enables transport of oil from multiple directions. The Polish petroleum sector is dominated by local

entities. However, limitations in supply of selected products are not uncommon. Liquid fuels are delivered to the wholesale and retail market using a limited transfer network, with significant participation of rail and road transports and support of storage facilities. The retail market of liquid fuels is quite flexible. Strong market competition of Polish and foreign entities is reflected in the prices and non-price offerings. The prices of individual types of fuel are still high in Poland and they are set according to the market rules. Additional price determinants include local demands and scale of competition between suppliers.

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PRINCIPLES OF FORMATION OF E-NETWORK KNOWLEDGE BASES IN THE FORMAT OF OPERATIONALLY STRUCTURED SCENARIOS

A brief analysis of the principles of formation of modern network knowledge bases is given. The principles of management of information sources accompanying the process of formation of network knowledge bases are described. An example of existing systems of information and communication technologies for building and managing knowledge bases in the e-network is given. The tasks related to the functioning of information and communication technologies from the standpoint of the formation of modern e-network knowledge bases are set. The importance of the ontological approach to the design of network knowledge bases is determined. The approach and principles of formation of e-network knowledge base in the format of operationally structured scenarios are described, based on ontological aspects of their construction. The general graph-structure of the operationally-structured scenario of the knowledge base is given. Examples of their formation and visualization in the environment of the Web-software complex "Knowledge Baseline Script Editor" are given. Recommendations are given regarding the scope of use of the Web-software complex "Knowledge Baseline Script Editor".

Keywords: knowledge base, knowledge base script, script editor, operating structure.

1. INTRODUCTION

At the present stage of development of information technologies, the tendency of transfer of the sphere of the organization of process of information interaction in the environment of an e-network is formed. In such conditions, the key points are the form of organization and access to information sources of knowledge, which are placed in appropriate environments and can be accessed from anywhere and at any time.

Currently, in the development of network management systems for information sources that accompany the process of forming knowledge bases, the problematic task is not the software aspect, but the task of finding, formulating, structuring and presenting data from which knowledge is further formed.

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2. RESEARCH ANALYSIS AND PROBLEM STATEMENT

Existing systems of information and communication technologies for building and managing knowledge bases in the e-network, have a broad theoretical and practical platform for research and use (Palagin, Kryvy, Petrenko, 2012; Boland, Singh, Salipante et al., 2001; Dalkir, Liebowitz, 2011; Krótkiewicz, Wojtkiewicz, 2009; Krótkiewicz, Wojtkiewicz, 2005; Nirenburg, Raskin, 2004; (Pugh, Prusak, 2013; O'Leary, 2016; Bera, Burton-Jones, Wand., 2011; Kalna-Dubinyuk, Rogoza, Samsonova et al., 2019; Demyanenko, Kalnoy, Strizhak, 2013; Kalnoy, 2019; Kalnoy, 2017). Recent theoretical research and practical results in this area are based on the construction of ontological models of knowledge bases and various ICTs based on them, such as: "Linguistic corpus", Exalead, Protégé, KAON2, Sesame, IBM SHER, Joseki Jena, Oracle Spatial, Krótkiewicz & Wojtkiewicz, Palagin et al., O'Leary, and others. The use of such ICTs provides the construction of a network environment in which the mode of e-remote interaction between all its participants is supported. E-distance interaction is a network virtual environment in which all its participants carry out mainly individualized interaction both asynchronously and synchronously in time, mainly and in principle using electronic transport systems for the supply of information objects. One of the tasks of activity in this environment is to provide conditions for the effective use of information resources by all its participants. For this purpose means of formalization of various information sources of formation of knowledge taking into account specificity of process of e-network interaction are created.

The use of ICT software and information takes into account the fact that the volume and diversity of data and messages, according to different profiles of knowledge, is now so voluminous that there is a need to classify them in terms of belonging to the subject area or areas of interest of its participants. from the tasks they solve. Therefore, the use of these ICT software and information tools is focused on solving the following tasks:

- ensuring the possibility of operative organization of access to information sources of knowledge formation related to one subject area or areas of activity united by similar interests;
- support for the interaction of all participants within a non-single set of subject areas with the possibility of expanding this set;
- providing an opportunity to expand the list of sources and consumers of diverse information sources of knowledge formation, taking into account the results of all its participants;
- restricting access to information resources within a specific subject area or area of interest in connection with the possibility of solving the previous problem;
- ensuring the possibility of using information resources of several subject areas;
- ensuring the possibility of operative search of the source of necessary information resources by all its participants, as well as their operative exchange.

The ontological approach to designing a network knowledge base allows to create systems in which information sources of knowledge formation become ontologically structured and accessible to all its participants. The main advantages of this approach:

- the ontological approach gives the user a holistic, systematic view of a particular subject area;
- information sources about the subject area are presented in the same way, which simplifies their perception;

- construction of the ontology allows you to quickly restore the missing logical connections of the subject area, where without violating the general structure of the knowledge base.

The importance of the ontological approach in creating a networked knowledge base is also due to the fact that if the information sources of knowledge formation are not described and replicated, they eventually become obsolete and irrelevant. On the contrary, information sources of knowledge formation, which are ontologically structured, distributed and used in a network way, can generate new knowledge. The ontological approach allows to present terms, concepts in such a way that they become suitable for computer processing, which leads the subject terminology to a formalized form and contributes to its equal understanding by all participants.

One of the approaches that will ensure the effective functioning of such a system is the construction of operationally structured scenarios of the knowledge base.

3. RESEARCH RESULTS

Each of the modern models of building knowledge bases has its own organizational structure, which forms the links between the information objects of the knowledge base. At the same time, almost all information objects of modern knowledge bases are fully integrated with its structure, which determines the large structural size of such knowledge bases. Management of such knowledge base systems takes up large computing resources, which directly affects the processing time of information. In addition, the systems are not focused on a personalized approach to their organization and management. To solve this problem, it is proposed to form the structure of the knowledge base in the form of a set of individual personalized e-scenarios, which within a given ontological structure, are operationally formed in accordance with the selected object and the task. If you need to create a new e-script, which would include other e-scripts stored in the knowledge base in the form of .xml files, they connect to it, either automatically in hyperlink format, or operationally, by embedding its information structure in the base the structure of the script being created. The combined script structure is then stored in a .xml file. Thus, the knowledge base in this case has a file operating structure, which includes ontologically structured e-scripts in .xml file format. That is, each e-script, within a given subject area, is personally formed according to the selected object and the task, and then stored in the .xml file format in the knowledge base.

“Operationally-structured knowledge base scenario” is one of the forms of organization of object-oriented knowledge base in a given subject area, which describes its functional and information structure step by step and is formalized in the form of operationally structured data blocks stored in xml format. files. The operational-structured xml knowledge base scripts created in this way can be combined or separated into other operational-structured xml knowledge base scripts, thus creating new transdisciplinary knowledge bases. In this case, operationally-structured xml scripts of the knowledge base can be formalized, both in the information-applied aspect (for example – a reference book or textbook) and in the functional aspect (for example – a training program as a functional structure of the educational process), or combine both of these formats.

In the theoretical aspect, the principles of formation of operational-structured scenarios of the knowledge base are based on the theory of ontologies and the theory of graphs. In

formalized form, they are represented by a graph structure in which the vertices of the graph and their relationships are displayed in the form of subfolders (folders), defining the name of operational steps (What to do or What to determine) of the knowledge base script and the name of provided steps, which are interconnected by the operating structure, each element of which contains its own information data block.

The information structure of data blocks consists of a set of data blocks having the following structure: the name of the data block; the content of the data block (entered from the keyboard); hyperlinks to external sources of information in Microsoft Office formats (video, audio, images, spreadsheets etc.), as well as to websites and web resources, including other xml scripts contained in the knowledge base. In accordance with the above, the general graph-structure of operational-structured scenarios of the knowledge base has the following form (Fig. 1).

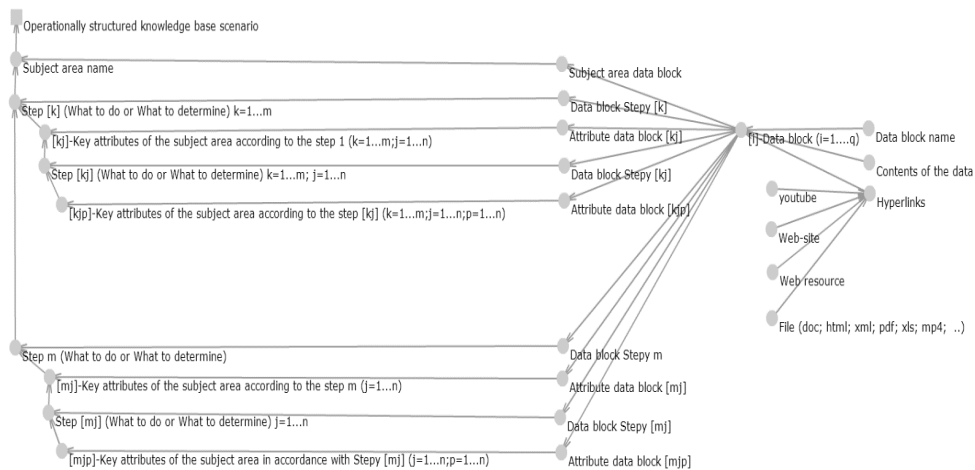


Fig. 1. The general graph-structure of the operational-structured scenario of the knowledge base

In practical terms, in the process of building a knowledge base script, an integrated information array is formed, which is formalized as an xml file stored in the knowledge base on the server as a standalone attribute, and if necessary joined as a key attribute to another knowledge base script.

In order to practically implement the above principles of knowledge base formation in the format of operational-structured scenarios, a Web-software complex “Editor of knowledge base scripts” was developed (Dovgy, Strizhak, Demyanenko, Kalnoy, Lisovy, Prikhodnyuk, Savchenko, Guralyuk, 2020; (<http://work.inhost.com.ua>)).

Web-software complex “Knowledge Base Script Editor” is a network software and information tool for building operationally structured knowledge base scripts in xml file formats with their subsequent visualization in the form of “Knowledge Prisms”.

Web-software complex “Knowledge Base Script Editor” has a wide format of use, from the creation of simple personalized knowledge bases in a given subject area, to complex-structured corporate knowledge bases. Its functionality provides the user with the

necessary set of tools provided for the construction of various operational-structured scenarios of the knowledge base in a given subject area, their storage on a server or local media, search and visualization. The provided software package also makes it possible to combine or separate knowledge base scripts into other operationally structured xml knowledge base scripts, thus creating new trans disciplinary knowledge bases.

The main interface of the Web-software complex "Knowledge Baseline Script Editor" is presented in Fig. 2.

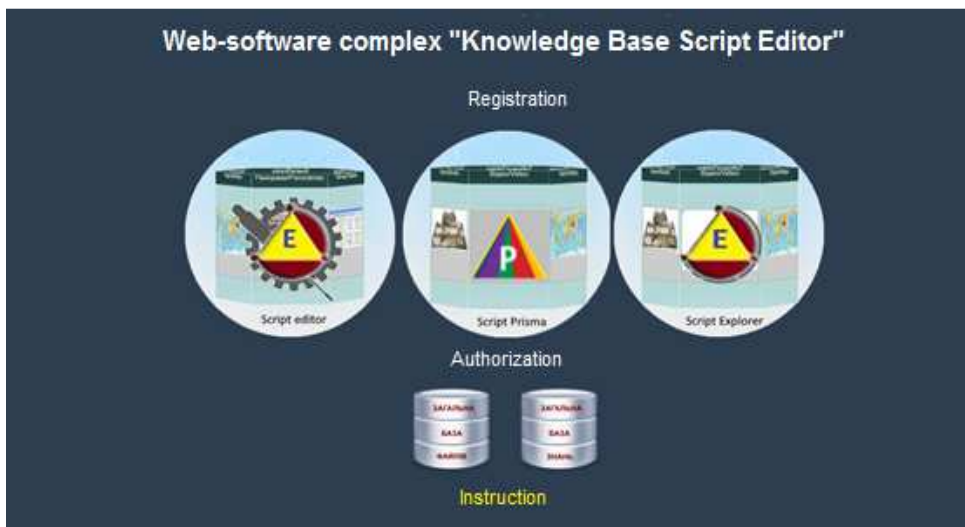


Fig. 2. The main interface of the Web software package "Knowledge Base Script Editor"

The general functional structure of the Web-software complex "Knowledge Base Script Editor" is presented in Fig. 3.

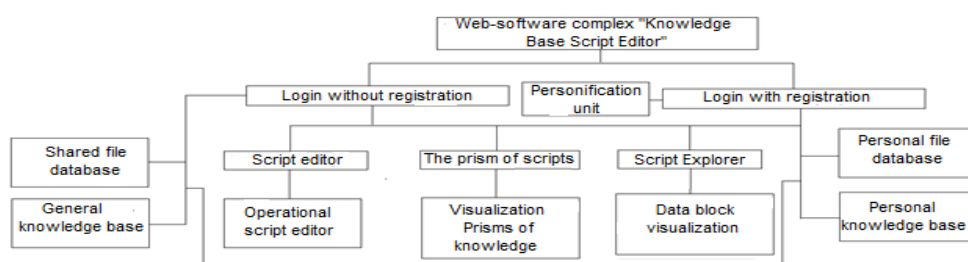


Fig. 3. General functional structure of "Web-software complex knowledge base script editor"

In accordance with the provided structure (Fig. 3), in the environment of the Web-software complex "Knowledge Base Script Editor", various knowledge base scripts are created, which are localized both on local magnetic media and in the network on the server, and which are further visualized (installed) in the format "Prism of knowledge".

“Knowledge Prism” is a virtual electronic form of visualization of the xml script of the knowledge base in the form of a set of screens combined into a prism, each of which corresponds to a separate element of the operational structure of the script and contains interactive links to structured data blocks and nested “Prisms” according to the multilevel operating structure of the xml script. An example of visualization (installation) of the knowledge base scenario in the format “Knowledge Prism” is presented in Fig. 4.

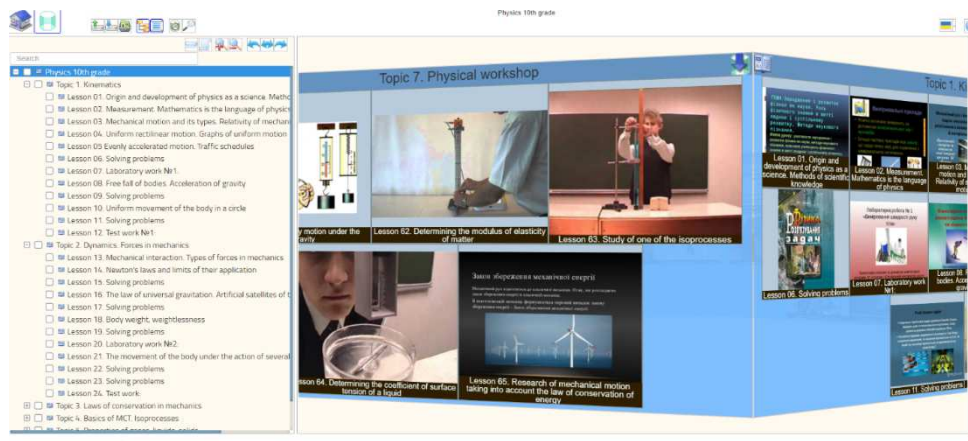


Fig. 4. Sample visualization of the knowledge base scenario in the format “Prism of knowledge”

In accordance with the provided “Prism of knowledge” (Fig. 4), to visualize the selected data block, which is represented by the corresponding image on the face of the prism, you need to activate it with the mouse cursor. In response to the monitor screen, its contents will be loaded (Fig. 5).

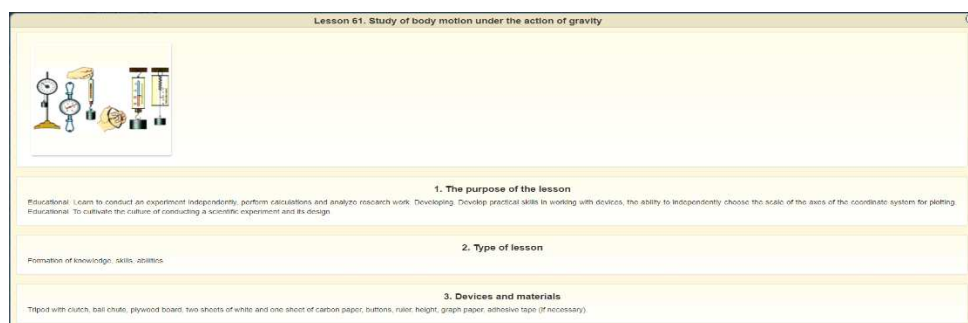


Fig. 5. Sample visualization of the knowledge block script block

$$x = x_0 + v_{0x}t + \frac{a_x t^2}{2}$$

$$y = y_0 + v_{0y}t + \frac{a_y t^2}{2}$$

Purpose: to measure the initial velocity given to the body in the horizontal direction during its movement under the action of gravity. Equipment: a tripod with a coupling, a gutter for starting the ball, a plywood board, two sheets of white and one sheet of carbon paper, buttons, ruler, graph paper, adhesive tape (if necessary). Theoretical information: If the ball is thrown horizontally, it moves in a parabola. Let's connect the frame of reference to the ground. The OX axis is directed along the earth's surface, and the OY axis is vertically upward perpendicular to the earth's surface. The origin is arranged as shown in Figure 1. Write the equation of motion in the projections on each axis:

Since only the force of gravity acts on the thrown body during the flight, the body thrown horizontally will move with the acceleration of free fall g. Having designed the vectors of Fig. 1 of the initial velocity v_0 and acceleration g on the axis OX and OY, we write the equation of motion for this case:

If you let the ball in the same conditions of the experiment several times, the values of the flight range will have some variation due to the influence of various reasons, which cannot be taken into account. In such cases, the value of the measured value is taken as the arithmetic mean of the results obtained in several experiments.

Progress: 1. Process theoretical information and instructions for laboratory work. Prepare a data table to record the results of measurements and calculations. 2. Using a tripod, secure the plywood board vertically so that the bent collapse of the sloping gutter is horizontal. 3. Attach a sheet of white paper to the plywood with the buttons.

4. Place the ball on the upper edge of the chute and release (Fig. 2). Lock the place where the ball falls on the desk. In this place, near the base of the installation, on the desk, put a sheet of white paper, and on top of it a copy, copy layer down. It is advisable to put a piece of rubber under a sheet of white paper to prevent damage to the surface of the desk.

N	x_0 , m	t , s	l , m	h , m	v_{0x} , m/s
1					
2					
3					
4					

5. Place the ball on the top edge of the chute and release. Using a measuring tape, measure the flight range of the ball l (see figure) and the height of fall h. Record the measurement results in a table. 6. Repeat the experiment 4 times (Items 4 - 5), each time measuring the range l. Calculate the average value of the flight range $l = (l_1 + l_2 + l_3 + l_4) / 4$ and the average value of the initial speed $v_{0x} = l / \sqrt{2h}$.

7. Calculate the absolute and relative errors of the experiment. Ignoring the error of the acceleration of free fall, calculate the relative error of the initial velocity: $\epsilon = \Delta l / l + \Delta h / 2h$. The absolute error of the initial velocity is calculated by the formula: $\Delta v_{0x} = \epsilon v_{0x}$.

Relative error	Absolute error	Relative error	Absolute error
ϵ	Δv_{0x}	ϵ	Δv_{0x}

8. Record the results of the calculations in the table:

9. Make a conclusion in which you describe your achievements, which you have acquired while performing this work; main causes of errors; the main, in your opinion, disadvantages and advantages of this study; suggestions for its improvement.

Laboratory work Research of body motion under the action of gravity

Fig. 5 (cont.). Sample visualization of the knowledge block script block

4. CONCLUSIONS

The described principles and means of network organization of information resources in the format of operationally structured xml scripts of knowledge base, using “Web-software complex editor of knowledge base scripts” (hereinafter “software complex”), allow to create personalized and corporate object-oriented knowledge bases in a given subject area, which can be placed both on local magnetic media (eg flash media) and on the server, with their subsequent visualization in the format “Prisms of knowledge”. This allows each user of the “software package” not only to create personal knowledge bases or corporate knowledge bases, but simply to use ready-made general knowledge bases for their work, or to exchange personal knowledge bases (xml knowledge base scenarios) with other users of the “software package”.

The proposed approach is relevant, having a wide range of applications in various fields from training to production, as well as in everyday life to build interactive training programs, innovative production technologies, albums, tourist routes and more.

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ANALYSIS OF THE SOCIAL MEDIA MARKETING: BUSINESS ENVIRONMENT AND MODERN TRENDS IN POLAND AND UKRAINE

The author in the article aimed to summarize the trends in the Digital and SMM market by an analysis of the main indicators characterizing Internet and Social media users for 2014–2020 years. Theoretical part of this work was the study of the essence of the «social media marketing» concept (SMM) based on the data on the most popular social networks in Poland and Ukraine. There were analyzed the key performance indicators of the Social Media Marketing Agencies in Poland and Ukraine, such as the average cost of completed projects, personnel numbers, and characteristics of the market segment on the basis of belonging to small, medium and large businesses. A number of tools for activities in various social networks are identified, the reasons for their use, features and methods of promotion are considered.

Keywords: SMM-marketing, social media, social networks, marketing communications, sales, consumer behavior analysis.

1. INTRODUCTION

The current economic and social environment is characterized by a rapid increase in the number of Internet users and Social media users worldwide. Of course, each country is characterized by its own characteristics of these processes. The Internet, information technology, social networks are used for professional activities and business, leisure and social communications. Social Media Marketing (SMM) is becoming a modern effective tool for promotion and marketing, the importance of which has increased in time of Covid-19 pandemic and caused by it lockdown.

Social media is a web-based form of data communication. Social media platforms allow users to have conversations, share information and create web content. It has different forms, together with blogs, micro-blogs, wikis, social networking sites, photo-sharing sites, instant messaging, video-sharing sites, podcasts, widgets, virtual worlds, and more. Billions of people around the world use social media to share information and make connections.

SMM is creating the involvement and effective interaction of all stakeholders. The audience of social networks is characterized by a higher level of attention, interest and activity, compared to other channels of promotion, which are the characteristic to the network communication.

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Social network users share links, news, useful information, put “likes” and actively comment on posts, which helps to increase the size of the audience of potential consumers. All this allows influencing cohabitants (users) through information and communication.

The key characteristics of SMM are targeting, interactivity, effective tools for selecting the target audience by various economic, age, educational, professional, status, psychographic, behavioral, territorial and many other criteria, relatively low price and wide range of non-standard methods of promotion. (Shtal, Dmytriiev, 2019).

The advantages of SMM promotion are: low cost, high viral effect, prospects for active development of the company. The main disadvantages of SMM are the lack of both information and analytics, which determines the demand for professional activities of relevant professionals. A characteristic feature of SMM is also control by network moderators, the need for administration and competition, the struggle for users and the formation of a stable level of brand loyalty. (W. Akram, Kumar, 2017).

On an individual level, social media allow us to communicate with our friends and relatives, gain knowledge of new things, develop your interests, and be entertained. On a professional level, we can make use of social media to expand or broaden our knowledge in a particular field and build our professional network by connecting with other professionals in our industry. At the business level, social media allows us to have a conversation with our audience, gain customer feedback, and elevate your brand (Akram, Kumar, 2017).

2. LITERATURE REVIEW

Possibilities and advantages of product promotion by enterprises with the help of SMM tools have been studied in works by such scientists as T.V. Shtal, H.B. Dmytriiev (Shtal, Dmytriiev, 2019), M.V. Miroshnyk, L.O. Striuk, D.O. Kopytsa (Miroshnyk, Striuk, Kopytsa, 2020), Beata Zatwarnicka-Madura (Zatwarnicka-Madura, Stecko, Mentel, 2016).

Iryna Pentina, Anthony C. Koh and T.Le Thuong pay attention to the study of the adoption of social networks marketing by SMEs by exploring the role of social influences and experience in technology acceptance (Pentina, Koh, Thuong, 2018).

Abderlahim M. Zabadji in its scientific works the need to establish the effect of Social Media Marketing (SMM) on consumer's loyalty to the brand (Zabadji, 2019).

W. Akram and R. Kumar pointed on negative effects of social media on society, studied popular social media sites, impact of social media on medical and health, business, education, society, on kid and teens, handling influence of social media on youth and teens (Akram, Kumar, 2017). Also question about social responsibility of mass media was studied by known sociologist J. Stecko (Stecko, 2018).

Huge practical analysis was done by Simon Kemp (Kemp, Report Digital on 2014–2020 years). In this yearly reports since 2012 was collected merely all statistic of comprehensive study of digital, social and mobile use around the world, produced in partnership with We Are Social (<https://datareportal.com/>).

Also the author wants to thank to the job done by analytics of clutch.co – commercial project of platform of in-depth client reviews, data-driven content, and vetted market leaders.

However, further research is needed on the theory and practice of using SMM in marketing activities in the B2C and B2B market. The above determined the purpose of the

article, which is to summarize the practical indicators of the use of SMM as a modern marketing technology.

3. AIM OF THE STUDY

The article is aimed at researching the main characteristics of the players at the social media market in Poland and Ukraine. The research objectives are:

- an analysis of the main trends in the field of Internet users and Social media users in the world, and in particular in Poland and Ukraine;
- characteristics of the share of the social media marketing agencies projects according to business size in Poland and Ukraine;
- monitoring the structure of the social media marketing agencies according to such criteria as the minimum project size, brand agency staff numbers;
- an analysis the popularity of the social media marketing agencies at such areas: corporate identity, brand strategy, product branding, communication (message) of the brand, naming;
- an analysis of the focus service lines of the top social media marketing agencies in Poland and Ukraine;
- an analysis of the PPC focus service lines of the top social media marketing agencies in Poland and Ukraine;
- substantiation of future trends and activities changes of the Poland and Ukraine social media marketing.

4. RESULTS AND DISCUSSION

According to data from the Report Global Digital Overview 2019 and 2020 of the International Telecommunication Union (ITU) the number of people using the internet has surged over the past year, with more than one million people coming online for the first time each day. In particular here are:

- 4,54 billion internet users in 2020, an increase of 152 million (3 %) versus January 2019;
- 3,80 billion social media users in 2020, with the worldwide total growing by 316 million (9%) since this time last year (table 1);
- 5,11 billion unique world mobile users in the 2019, up 100 million (2 percent) in the 2018;
- 3,26 billion people use social media on mobile devices in January 2019, with growth of 297 million new users representing a year-on-year increase of more than 10% (Report Global Digital Overview, 2020)

Internet users spend a lot time using it. Average amount of time per day using the internet via any device, in hours and minutes is 6,42 worldwide and 6,02 in Poland in 2019.

The number of Internet users worldwide for the period 2014–2020 increased by 82% (from 2484 to 4540 millions). The number of social media users worldwide more than doubled between 2014 and 2020 (from 1857 to 3800 millions) (table 1).

Social media dispersion in 2019 (territory, compared to total population) is 45% worldwide and 47% in Poland, 39% in Ukraine. Average amount of time per day using social media via any device in 2019, in hours and minutes was 2,16 worldwide and 1,45 in Poland (Report Digital, 2019, Poland).

Table 1. Internet users and Social media users in 2014–2019 years worldwide

	2014	2015	2016	2017	2018	2019	2020
Internet users over time, millions	2485	3,008	3429	3779	4021	4388	4540
Social media users over time, millions	1857	2078	2307	2796	3196	3484	3800

Developed based on: Report Global Digital Overview in 2014, 2015, 2016, 2017, 2018, 2019 and 2020 years (<https://datareportal.com/reports>).

Not only the numbers grow, but also ways in which people use the internet also are evolving quickly too, with smartphones adding ever-increasing share of our online activities. Mobile phones used for almost half the time that people spend on the internet. On average, the world's internet users spend 6 hours and 42 minutes online each day.

Despite the year-on-year drop, our online time quickly adds up. An average of more than 6,5 hours a day equates to a total of more than 100 days of online time each year for every internet user. If we extend that average across the total internet user base of almost 4.4 billion users, we find that humanity will spend a collective total of more than 1.2 billion years online in 2019 year (Report Global Digital, 2019).

Although many people's connected activities now rely on recent innovations like native mobile apps, the Web still represents «the internet» for most users around the world. Worldwide social media user numbers have grown to almost 3,5 billion at the start of 2019, with 288 million new users in the past 12 months pushing the global penetration figure to 45 percent. Many countries have shown strong growth in social media use over the past 12 months.

The process of change of Internet and Social media users behavior is influenced by such factors as:

- technical factors (level of urbanization, quality of infrastructure, availability of devices, Internet speed);
- socio-demographic factors (average age of the population of a country, the ratio of men and women, income level, employment, cultural characteristics);
- economic factors (average income, average purchase size, level of e-Commerce development).

Let's analyze the indicators for Internet users in Poland and Ukraine in 2017–2020 years (Table 2, 3).

In Poland for the period 2017–2020 years the number of Internet users increased by 2.71 million (from 27.92 to 30.63 millions). The share of Internet users in relation to the total population of Poland in 2020 year was 81%.

In Poland for the period 2017–2020 years the number of active social media users increased by 4.0 million (from 15.00 to 19.00 millions). The share of active social media users, in relation to the total population of Poland, in 2020 year was 50%.

The level of urbanization in Poland in 2020 year was 60% (table 2).

In Ukraine for the period 2017–2020 the number of Internet users increased by 2.71 million (from 21.93 to 27.46 million). The share of Internet users in relation to the total population of Ukraine in 2020 was 63%.

Table 2. The essential headline data about mobile, internet and social media use in Poland in 2017–2020 years

	2017	2018	2019	2020
Total population, million	38,58	38,14	38,07	37,87
Urbanization, %	61	61	60%	60
Internet users, million	27,92	29,75	30,07	30,63
Penetration, %	72	78	79%	81
Active social media users, million	15,0	17,0	18,00	19,00
Penetration, %	39,0	45	47	50

Developed based on the analytics “Report Digital” of datareportal.com on 2017-2020 years in Poland and Ukraine.

In Ukraine for the period 2017–2020 the number of active social media users increased by 4.0 million (from 16.17 to 19.00 million). The share of active social media users, in relation to the total population of Ukraine, in 2020 was 43%.

The level of urbanization in Ukraine in 2020 was 43% (Table 3).

Table 3. The essential headline data about mobile, internet and social media use in Ukraine in 2017–2020 years

	2017	2018	2019	2020
Total population, million	44,51	44,12	43,9	43,86
Urbanization, %	70	70	69	69
Internet users, million	21,93	25,59	40,91	27,46
penetration	49	58	93	63
Active social media users, million	16,17	13,00	17,00	19,00
compared to total population	36	29	39	43

Developed based on the analytics “Report Digital” of datareportal.com on 2017–2020 years in Ukraine.

According to the results of the analysis “Social media users behavior in 2019” the amount of time that people spend on social media has increased again in 2019, albeit very slightly. Global Web Index reports that the average social media user now spends 2 hours and 16 minutes each day on social platforms, which equates to roughly one-third of their total internet time, and one-seventh of their hours awake. We get a combined total of almost 330 million years of human time spent on social platforms during 2019 year (Report Global Digital Overview, 2020).

Facebook’s advertising audience did lose 10 million users aged 13 to 17 in the last 3 months of 2018, although it made up for this loss with an equivalent gain in the number of users over the age of 55 (Report Global Digital Overview, 2019)

The median number of posts ‘liked’ by the typical Facebook user has fallen by 10 percent in the past 6 months, and now stands at 9 per month.

These findings reinforce the fact that Facebook users aren’t going to Facebook just to see advertisements. People’s primary motivations for using Facebook remain of the original aim with what this platform was built – staying in touch with friends and family, and these activities accounts for the lion’s share of the time that people spend on the platform.

If it necessary to succeed with Facebook marketing, you need to give people more of what they want, and less of brand's corporate propaganda (Kemp, *Report Global Digital Overview, 2019*).

The above global trends are also characteristic of Poland and Ukraine.

Number of people that Facebook reports can be reached with adverts did lose 1 million users in Poland in 2020 and number of Facebook users in 2020 is 16 million. A similar rate is in Ukraine – 13 million (Table 4).

Table 4. Facebook Audience overview in Poland and Ukraine in 2019–2020 years

	Poland			Ukraine		
	2018	2019	2020	2018	2019	2020
Number of people that Facebook reports can be reached with adverts on Facebook, million	17,0	17,00	16,00	13,00	13,0	13,0
Facebook's reported advertising reach compared to total population aged 13+, %	-	51	49	-	34	34
Percentage of its audience that Facebook reports is female, %	51	52	53,4	57	59	60,4
Percentage of its audience that Facebook reports is male, %	49	48	46,6	43	41	39,6

Developed based on the analytics "Report Digital" of datareportal.com on 2018–2020 years in Poland and Ukraine.

However, comparisons to total population are less representative when it comes to social media, because most platforms prohibit children use. As a result the dates are also include analysis of what we're terming «eligible penetration» – i.e. social media use amongst people aged 13 and above.

Facebook's reported advertising reach compared to total population aged more than 13 years old is 49% in Poland in 2020 and 34% at the same period in Ukraine.

Female Facebook's audience is more than male one. Thus in 2020, percentage of audience that Facebook reports as female is 53,4 % in Poland and 60,4% in Ukraine (table 4).

Top topics for posts that are of most interest to Facebook users:

- master classes (teaching materials, photo and video lessons and practical recommendations);
- posts that contain information about new products, promotions and "behind-the-scenes" life of the enterprise;
- informative posts (publications on one of the aspects of the product that form a better understanding of the product and bring it closer to purchase);
- general thematic posts;
- user feedback when a potential customer chooses a new product.

Instagram. It is indicated that Instagram will be a top choice for brands in 2019–2020. Instagram's advertising audience is 895 million active users around the world (Report Global Digital Overview, 2020).

However, this figure does *not* include user numbers for some countries that have sizeable Instagram audiences, but which are not available to advertisers as targeting locations (for example Iran).

Instagram's user base may be less than half the size of Facebook's, but Instagram has added more than twice as many new users as Facebook in the past three months in 2020 (Report Global Digital Overview, 2020).

Instagram's growing popularity amongst marketers isn't just down to a growing user base, either; the platform also boasts a well-balanced audience profile. Globally, Instagram users are split roughly 50:50 between women and men, and – while the average age still skews younger than Facebook – Instagram has a higher incidence of users in the 18 to 34 year-old age bracket than Facebook does (albeit with a smaller total number of users in that age range).

Total Instagram's advertising audience is 894,9 million, among them according to age around the world: 13–17 years old – 57,0 million; 18–24 years old –280,4 million; 25–34 years old –290,4 million; 35–44 years old –142,2 million; 45–54 years old –73,1 million; 55–64 years old –32,0 million; more than 65 years old –19,8 million

The analysis showed that the total number of Instagram users in Poland increased in 2018–2020 from 5.4 to 7.3 million. The share of users over 13 in 2020 was 22%. The share of Instagram users compared to the total population in Poland in 2020 is 19.28%. The share of female population among Instagram users in 2020 was 58.3% (Table 5).

Table 5. Instagram Audience overview in Poland and Ukraine in 2019–2020 years

	Poland			Ukraine		
	2018	2019	2020	2018	2019	2020
Number of people that Instagram reports can be reached with adverts on Instagram, million	5,4	6,8	7,3	7,2	10,0	11,0
Instagram's reported advertising reach compared to total population aged 13+, %	-	21	22	16	27	29
Percentage of its audience that Instagram reports is female, %	58	58	58,3	61	60	60,2
Percentage of its audience that Instagram reports is male, %	42	42	41,7	39	40	39,8

Developed based on: the analytics "Report Digital" of datareportal.com on 2018-2020 years in Poland and Ukraine.

Regarding Instagram users in Ukraine, we have slightly higher rates. The analysis showed that the total number of Instagram users in Ukraine increased in 2018–2020 from 7.2 to 11.0 million. The share of Instagram users compared to the total population in Ukraine in 2020 is 25.07%. In Ukraine, the share of Instagram users over the age of 13 in 2020 was 29%. The share of women among Instagram users in 2020 was 60.2%.

Twitter. 2018 was less favourable to Twitter, who reported declines in global active users in their two past earnings announcements. This downward trend is clearly visible in the platform's advertising audience numbers too, which indicate that Twitter's total addressable audience has fallen.

Twitter's advertising audience also skews significantly towards men, with the platform reporting that almost two-thirds of its addressable audience is male.

Twitter has grown to become a platform of choice for various influential figures around the world, from presidents and prime ministers, to some of the world's top journalists. Crucially though, observers do *not* need to have a Twitter account to access all of the content

that these people post to the platform, and this is where some broader data provide a very different story of Twitter's success compared to its earnings announcements.

While the number of 'registered' users engaging with the platform appears to be falling, overall visitor traffic to Twitter.com has actually been increasing over recent months. Similar Web's latest data suggest that Twitter.com attracted more than 670 million unique visitors in December 2018 (Report Global Digital Overview, 2018).

These figures suggest that total visitors to Twitter.com are considerably more than *double* the platform's total addressable advertising audience. These 670 million visitors also spend an average of more than nine minutes on the site each visit, so it's clear that they're not simply stopping in to read one or two tweets.

Interpreting these numbers, it appears that Twitter's primary problem isn't necessarily the appeal of its platform, but rather its business model. Crucially, because people can access much of Twitter's value without needing to log in, the company's primary revenue source (ad placements targeting logged-in users) appears to be out of sync with the company's primary asset (hundreds of millions of visitors, regardless of whether they're logged in).

This makes Twitter a highly attractive target for a media company who can make better sense of the potential value residing in these non-logged-in visitors.

Let's analyze in more detail the indicators of the portrait of Twitter users in Poland and Ukraine.

The analysis showed that the total number of Twitter users in Poland increased in 2019–2020 from 0.934 to 1.25 million. The share of users over 13 in 2020 was 3.8%. The share of Twitter users compared to the total population of Poland in 2020 is 1.7%. The share of male population among Twitter users in 2020 was 65.7% (Table 6).

Table 6. Twitter Audience overview in Poland and Ukraine in 2019–2020 years

	Poland		Ukraine	
	2019	2020	2019	2020
Number of people that Twitter reports can be reached with adverts on Twitter, million	0,934	1,25	0,575	0,674
Twitter's reported advertising reach compared to total population aged 13+, %	2,8	3,8	1,5	1,8
Percentage of its audience that Twitter reports is female, %	32	34,3	27,0	30,1
Percentage of its audience that Twitter reports is male, %	68	65,7	73,0	69,9

Developed based on: the analytics "Report Digital" of datareportal.com on 2019-2020 years in Poland and Ukraine.

Regarding Twitter users in Ukraine, we have slightly different indicators. The analysis showed that the total number of Twitter users in Ukraine increased in 2019-2020 years from 0.575 to 0.674 million. The share of Instagram users compared to the total population in Ukraine in 2020 is 1.53%. In Ukraine, the share of Twitter users over the age of 13 in 2020 was 1.8%, with the major share of the male population – in 2020 it was 69.9%.

LinkedIn. The world's favorite professional social network LinkedIn delivered strong results in advertising.

It's important to note that LinkedIn's advertising audience numbers are based on total *registered* users, and not the monthly active users reported in other platform's tools.

However, the company's latest data show that advertisers can now reach more than 600 million users around the world on LinkedIn, which tells a compelling story for brands hoping to connect with working professionals across the globe.

For LinkedIn by eligible penetration it is noted that we're using adults aged 18+ for LinkedIn's eligible audience, rather than the 13+ we've used for the other platforms.

The analysis showed that the total number of LinkedIn users in Poland increased in 2019–2020 years from 3.3 to 3.7 million. The share of users over 18 in Poland was 12%. The share of LinkedIn users, compared to the total population in Poland in 2020 year is 9.77%, while the share of male population in this number was 53.3% (Table 7).

Table 7. LinkedIn Audience overview in Poland and Ukraine in 2019–2020 years

	Poland		Ukraine	
	2019	2020	2019	2020
Number of people that LinkedIn reports can be reached with adverts on LinkedIn, million	3,3	3,7	2,5	2,9
LinkedIn's reported advertising reach compared to total population aged 18+, %	11	12	0,7	1,6
Percentage of its audience that LinkedIn reports is female, %	48	46,7	47	45,8
Percentage of its audience that LinkedIn reports is male, %	52	53,3	53	54,2

Developed based on: the analytics "Report Digital" of datareportal.com on 2019–2020 years in Poland and Ukraine.

Regarding LinkedIn users in Ukraine, we have slightly different indicators. The analysis showed that the total number of LinkedIn users in Ukraine increased in 2019–2020 years from 2.5 to 2.9 million. The share of LinkedIn users compared to the total population in Ukraine in 2020 is 6.61%. In Ukraine, the share of LinkedIn users over the age of 18 in 2020 was 1.6%. The share of the male population among LinkedIn users in Ukraine in 2020 was 54.2% (Table 7).

Snapchat. Snapchat's latest numbers tell an even more worrying story than Twitter's.

Snapchat's total addressable audience sits at 306.5 million at the start of 2019, down more than 10 percent since October (note that this number is based on the figures published by Snapchat itself, in the platform's own advertising tools).

While it's unclear whether the two numbers are correlated, it's worth noting that the drop of 41 million users in Snapchat's advertising audience over the past three months closely aligns to Instagram's growth of 38 million users during the same time period (Report Global Digital Overview, 2019).

Furthermore, despite the platform's existing female audience skew, Snapchat is losing male users faster than its losing women. However, Snapchat remains an important part of the social mix in a number of countries around the world, and – despite losing ground in these countries too – Snapchat still boasts a sizeable share of social media users in many countries across the Middle East.

The platform has consistently appeared to focus on younger users – particularly those in the 13 to 24 year-old age bracket. However, people in these age groups tend to be more fickle in their social media behaviors, and while this targeted approach may have served

Snapchat well in previous years, the platform seems to be struggling to maintain its appeal amongst its core audiences.

Crucially, Instagram now boasts almost twice as many users as Snapchat in the same age bracket – and Instagram’s numbers are still growing. Furthermore, unlike Twitter, there’s little evidence in other data to hint at a remedy for Snapchat’s ails (Report Global Digital Overview, 2019).

The analysis showed that the total number of Snapchat users in Poland increased in 2019-2020 from 3.8 to 4.0 million. The share of users over 13 in 2020 was 12%. The share of Snapchat users, compared to the total population in Poland in 2020 is 10.56%. The share of female population predominates among Snapchat users – in 2020 it was 57.6% (Report Digital, 2019, Poland, Report Digital, 2020, Poland).

Let's analyze the Top 15 Social Media Marketing Agencies in Poland and Ukraine (Table 8, 9).

Table 8. Top 15 Social Media Marketing Agencies in Poland (Aug. 2020)

Rank	Agencies Name	Location, Founded	Agencies Slogan
1	Ladder.io	Wroclaw, 2014	Reach Your Growth Goals. World-Class Marketing
2	MTA Digital	Poznań, 2014	Digital & Performance Marketing Team
3	FROGRIOT – digital, studio	Poland, 2012	Softwear experts – we make things happen
4	Quick SEO Help	Warszaw, 2014	Connecting customers to your Brands
5	Skalski Growth	Krakow, 2014	Growth Marketing Team for Turbulent Times
6	Zest Creations	Warsaw, 2012	In ROI we trust
7	Biuro Podrozy Reklamy	Warsaw, 2003	INTERNET EXPLORERS
8	MU Interactive	Warsaw, 2011	We Animate Ideas
9	NUEKO Digital	Imielin, 2014	We help grow your business online
10	Urest	Warsaw, 2019	Digital Marketing solutions for small&medium sized
11	x100.digital	Warsaw	We generate x-income in your business
12	Bluerank	Lodz, 2005	Success can be optimized!
13	Strategiczni.pl	Wroclaw, 2017	Data driven, analytical SEO consultants
14	Tribe47	Warsaw, 2016	Your online revenue generating partner
15	9BITS	Warsaw, 2009	eCommerce Agency, Web Development, Mobile Apps

Developed based on: the analytics of clutch.co

Among presented SMM Agencies in Poland most of them are located at major Polish cities – Wroclaw, Poznań, Krakow, Warsaw, Imielin, Lodz. All of them are rather young companies – the average duration of operation in the market 5,5 years.

The table 8 is presenting slogans of the SMM Agencies in Poland, which deal with rational motive of the services quality and includes such keywords related rational motives of quality and income (price/quality):

- «reach», «growth», «goals ideas», «grow your business», «income in your business»;

- «team experts», «growth marketing team», «analytical SEO consultants», «generating partner»;
 - «connecting customers», «brands digital marketing solutions», «success can be optimized»
 - «digital», «marketing», «e-Commerce agency», «web development»
- The professionalism of the team ensures high quality services.

Table 9. Top 15 Social Media Marketing Agencies in Ukraine (Aug. 2020)

Rank	Agencies Name	Location, Founded	Agencies Slogan
1	AdTribe	Kyiv, 2018	Scaling eCommerce businesses with Facebook Ads!
2	Respect.Studio	Lviv, 2016	Alternative Digital Marketing Solutions for B2B
3	Livepage	Dnipro, 2011	Design & Digital Marketing for Local SMB, e-Commerce
4	711media	Lviv, 2002	Digital Marketing Agency
5	UAATEAM	Kharkiv, 2014	We help businesses to grow online
6	WiserBrand	Kharkiv, 2015	e-Commerce focused Company
7	NOWEDO	Kiev, 2017	NOWEDO
8	Mobihunter	Kiev, 2015	Performance Marketing Agency
9	Kosmiqs LLC	Odessa,	Your reliable partner in the world of advertising
10	Areanda	Kharkiv, 2011	Outsourced inbound marketing services
11	Upturn Digital Agency	Kyiv,	We help grow your business
12	MixDigital	Kyiv, 2011	Media & Performance advertising agency
13	Polimentor	Ukraine, 2010	We are Google Partner Internet-marketing company
14	Devenup Health, LLC	Chernihiv, 2015	Healthcare SEO and brand promotion using MRank
15	ITForce	Kharkiv, 2015	Digital Marketing Agency – Premier Google Partner

Developed based on: the analytics of clutch.co

The table 9 is represented slogans of the SMM Agencies in Ukraine, which deal with rational motive of the services quality and includes such keywords related rational motives of quality and partnership (help, solutions, partner, healthcare):

- «scaling e-Commerce businesses», «alternative solutions», «outsourced services»
- «help businesses to grow online», «help grow your business»;
- «reliable partner», «premier Google partner», «healthcare SEO».

Among presented SMM Agencies they are located at major Ukrainian cities, all of them administrative centers - Kyiv, Lviv, Dnipro, Kharkiv, Odessa, Chernihiv. All of them are young companies – the average duration of operation in the market is 6,15 years.

These agencies are implementing projects in small business (< \$10M), midmarket (\$10M – \$1B), big enterprises (>\$1B) (Fig. 1, 2).

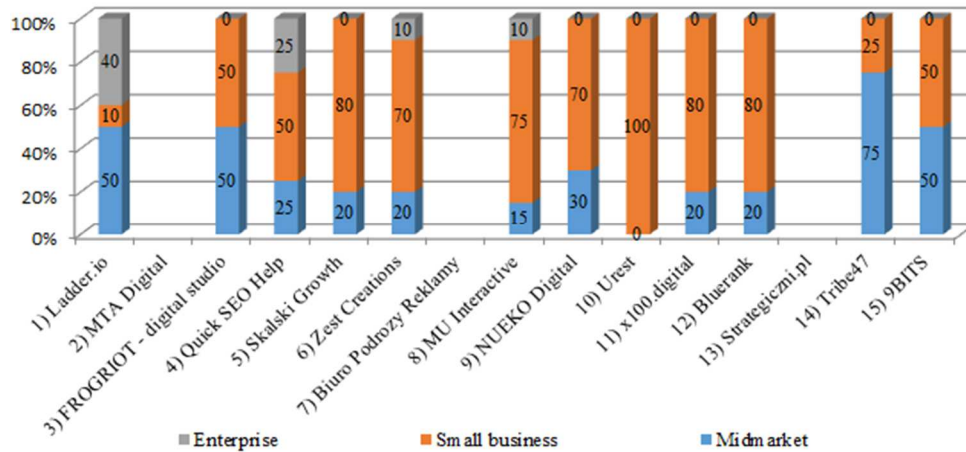


Fig. 1. Projects characteristics implemented by the leaders of the Social Media Marketing Agencies according to served business size in Poland (Aug. 2020)
Created by the authors based on the analytics of clutch.co

Among the 15 Poland top SMM Agencies, 12 agencies (80,0%) work for the small business and midmarket. The share of the serviced companies by the relevant agencies is 15–75% for midmarket and 25–100% for small business. Four agencies (26,67%) work for the big business (big enterprises, companies). The share of the serviced companies by the relevant agencies is 10–40%.

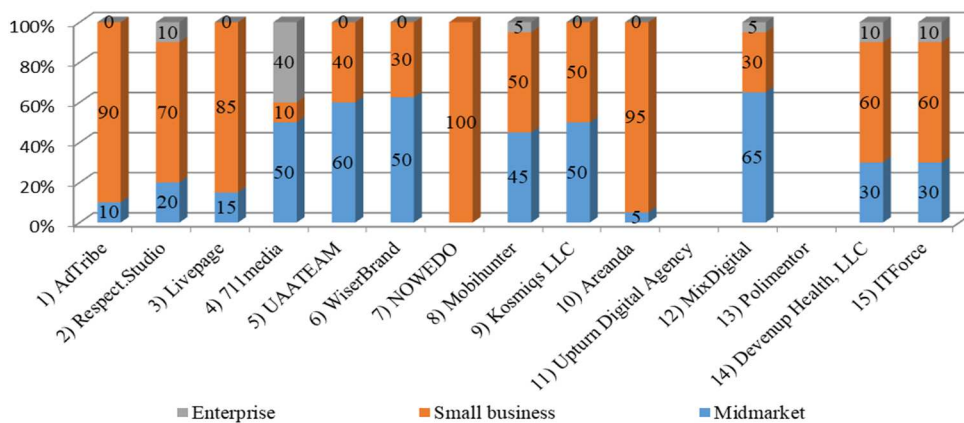


Fig. 2. Projects characteristics implemented by the leaders of the Social Media Marketing Agencies according to served business size in Ukraine (Aug. 2020)
Source: Created by the author based on the analytics of clutch.co

The same situation is in Ukraine, among the 15 top SMM Agencies, 12 agencies (80,0%) work for the small business with the share of the serviced companies by the relevant agencies 10–60%, 13 agencies (86,67%) work for the midmarket with the share of the

serviced companies by the relevant agencies 30–100% and 6 agencies (40,0%) work for the big business (big enterprises, companies). The share of the serviced companies by the relevant agencies is 5–40%.

There is no available information about some SMM agencies: in Poland – «MTA Digital», «Biuro Podrozy Reklamy», «Strategiczni.pl» (Fig. 1); in Ukraine – «Upturn Digital Agency», «Polimmentor» (Fig. 2).

The vast majority of SMM agencies in Poland and Ukraine implement projects with budget of \$1,000 and more. There are a lot of projects in Poland what have budget \$5,000 and more.

Medium budget projects (\$10,000 and more) have only some of the top SMM agencies in Poland (Table 10). The same situation is with big projects (\$25,000 and more; 50,000 and more). Only some of the top SMM agencies in Ukraine realize such projects.

Table 10. Top 15 Social Media Marketing Agencies in Poland and Ukraine according to the project size (Aug. 2020)

Project cost, \$	Poland	Ukraine
1,000+	«Quick SEO Help», «Skalski Growth», «Zest Creations», «MU Interactive», «NUEKO Digital», «Urest», «Strategiczni.pl»	«AdTribe», «Respect.Studio», «Livepage», «UAATEAM», «Mobihunter», «Kosmiqs LLC», «Areanda», «Upturn Digital Agency», «MixDigital», «Polimmentor», «ITForce»
5,000+	«FROGRIOT – digital studio», «Biuro Podrozy Reklamy», «Bluerank», «Tribe47», «9BITS»	«Devenup Health, LLC»
10,000+	«MTA Digital», «x100.digital»	–
25,000+	–	«NOWEDO»
50,000+	–	«711media», «WiserBrand»
Undisclosed	«Ladder.io»	–

Created by author according to Top Poland Social Media Consultants (Dec. 2020).

The basic focuses service lines of the top 15 SMM Agencies in Poland and Ukraine are: marketing strategy, digital strategy, search engine optimization (CEO), social media marketing (SMM), conversion optimization, pay per click (PPC), mobile and app marketing, content marketing (Table 11).

The most popular service lines among SMM agencies in Poland are: SMM (100%); Digital Strategy, Search Engine Optimization, Pay Per Click (60%). The most popular service lines among SMM agencies in Ukraine are: SMM (100% among of the all 15 agencies); Search Engine Optimization, Pay Per Click (66,7% among of the all 15 agencies).

The average share of the project at the total projects portfolio of each agency in Poland (according to Table 4) are: SMM (about 14%); Digital Strategy (about 17%), Search Engine Optimization (about 28%), Pay Per Click (about 25%).

The average share of the project at the total projects portfolio of each agency in Ukraine (according to Table 11) are: SMM (about 30%); Search Engine Optimization (about 34%), Pay Per Click (31%).

Table 11. Focus Service lines of the Top 15 Social Media Marketing Agencies in Poland (Aug. 2020)

Service lines	Poland	Ukraine	Poland	Ukraine
	Agencies share at the total numbers of the agencies %		The average share of the project at the total projects portfolio of each agency, %	
Marketing Strategy	6,67	–	20	–
Digital Strategy	60,0	40,0	17,7	16,0
Search Engine Optimization	60,0	66,7	28,12	34,5
Social Media Marketing	100	100	14,53	30,66
Conversion Optimization	20,0	13,3	13,3	5,0
Pay Per Click	60,0	66,7	25,5	31,6
Mobile and App Marketing	33,4	20,0	15,0	20,0
Content Marketing	33,4	33,3	13,0	10,0

Developed based on: the analytics of clutch.co – Top Poland Social Media Consultants.

Today, Facebook is the most popular social network in Poland, Ukraine and the world. Facebook is an ideal place for marketing in both the B2B and B2C segments. Business pages and thematic groups are the main tool of Social Media Marketing on Facebook. Note that the most popular methods of promotion on Facebook today are: commercial, targeted, advertising and viral posts, as well as targeted advertising (only for the target audience).

Another successful social network is Instagram. SMM on the Instagram platform today is one of the most effective methods that really shapes sales and brand promotions. The main benefits of promotion on Instagram have been and remain: recognition, loyalty, reputation management and feedback.

LinkedIn is the most convenient platform for marketing campaigns. The rule works in this network: the more useful information the user uploads to his profile, the more effective the use of the network will be. LinkedIn can promote personal sales, the B2B segment, products and services designed for a narrow target audience, and products and services in the high price segment. LinkedIn promotion tools are: the company's own page; personal messages; thematic groups.

SMM-promotion also actively uses the Twitter messaging platform – the highest generator of traffic to the main site, because the “tweets” (posts) in it are short, and the user reads complete information directly from the main resource. With the help of Twitter there is a constant communication with users, informing about news, promotions and special offers, as well as communicating with subscribers on various aspects of the company (Shtal, Dmitriev, 2019).

Findings of such authors as Iryna Pentina and Anthony C. Koh (Pentina, Koh, 2015) show that adoption of SNM is strongly influenced by social influences from experts, competitors, and customers. These social influences affect intention to adopt this new technology both directly, and by affecting the perceptions of the technology usefulness.

The basic social media focuses of the top 15 SMM Agencies in Poland and Ukraine are: Facebook, Instagram, LinkedIn, Snapchat, Twitter, Influencer (Table 12). In Poland at the 2020 the most popular social media for advertising are: Facebook (86,67 among of the all

15 agencies), Instagram (73,3% among of the all 15 agencies), LinkedIn (66,7% among of the all 15 agencies) and Influencer (40,0% among of the all 15 agencies).

Table 12. Social Media Focus Top 15 Social Media Marketing Agencies in Poland and Ukraine (Aug. 2020)

Advertising	Poland	Ukraine	Poland	Ukraine
	Agencies Share at the total numbers of the agencies %		Average share of the project at the total projects portfolio, %	
Facebook	86,67	66,7	54,5	38,5
Instagram	73,3	66,7	22,7	33,5
LinkedIn	66,7	53,3	17,8	26,87
Snapchat	13,3	13,3	7,5	7,5
Twitter	26,7	26,7	7,5	11,25
Influencer	40,0	26,7	14,0	26,25

Developed based on: the analytics of clutch.co –Top Poland and Top Ukraine Social Media Consultants.

The largest share of projects in Poland for advertising on the Internet are advertising campaigns on Facebook (54.5%), Instagram (22.7%), LinkedIn (17.8%), Influencer (14.0%).

In Ukraine, the following trends are observed: the share of advertising campaigns on Facebook and Instagram is 38.5% and 33.5%, respectively; the share of LinkedIn and Influencer advertising campaigns is almost the same and is about 26%.

Table 13. Social Media Focus Top 15 Social Media Marketing Agencies in Poland (Aug. 2020)

Rank	Agencies Name	Advertising						Total
		Facebook	Instagram	LinkedIn	Snapchat	Twitter	Influencer	
1	Ladder.io	30	30	20	10	10	0	100
2	MTA Digital	80	10	10	0	0	0	100
3	FROGRIOT – digital studio	34	33	33	0	0	0	100
4	Quick SEO Help	50	25	25	0	0	0	100
5	Skalski Growth	50	15	15	5	5	10	100
6	Zest Creations	40	40	10	0	0	10	100
7	Biuro Podrozy Reklamy	20	30	20	0	5	25	100
8	MU Interactive	–	–	–	–	–	–	–
9	NUEKO Digital	70	20	10	0	0	0	100
10	Urest	40	40	15	0	0	5	100
11	x100.digital	85	0	0	0	0	15	100
12	Bluerank	–	–	–	–	–	–	–
13	Strategiczni.pl	80	20	0	0	0	0	100
14	Tribe47	30	20	20	0	10	20	100
15	9BITS	100	0	0	0	0	0	100

Created by the authors based on the analytics of clutch.co – Top Poland Social Media Consultants.

Relevant data on the analyzed Top 15 Social Media Marketing Agencies in Poland and Ukraine are presented in Table 13, 14.

These data show that the least popular, both in Poland and in Ukraine are Snapchat and Twitter (Table 13, 14).

Table 14. Social Media Focus Top 15 Social Media Marketing Agencies in Ukraine (Aug. 2020)

Rank	Agencies Name	Advertising						Total
		Facebook	Instagram	LinkedIn	Snapchat	Twitter	Influencer	
1	AdTribe	50	50	0	0	0	0	100
2	Respect.Studio	0	0	100	0	0	0	100
3	Livepage	60	25	10	0	5	0	100
4	711media	–	–	–	–	–	–	–
5	UAATEAM	30	30	10	10	0	20	100
6	WiserBrand	35	35	30	0	0	0	100
7	NOWEDO	–	–	–	–	–	–	–
8	Mobihunter	30	20	0	0	0	50	100
9	Kosmiqs LLC	25	30	15	5	5	20	100
10	Areanda	40	30	15	0	15	0	100
11	Upturn Digital Agency	–	–	–	–	–	–	–
12	MixDigital	45	40	15	0	0	0	100
13	Polimentor	–	–	–	–	–	–	–
14	Devenup Health, LLC	20	25	20	0	20	15	100
15	ITForce	50	50	0	0	0	0	100

Developed based on: the analytics of clutch.co – Top Ukraine Social Media Consultants.

The results of the study revealed that customers' loyalty to the brand is positively affected when the brand offers: advantageous campaigns, relevant content, popular contents, applications on social media, and appears on various platforms. Customers prefer to share music, technological-related, and funny contents on social media platforms (Zabadi, Abdelrahim, 2019).

Table 15. PPC Focus Top 15 Social Media Marketing Agencies in Poland and Ukraine (Aug. 2020)

Advertising	Poland	Ukraine	Poland	Ukraine
	Agencies Share at the total numbers of the agencies %		Average share of the project at the total projects portfolio, %	
Google Adwords	60,0	53,3	70,0	68,75
Amazon	26,7	20,0	8,75	10,0
You Tube	60,0	46,67	20,0	21,42
Bing	26,7	40,0	10,0	7,5
Yahoo	13,3	20,0	7,5	6,67

Developed based on: the analytics of clutch.co – Top Poland and Ukraine Social Media Consultants.

Analysis of PPC focus top 15 SMM agencies in Poland and Ukraine showed that the most popular is Google Adwords and You Tube (Table 15).

YouTube The world's favorite video platform doesn't share in-depth insights into its advertising audiences.

Much of this data points to the fact that music is the top draw for YouTube audiences, especially in the platform's high-growth markets. Music-related topics accounted for half of the top 20 search queries for on YouTube during 2018. Movies and 'TV content' accounted for much of the rest of the list, but it's worth noting that the games Fortnite and Minecraft both attracted huge volumes of interest on YouTube throughout 2018 (Report Global Digital Overview, 2018).

5. SUMMARY

SMM has many tools to influence consumer buying behavior, and the number of promotion channels surpasses all other types of marketing. The choice of promotion channel and type of SMM depends on the business goals and capabilities of the enterprise. SMM – a set of activities aimed at promoting products or services of the enterprise, as well as communication with potential existing consumers on the Internet platforms of social media resources.

As we noted above, the cold, hard data show that Facebook hasn't experienced any of the dramatic user declines that the media continue to portend. In reality, Facebook user numbers continue to grow around the world, with the platform adding 18 million new users to its addressable advertising audience in Q4 of 2018 alone.

The SMM advantages are: track audience reactions in a constant mode of the present time; daily and direct contact with the target audience; great resonance in the success of the company for the relatively low cost of promotion (the desire of users to share information, distribute posts about the brand); efficiency; wide coverage of the target audience; increasing online and offline activity in social media (constant posting in the feed); use of targeted advertising; ability to use non-standard interactive formats (e.g. wiki markup); event marketing.

Using collected data, we could make the grounded choice of location of the system of artificially intelligence self-education system with the purpose of addressing social and commercial valuable information, such as, for example, advertising of the study of our University among the future students.

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ANALYTICAL EVALUATION OF THE EXPORT OF MEDICINAL PLANTS FROM UKRAINE

Certain aspects of the export of medicinal plants from Ukraine have been investigated in the article. Sales of medicinal plants abroad in the period from 2006 to 2020 in-kind and monetary worth have been analyzed. The geographical structure of export of Ukrainian medicinal plants and the structure of export of medicinal plants from Ukraine by species has been studied. The characteristic positive and negative tendencies inherent in the export of medicinal plants from Ukraine has been revealed and generalized. Importance of medicinal plant production for the national economy of Ukraine, the ability to partially meet the demand for medicinal plants in the world, in particular in European countries, and the factors that determine the economic feasibility of given production has been emphasized.

Keywords: medicinal plant production, export capacity, evaluation of the market, structure of export of medicinal plants.

1. INTRODUCTION

There is information that there are about 320 thousand species of plants in the world. Of these, 3 thousands are a source of food, 5 thousands are used for industrial purposes, 15 thousands as ornamental plants, 25 thousands for medicinal purposes, and others are used for various needs. There is also a claim that there are 422 thousands flowering plants in the world and 72 thousands of them are used for medicinal purposes. Beyond that, studies by Karik U., Tunçtürk M. (2019) show that 900 species of medicinal plants in the world are grown for commercial purposes and that the production of medicinal plants, including essential oily and spicy, in the modern global agro-industrial complex is considered to be one of the most profitable. Export-import of medicinal plants in the world is also widely developed in today's conditions. Thus, Mafimisebi, T. (2013), studying the international market of medicinal plants and products of their processing, points out that it is very voluminous. Medicinal plants, including essential oily and spicy are sold both as raw materials and as processed final products. Demand for these products is growing rapidly, as new directions of medicinal plants uses are constantly appear and these markets are

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constantly expand. World Bank experts note that global demand for medicinal plants, especially as raw materials for more complex final products, has been growing steady since the turn of the century, and the World Health Organization forecasts that the global herbal market will grow to \$ 5–7 trillion until 2050 (Medicinal and Aromatic Plants, 2018). The largest suppliers to the world market of medicinal plants from Asia are China and India, from Africa – Morocco, from Europe – Poland, Bulgaria and Albania, from South America - Chile and Peru. The largest consumers of medicinal plants in the world are the United States, Japan and Europe. Thus, it is known that in Japan 90% of the population use medicinal plants in nutrition and treatment of various diseases (Rokhsareh Asl Roostaa, Reza Moghaddasib, Seyed Safdar Hosseini, 2017). Today, European market is considered to be one of the world's largest commercial medicinal plants and plant-origin medicines markets. European countries not only import, but also produce a wide range of medicinal plants and medicines based on plant raw material. European consumers, for example in France, Germany, Italy, Sweden and England, often use medicinal plants as an adjunct to medication treatment (Mirzoieva, 2013).

Thus, in today's conditions, medicinal plant production plays an important role in the world economy and in fact has become a separate export-oriented direction of production activity. In Ukraine, despite the fact that medicinal plant production has a stable export orientation in recent years, this branch is not a priority sector of the economy. As a result, the share of medicinal plants is teeny in the total state export. At the same time drawing attention to the fact that while exporting agricultural sector products, first of all Ukraine sells abroad grain, world prices for which have been falling steady in recent years, it would be useful to move to a multi-purpose export policy. In particular, if we consider that worldwide export of cultivated medicinal plants is an extremely promising area of the economy, it is necessary to study trends in export of medicinal plants from Ukraine to determine the existing potential. Therefore, the purpose of this research is to analyze Ukrainian export of medicinal plants and to identify its characteristic trends.

2. METHODOLOGY OF RESEARCH AND RESULTS

The study was practical in nature and was conducted using the method of scientific comparison, descriptive-analytical method and the method of statistical analysis. The method of scientific generalization was used to formulate the conclusions of the research.

Ukraine having a huge potential, now is the 44th in the world ranking of exporters of medicinal plant products. According to experts, the state does not use the export potential practically in the market of medicinal plants (*Ukraine practically does not use...*, 2018). Nevertheless, Ukrainian export of medicinal plants has been characterized by a number of positive trends during recent years.

The average annual indicator of export of medicinal plants from Ukraine in 2010–2020 fluctuated within about 3 thousand tons of products (Fig. 1). At the same time, the largest export increase was observed in 2019 – 4.39 thousand tons or 12.08 million dollars. USA, which is 2.2 times more in-kind and 3.6 times more in monetary worth, compared to 2010 (Market Review, 2020, 2018).

The largest collapses of export of medicinal plants from Ukraine were in 2006 and 2014. After the collapse in 2014, since 2015 there has been a gradual increase in export of medicinal plants from Ukraine. Thus, in the period from 2014 to 2019, the export of medicinal plants from Ukraine increased by 87.6% in-kind. It can be explained by the fact

that in recent years European companies, realizing that Ukrainian medicinal plant raw materials are more cost-effective for them and have a high concentration of active substances, began to buy it actively from Ukrainian producers and intermediaries.

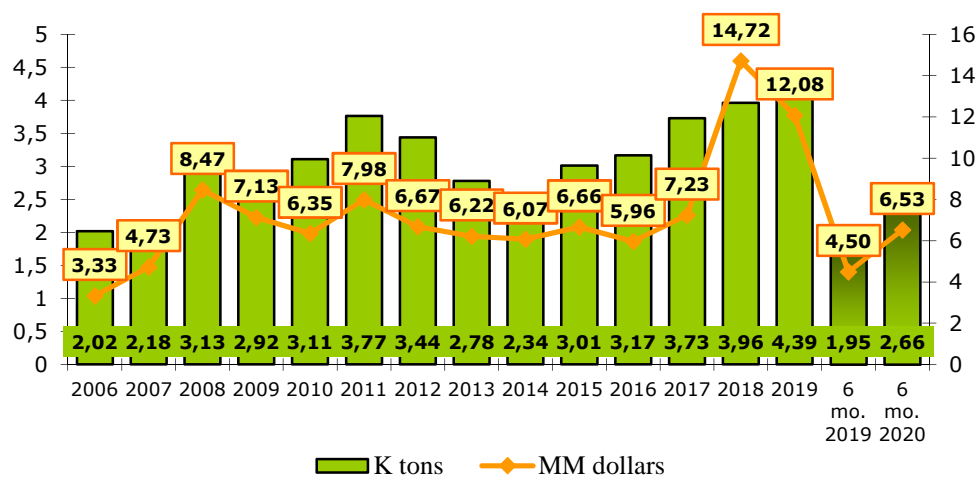


Fig. 1. Dynamics of export of medicinal plants from Ukraine in 2006–2020, thousands of tons, millions of USA dollars

Source: (*Market Review.....*, 2020, 2018. Author's own depiction).

In turn, export of medicinal plants from Ukraine in monetary worth in 2019 increased by 99% compared to 2014. A significant increase in export of medicinal plants in monetary worth indicates that Ukrainian producers have begun to produce higher quality products that meet the foreign buyer's needs. At the same time, drawing attention to the fact that Ukraine is unique for its great variety of medicinal plants, experts point out that the country is able to increase export of given products (Lavender Plantation will pay off in 2 years, 2018, Stepanushko, 2018).

According to the statistics, in 2010-2011 the biggest consumers of Ukrainian medicinal plants were Poland and Russia, in 2012-2013 - Austria, Poland and Russia. In 2014, Germany joined the leading countries-consumers of Ukrainian plant raw materials. In 2015, among the three leaders in the overall export structure of medicinal plants from Ukraine were Poland – 38.51%, Latvia – 14.83% and Germany – 13.06% (Fig. 2).

Export of Ukrainian medicinal plants to Germany, which is a major player in the area of medicinal plants in the world, has been growing in recent years. This is due to the fact that any other European country doesn't consume as many medicinal herbs as Germany – in recent years, doctors and patients in Germany more and more preferred natural rather than chemical medication. When Germans come to the pharmacy without a prescription, three-quarters firstly ask about herbal medicines (Medicinal Herbs, 2008). In addition, German inhabitants do not drink usual for Ukrainians green or black tea, they prefer herbal teas. And since some species of plants are threatened with extinction in Germany itself, German producers are looking for medicinal plant raw materials outside their country.

Currently, experts point out that Germany is ready to buy 40,000 tons of medicinal plants a year in Ukraine.

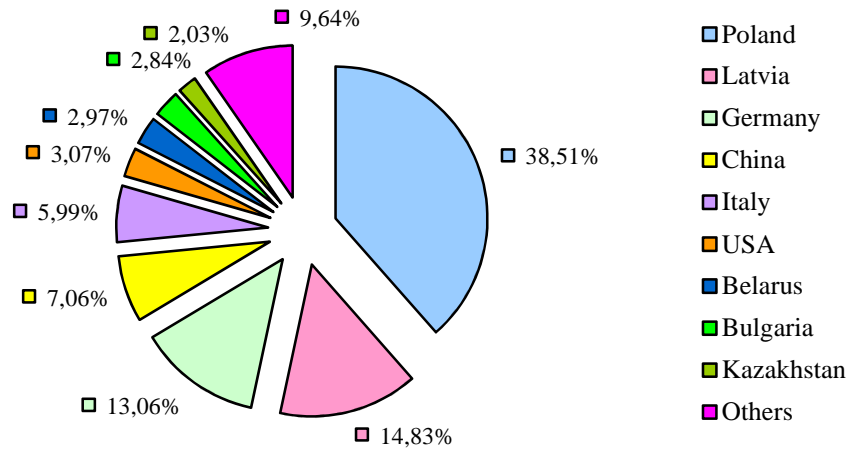


Fig. 2. Geographical structure of export of medicinal plants from Ukraine in 2015, % (in-kind)
Source: (Market Review..., 2020, 2018. Author's own depiction).

According to the analysis of the geographical export structure of medicinal plants from Ukraine in 2020 the largest buyers of domestic medicinal plants in-kind were Poland (35.48%), China (13.63%), Latvia (11.01%) and, again, Germany (8.7%) (Fig. 3).

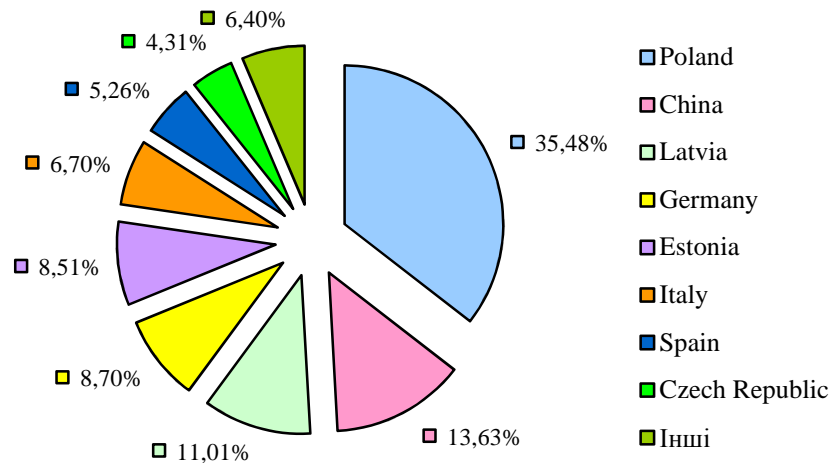


Fig. 3. Geographical structure of export of medicinal plants from Ukraine in 2020, % (in-kind)
Source: (Market Review..., 2020, 2018. Author's own depiction).

According to experts, in the future the demand from Europe for Ukrainian medicinal plants will only increase. The marginalization of such production depends on both individual crops and demand from importing countries. Thus, Yevhenii Shumeiko, owner of the Ukrainian company “Dobrotrav”, which specializes in cultivation and harvesting high-quality medicinal plant raw materials, notes that a significant number of medicinal plants are popular on the European market –they are elderberries, lime blossom, nettle leaves, marshmallow root, burdock root, Echinacea root and herb, dandelion root and leaf, birch leaf, coltsfoot leaf, plantain leaf and others. (Demand is growing in Europe, 2018).

The rapidly increasing demand for medicinal herbs in the world is largely due to the fact that European producers are gradually abandon their cultivation and prefer to buy finished raw materials in developing countries, including Ukraine, in order to resell it to other countries or for production of value-added products on a plant basis. For example, Poland and Bulgaria, which until recently traditionally specialized in cultivation and harvesting medicinal plants, are changing their references. It is assumed that these countries turn into importers from pure exporters of medicinal plants, including buying products in Ukraine and reselling them or products based on them to customers in Germany, the USA and Japan.

Information of fig. 4 shows that the most important batches of medicinal plants in 2020 in monetary worth were sent from Ukraine to Poland (31.5%), Germany (19.56%) and Latvia (15.15%). Thus, during 2015–2020, export channels for the distribution of Ukrainian origin medicinal plants remain stable, which indicates a relatively well-established cooperation between domestic sellers and foreign buyers.

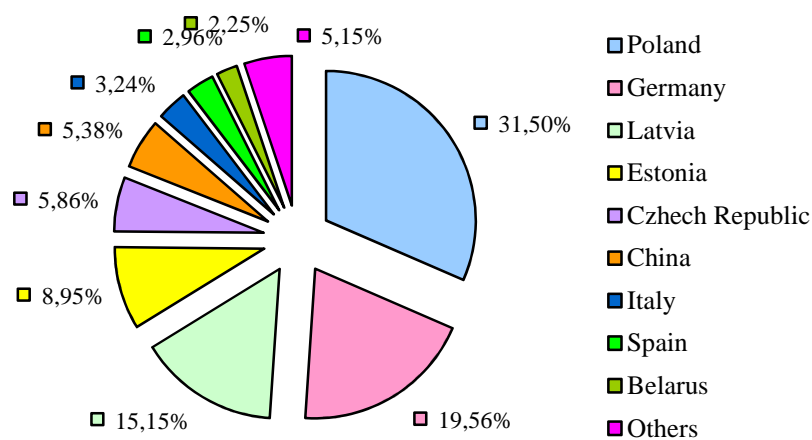


Fig. 4. Geographical structure of export of medicinal plants from Ukraine in 2020, % (in monetary worth)

Source: (*Market Review...*, 2020, 2018. Author's own depiction).

The fact that the number of exporters of medicinal plant raw materials gradually increased we consider as positive: in 2012 there were 4 of them, in 2015 – 10, in 2018 – 30. At the same time, it was found that 50–60% of all sales of Ukrainian medicinal plants in

2020 account for 4–6 Ukrainian companies, two of which are large intermediaries, so this fact indicates that this segment in the structure of Ukrainian export is still extremely narrow.

The study revealed that the characteristic factors of Ukrainian export of medicinal plants are also: 1) 80% of export is wild ones; 2) there is almost no organic plant raw material, which has the biggest demand on the world market in today's conditions.

The backlog of Ukrainian producers in the direction of organic medicinal plants production gives a competitive advantage to the United States and Europe, since there are about 30% of the medicinal plants market are organic in there. Although, it should be noted that Ukraine is also actively increasing the export of organic products, in the which structure a significant share is falls on medicinal plants. Thus, according to the leading national certification body “Organic Standard”, the main organic products (by volume) exported from Ukraine in 2017 were: corn, wheat, soybeans, barley, sunflower, millet, rapeseed, blueberries (frozen), oats, millet, lupine, apples (fresh), buckwheat, mustard, elderberry (fruit), pumpkin seeds, birch sap, flax, rye, walnut (kernel), sea buckthorn (frozen), blackberry (frozen), dog rose (frozen), coriander, peas, elderflower flowers (frozen), strawberry (frozen), cranberry (frozen), hawthorn (frozen), durum wheat flour, cranberry (frozen), mountain ash (frozen), chamomile (dried), hemp, raspberry (frozen) and sunflower oil (*Ukraine is increasing...*, 2018). In the next years and until 2020, the volume and list of exported organic products only increased. The list above shows that a significant part of organic products Ukraine export belongs to medicinal plants - lupines, elderberries, pumpkin seeds, coriander, flax, chamomile, etc., which reflects the presence of positive trends in the development of medicinal plants in general.

In general, the export of medicinal plants from Ukraine is currently characterized by: an increase in the number of exporting companies; purchases in Ukraine and export from Ukraine by Polish companies; increasing of the export amount from year to year, increasing of the export to Asia. In 2018, Ukraine had the 4th place in the volume of export of organic products to the EU, behind China, Ecuador and the Dominican Republic. According to the results of 2019, Ukrainian export of organic products to the European Union increased by 27% compared to 2018 or to 337.86 thousand tons and, accordingly, Ukraine ranked 2nd out of 123 countries in volume of export of organic products to the EU, up on two positions compared to the previous year (*Ukraine – in second place...*, 2020).

Analysis of the export structure of medicinal plants from Ukraine by species in 2015–2020 in-kind indicates that at the beginning of the study period the most sold plants abroad were chestnut (19.85%) and blessed milk thistle (12.30%) and a fairly wide list of others medicinal plants (Fig. 5). List of medicinal plants sold by Ukrainian producers and intermediaries abroad is broad enough to confirm once again the existence of demand for this product and Ukraine's ability to meet it. In 2020, indicated trends remained.

Analysis of the medicinal plants export structure by species in 2020 in-kind (Fig. 6) indicates that Ukrainian producers continued to sell a fairly wide range of products abroad. The leaders of sales at the end of the study period were chestnut and Echinacea – the percentage of the Echinacea in the overall export structure of medicinal plants from Ukraine in-kind in 2020 amounted to 8.36%. Beyond that, domestic producers sell abroad large number of elderberry, birch buds and leaves, nettle, buckthorn bark, celandine, St. John's work, corn silk, horsetail, immortelle, sweet flag and other medicinal herbs. Wide range of medicinal plants that are sent abroad and accordingly to it are in demand is also a confirmation of the prospect and economic feasibility of their production and we believe

it is another argument for the development of medicinal plants to come into the attention of the state.

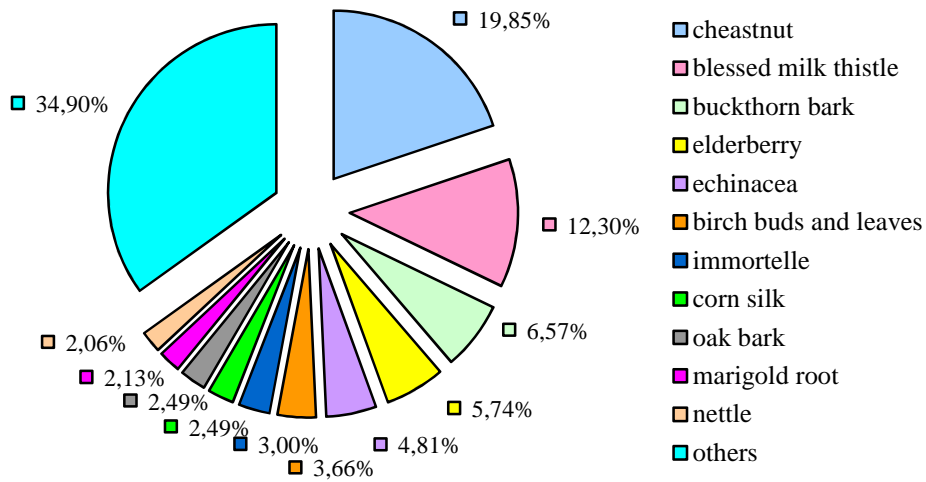


Fig. 5. Structure of export of medicinal plants from Ukraine by species in 2015, % (in-kind)
Source: (Market Review..., 2020, 2018. Author's own depiction).

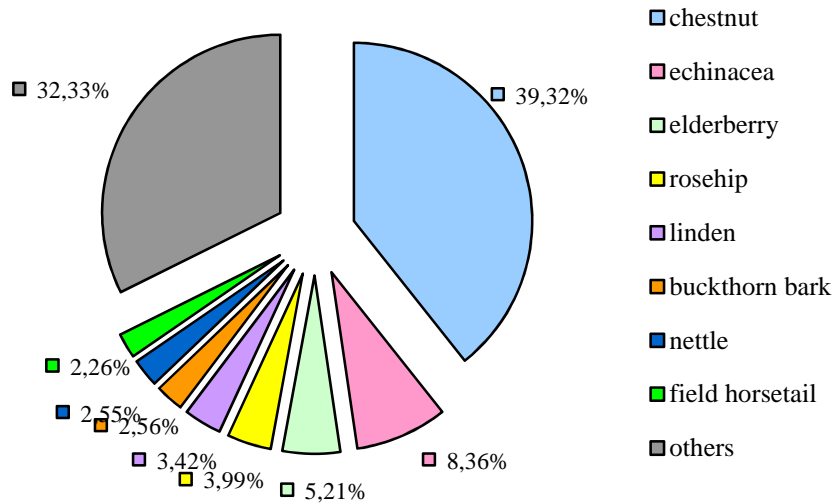


Fig. 6. The structure of export of medicinal plants from Ukraine by species in 2020, % (in-kind)
Source: (Market Review..., 2020, 2018. Author's own depiction).

Analyzing the structure of export of medicinal plants from Ukraine by species in monetary worth, in 2015, exporters received the biggest amount of money from the sales of elderberry (16.79%), chestnut (7.39%) and buckthorn bark (6.92%) (Fig. 7). Blessed milk thistle was at the fourth place of cash proceeds – 6.87%. These are plants on the basis of which a large number of medicines, disease prevention products and a number of healthy food around the world are produced.

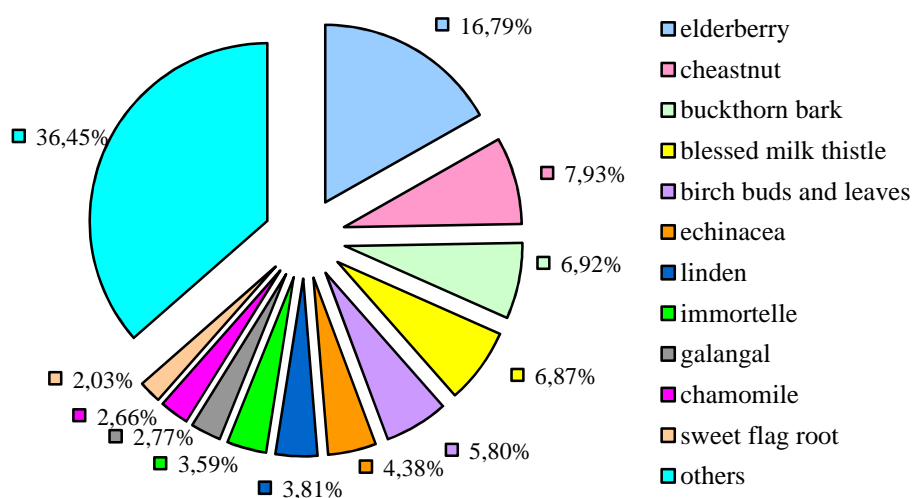


Fig. 7. Structure of export of medicinal plants from Ukraine by species in 2015, % (in monetary worth)

Source: (*Market Review...*, 2020, 2018. Author's own depiction).

In principle, the structure of export of medicinal plants from Ukraine by species in 2015 in monetary worth echoes with the structure of export of medicinal plants from Ukraine by species in-kind in the same year. That is, it can be noted that the largest profits producers receive by selling products in large quantities. In the same time the sale of high-value medicinal raw materials in small quantities may also be forward-looking. However, it is possible with the presence of modern technological methods of deep processing of medicinal plants, which is not present in the vast majority of Ukrainian producers in the area of medicinal plants at this stage of development. And intermediaries-buyers, as a rule, use their efforts for collect as large batches of goods as possible and send them abroad through the established channels. So the main problem of medicinal plant export from Ukraine is similar to the Ukrainian agricultural sector in general - producers mainly sell raw materials abroad, rather than the final product with high added value. We believe, the solution to this problem directly depends on the development and introduction of an effective strategy for the development of medicinal plants in the country.

In 2020, the situation with the export of medicinal plants from Ukraine has changed a bit. Thus, the largest in-kind export were chestnuts, Echinacea, elderberries, rose hips, and the most of monetary proceeds in the same year were received from export of chestnuts

(27.14%), lindens (22.58%), elderberries (15.66%), Echinacea (8.92%) and lavender (6.93%) (Fig. 8).

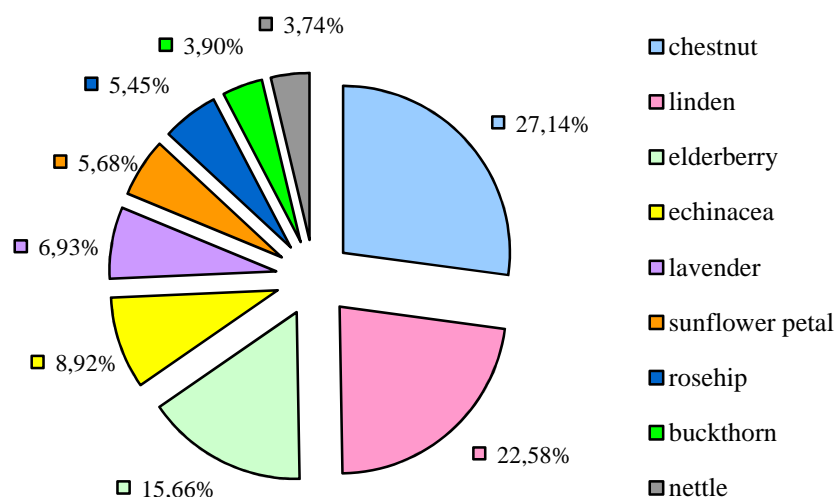


Fig. 8. Structure of export of medicinal plants from Ukraine by species in 2020, % (in monetary worth)

Source: (*Market Review...*, 2020, 2018. Author's own depiction).

The last one, in particular the export of lavender, requires some comments. The matter is that the production of lavender in Ukraine is only gaining momentum and it has not impregnated domestic market yet. Nevertheless, as we can see, some Ukrainian producers have started production of lavender in response to the significant demand for this crop and its essential oil from foreign consumers. The analysis of the structure of export of medicinal plants from Ukraine showed that these are actually niche crops to a large extent – those which can produce significant profits with small volumes of production.

It is necessary to note that the structure of export of medicinal plants by species is not something stable and constant. Need for certain type raw materials depend on the provision of it in the previous period and on the general trends in the consumption of medicinal plants in Ukraine and in the world. For example, in the CIS in today's conditions, the consumption of medicinal plants is declining due to impoverishment, but is increasing in Germany. Export-import volumes and prices for medicinal plants accordingly depend on weather conditions, the world harvest and tendencies in the processing enterprise's needs. Thus, in 2017, linden color price in Ukraine increased 2–2.5 times, due to the dry summer its main supplier Bulgaria had a crop failure (Stepanushko, 2018). This led to the linden taken the second place in the structure of export of medicinal plants from Ukraine by species in 2017 (in monetary worth) while in 2015 it took the seventh place.

Analyzing the export of Ukrainian medicinal plant raw materials, we cannot ignore the fact that the sale of medicinal plants abroad must be controlled by the state so it is no harm to the domestic vegetation, as is sometimes the case. In many countries of the world there

is a critical situation with the resources of wild medicinal plants today because of excessive and sometimes uncontrolled procurement of medicinal raw materials. Thus, the uncontrolled collection and export of medicinal plants in general and extremely valuable ones in particular lead to the impoverishment of vegetation and to the degradation of agricultural land in the country.

3. CONCLUSION

In general, the analysis of export of Ukrainian medicinal plants revealed that: 1) its volumes are characterized by increase trends in monetary worth and in-kind; 2) the largest buyers of Ukrainian medicinal plants are Poland, Germany and Latvia, where is a stable constant demand for medicinal plants and products based on them; 3) Ukraine distributes a wide range of medicinal crops abroad; 4) a core of large permanent players has been formed within this segment in Ukraine.

Along with this, the main drawbacks in the field of export of medicinal plants from Ukraine were revealed: first, paying attention to the huge world demand for medicinal plant products and Ukraine's huge opportunities to partially meet it, the number of producers and exporters of medicinal plants in Ukraine is still extremely small; secondly, the largest profits Ukrainian producers receive by selling medicinal plants in large quantities, while the sale of high-value medicinal raw materials in small quantities may be forward-looking; thirdly, the main problem of export of medicinal plants from Ukraine is that inherent in the Ukrainian agricultural sector in general – producers sell abroad mainly raw materials, rather than the final product with high-added value.

Also, the analytical assessment of the export of medicinal plants from Ukraine testified to the prospects and economic feasibility for their production and is an argument that the development of medicinal plants came into the view of the state. Drawing attention to the important role which the sale of agricultural products abroad currently play in the development of the Ukrainian economy, the development of export of medicinal plants is also essential, as it will increase foreign income to the state budget.

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KREMLIN INFORMATION CAMPAIGN IN THE BALTIC STATES DURING THE COVID-19 PANDEMIC ESCALATION OF SPRING 2020

The authors examine pro-Russian media outlets during the escalation of COVID-19 pandemics in Spring 2020 (March–May). Strategic narratives constructed and disseminated by the Russian Federation for the Baltic states (Estonia, Latvia and Lithuania) may emphasize: political and economic motives related to the policies of governments of the Baltic states; status-related motives to disrupt the international system and Western-led political institutions through the Baltic states; conflictual motives indicating opposing identities between Russian and Baltic nations, which have often emphasized the Russophobic context of the Baltic identity-building. These strategic narratives are part of Moscow’s strategy that aim is to destroy the unity of West and to increase ideological fragmentation in the European Union. Therefore, Baltic states have become an important target of influence operations conducted by the Russian Federation because of their geopolitical location and strategic importance.

Keywords: Russia, strategic narratives, COVID-19, Baltic states, international system, EU, economic, crisis, politics, influence activity.

1. INTRODUCTION³

The massive spread of corona-virus (SARS-CoV-2) started in China in late 2019⁴. The virus developed into the pandemic disease of COVID-19 conquered most of the world by early 2020. The world experience with the pandemic of testified that in the globalized world, in addition to imminent military threats, mankind faces a variety of miscellaneous risks the impact of which on the global security environment is often unpredictable (Franke, 2015; Renz, 2016; Heap, Krauel, Althuis, 2019).

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⁴ World Health Organization, Coronavirus 2020. [access: 8.05.2020]. Access on the internet: <https://www.who.int/health-topics/coronavirus>.

Often these threats and challenges are hybrid in nature and will simultaneously target various strategic vulnerabilities of opponent societies like historical memory, legislation, traditions, geostrategic factors, technological disadvantages, or a polarisation of society by ideological differences, among others (Sazonov, Koort, Heinsoo, Paas 2020)⁵. During the crisis it became obvious that the world was insufficiently prepared to deal with such an unconventional and untraditional security threats like the spread of pandemic diseases, Open societies of the Western world are particularly vulnerable in the time of crisis, being more influenced by fear-mongering emotions (e.g. fear and uncertainty) that influence public opinion. This produces widespread anxiety in society and puts pressure on elected politicians who should take into account popular trends in their decision-making process.

The vulnerabilities of the Western liberal democratic system have been often successfully abused by revisionist powers interested in changing the balance of power, and a number of status-seeking rising powers interested in changing the status quo in the current post-Cold war international order (e.g., China and Russian Federation) aimed to strengthen their international status in order to increase their influence in international relations (Lebow, 2010). All in all, the interoperability of the international community in standing against unconventional security threats left much to be desired during the corona-crisis. For example, China has skilfully used panic caused by the spread of coronavirus in its propaganda activities against the United States and European Union as it sees them as potential economic rivals (Rough, 2020). The main goal of Russia's information activities and influence operations is to widen the political gap between Europe and the United States and to reduce the US contribution to NATO and the European security. The second purpose is to shape public opinion and to mobilize populist movements in the Western societies that oppose the liberal democratic principles and are sceptical about the constitutional guarantees of minorities and the protection of individual rights on behalf of the Kremlin strategic interests (Makarychev, Sazonov, 2019).

The goal of influence operations in general is to direct societal attitudes by sowing panic and fear and creating information confusion or chaos. The most important tools of modern influence operations are not only related to the mainstream media but also social media can reach target groups, these capabilities having been developed not only by Russia but also by China (EEAS Special Report Update, 2020). Facebook, Twitter and other social media platforms and channels have long become instruments of information manipulation through which messages delivered to the target audience may contain distorted and skewed information or outright falsehoods. For example, China's outreach has projected thousands of English-language social media posts accusing the United States of unleashing the virus (Weedon, Nuland, Stamos, 2017).

The global spread of SARS-CoV-2 is just one new episode of influencing efforts perpetrated by these countries to take advantage of the chaotic situation created by the virus (Latvijas Radio, 2020). Insufficient preparedness of the globalizing world to respond to the crisis of COVID-19 increases the effectiveness of illiberal challenges in which corona virus becomes an effective propaganda tool that can destabilize liberal democratic societies by sowing insecurity, fear and confusion. With the spread of the pandemic of COVID-19 a lot of information noise, fake-news and conspiracy theories have been released and

⁵ Countering Hybrid Threats. [access: 1.05.2020]. Access on the internet: <https://www.hybridcoe.fi/hybrid-threats/>.

disseminated into both the mainstream and social media (Barnes, Rosenberg, Wong, 28.03.2020).

This article analyses the affiliation and the strategic narratives produced and disseminated by the Russian Federation in Estonia, Latvia and Lithuania during the spread of COVID-19 in selected articles from media outlets supporting the Kremlin's policy. The concept of strategic narratives has been widely adopted in political communication and international relations (Antoniades, O'Loughlin, Miskimmon, 2010; Roselle, Miskimmon, O'Loughlin, 2013). Strategic narratives take into account stories existing in the collective memory as well as other factors framing the interpretative atmosphere (e.g., shared ideological beliefs, political agendas, but also people's fears and expectations) (Ventsel, Hansson, Madisson, Sazonov, 2019). The better political actors succeed in aligning the narratives of the system, politics and identity with their strategic goals, the greater chance they have to increase their influence in international relations (Miskimmon, O'Loughlin, Roselle, 2018).

2. METHODOLOGY

Qualitative content analysis was applied to analyse the collected data by using a hidden pilot sample (three articles from three different publications) on the basis of which primary coding was performed (Kracauer, 1953; Kuckartz, 2014). A substantive analysis of a larger number of articles followed the pilot study. The authors analyzed the content of specific texts as well as the expressions, words and sentences in the articles, including the tone of the texts (e.g., emotionality, ridiculing, intimidation). When analysing the results it is important to keep in mind that the method used in this article makes it possible to determine the presence of certain motifs in the publications under examination, but this study does not allow the deduction of broader generalization about the extent or consequences of influencing.

3. DATA SAMPLE

In this study, the authors focused on 15 articles published from 20 March to 15 May 2020 in the following news agencies: *Baltnews.ee*, *RuBaltic.ru*, *Inosmi.ru*, *Взгляд.ру*, *Ритм Евразии* and *Sputnik*, known for supporting the strategic goals of the Putin administration of Russia. The selection was made by the target audience of the Russophone community in the Baltic states. The preliminary results of the study were published in the Estonian Journal "Sõjateadlane" (Military Scientist) (Mölder, Sazonov, 2020).

RuBaltic.ru was founded in January 2013 on the initiative of researchers from Moscow and Kaliningrad; its editor-in-chief currently is Sergei Rekada⁶. The information agency *Sputnik International* was established in 2014 with the aim of developing Russia's influence operations abroad. Its actions in Estonia were terminated in 2019 after sanctions against the Kremlin propaganda channel *Rossija Segodnya* (Russia Today), which owns the agency (Err.ee, 2019). In the Baltic states, Sputnik's representative office continues to operate in Latvia. The server for Lithuanian-oriented *Sputnik Lietuva* is located in Russia. *Inosmi.ru* is an online portal registered on April 8 2014 by the state-owned company *Rossija*

⁶ Редакция. – RuBaltic.ru. [Access: 19.05.2020]. Access on the internet: <https://www.rubaltic.ru/edition/>.

Segodnya. It is focused on Western news, and they publish a lot about the Baltic states (Springe, 2018).

Baltnews.ee belongs to the Russian state media group *Rossiia Segodnya*, which is led by Dmitry Kisselyov. According to the Estonian Security Police, *Baltnews.ee* is a pro-Kremlin source financed by the Russian Federation and its target audience are Russophone people in the Baltic states. The activities of *Baltnews.ee* are financed through shadow companies located in various European countries (Kaitsepolitsei aastaraamat 2015; Propastop, 2018).

The web portal “*Взгляд.ру*” (Sight) belongs to the Russian online newspaper *Vzglyad*. Its editor-in-chief is Konstantin Kondrashin and it has been in publication since May 2005. The newspaper's editorial office is located in Moscow⁷. The *Ритм Евразии* (*Rhythm of Eurasia*) is a Russian-language platform which was created primarily for politicians, public figures, experts and journalists in the post-Soviet space, but they also have a wider target audience⁸.

4. STRATEGIC NARRATIVES IN THE KREMLIN'S INFLUENCE ACTIVITIES

G.H. Karlsen (2019) analyses intelligence reports from various countries and argues that Russia has three primary strategic goals: ensuring the power and security of the Putin administration in the country; maintaining influence in the "near abroad" (former USSR countries except three Baltic states); and securing the status of a great power internationally. Russia's influence operations outside the post-Soviet space disseminate strategic narratives that amplify or shape perceptions of the world and political preferences in line with the Kremlin's foreign policy goals (Mölder, Sazonov, 2018; van Herpen, 2016). The Kremlin's strategic narratives are often targeted at various alternative and anti-establishment groups, which may represent both the right and left side of the political spectrum, e.g., Eurosceptics, anti-US, anti-immigration and anti-globalization movements. Strategic narratives are brought to target groups through public and covert methods. In doing so, the narratives conveyed often remain declarative without specifying specific steps or timelines or assessing their effectiveness in achieving the objectives (Kuhrt, Feklyunina, 2017).

Vladislav Surkov, the Kremlin's long-time leading ideologue who was fired by presidential order in February 2020, stated that among Russia's highest strategic goals is to become a world leader, and for that it must first and foremost guarantee the welfare of its citizens (Mäkinen, 2011). Surkov's concept of modernization without Westernization has strongly influenced the policies of Vladimir Putin's administration and has had a rather significant impact on Russia's strategic narratives. His perceptions of Russia's sovereign democracy can be understood as a unique way for the Russian Federation to achieve its strategic goals, where no outside power dictates to Russia and the Russians how this path should proceed (Yablokov, 2018). One of the key elements in Surkov's concept is to strengthen the worldwide competitiveness of the Russian economy. Russia's raw materials-based economy should be transformed into an innovative and intellectual economy (Surkov, 2008). President Vladimir Putin has called Russia a unique civilization that must be protected through the development of genetics, artificial intelligence, unmanned vehicles and other high technologies (The Moscow Times, 2020).

⁷ Выходные данные [Access: 25.05.2020]. Acces on the interent: <https://vz.ru/about/staff.html>.

⁸ <https://www.ritmeurasia.org/articles--o-proekte-167> [Access: 18.05.2020].

Strategic narratives on the international system spread by the Kremlin administration describe the Western world, along with its institutions (EU, NATO), predominantly as a vanishing and diminishing force suffering from liberal democratic values equated with weakness (Szostek, 2017; Sakwa, 2007). In its opposition to US hegemony Russia has paid more attention to international law, in that it manifests itself as a normative power and portrays Washington as a power that violates the norms of international law. Russia does not claim the status of norm-maker, but wants to create a new normative world order with Western countries divided into spheres of influence which, however, may not always be in line with the political ambitions of the EU and the US (Kuhrt, Feklyunina, 2017). Russia's narratives describe Western institutions primarily as corrupt and in need of reform, which is why Russia supports alternative formats of international cooperation excluding the West (e.g., BRICS – Brazil, Russia, India, China, Republic of South Africa) (Hinck, Kluver, Cooley, 2018). The Baltic states are in general described as a poor periphery of the West, abandoned by their new hosts and facing serious difficulties after leaving the Soviet bloc, such as economic and social decline. The political strategic narratives constructed by the Kremlin's policymakers emphasize Russia's role as holder of traditional conservative values, rescuing the world from the shackles of liberal ideology in the degenerate Western world (Laruelle, Radvanyi, 2018). In some cases they are more affected by imperial nostalgia for local audiences and alienated public sentiment abroad.

Strategic narratives emphasizing identity present two dominant motives that are strongly emerging: the patriotic image of Russia as a great power and a distinct civilization; and the need to secure Russian society (Kuhrt, Feklyunina, 2017). For Russian propaganda, it is important to emphasize Russia's peculiarity and alternative to the Western political and economic elites so they can easily find common ground with dissatisfied communities in Western countries, something which poses a serious challenge to both Western internal stability and ideological unity in defending liberal democratic values (Kuhrt, Feklyunina, 2017).

Identity-based strategic narratives are often based on a strong opposition between imagined collective identities – Us and Others. At the same time, motives referring to Russophobia in strategic narratives are sympathetic to the politics of the Kremlin (Darczewska, Żochowski, 2015). The term Russophobia has been “used by Russia for both domestic and foreign policy purposes, and historically the Kremlin's elite has concentrated much of the negative flow of information on Russia under the narrative of Russophobia” (Ventsel, Madisson, Hansson, Sazonov, 2018). The popular narrative of the oppression of the Russian-speaking population in the Baltic states tells us they are hated and deprived of many fundamental rights because of their national identity (Lucas, Pomerantsev, 2016).

Very often, Russia's strategic narratives support various theories about the conspiracy of Western civilization against Russia. Conspiracy thinking has been a widely-used political tool to keep society in a single constructed information space since the days of the Russian Empire. During the Soviet era there was the belief that Western countries dreamed of destroying and humiliating the Soviet Union, which was widespread in Soviet society, and such conspiratorial thinking has been transferred to today's Russian Federation (Yablokov, 2018). However, such activities have also been transferred to the post-Soviet space, especially for fuelling regional conflicts and for accusing the West in anti-Russian conspiracies (Mölder, Sazonov, 2019).

The Kremlin-induced information warfare is still very active and uses all possible opportunities. During the global corona crisis Russia's influence operations in the West have

shown no signs of fading. Finnish researcher Saara Jantunen points to a fundamental difference between the Western and Russian influence activities, which makes it for the latter very flexible. In the West, legislation imposes fundamental restrictions on the use of influence in communication by the state and military organizations in target groups, but Russia does not recognize such restrictions i.e. there is no problem (Jantunen, 2018). On 3 February 2020 the World Health Organization (WHO) declared that coronavirus is a global threat and since then messages on social media proclaimed it as a new type of biological weapon. Western analysts believe the campaign in social media was launched by President Vladimir Putin personally who has previously claimed that large-scale viral epidemics such as Ebola, bird and swine flu, or now the coronavirus, were developed by American scientists (Broad, 2020). According to the *New York Times*, this is not surprising as, during his 16-year KGB career in 1975–1991, Vladimir Putin was responsible for, among other things, a campaign accusing the United States of using diseases (more attention was paid to HIV) as biological weapons (Broad, 2020).

Opposition to the West is also one of the main motives for presenting the consequences of the coronavirus, which calls into question the West's ability to cope successfully with the crisis, and is not shy in returning to conspiratorial sources when constructing its strategic narratives. Several US experts refer to Russia's new strategy of producing less fake news itself, but spreading messages produced by others that cause fear and chaos. It is possible that such slippery news is even bought in (Broad, 2020). Pro-Russian social media has been keen to disseminate the allegations of the US conspiracy virus blog *Naturalnews.com* that coronavirus was engineered by scientists in a laboratory using advances in genetic engineering that have left traces of genetic code that can only be artificially generated. According to the blog, both the American CDC and the WHO are trying to hide the causes of coronavirus because the virus escaped from Chinese biological weapons laboratories, just as the Ebola virus escaped from US laboratories in 1989 (Adams, 2020).

The main goal of Russian influence operations is to spread fear and instability and to increase political and ideological divisions in Europe, the United States and, more broadly, the West (Rutenberg, 2017). Russia's information activities have been remarkably active in promoting their influence all over the world. Videos distributed through the international social channel RT social media YouTube platform accumulate up to a million viewers a day and have been visited four billion times since 2005 (Director of National Intelligence, 2017). RT's strategy is primarily aimed at Russian, English, Spanish and Arabic viewers. They have been successful in the first three languages, while the impact of their Arabic channels has been smaller (Orttung, Nelson, 2018). In 2012 the Internet Research Agency was founded in St. Petersburg. It became a successful trolling company that conducted influential social media campaigns on Facebook, Twitter and Instagram, and was successful in the United States where their posts reached the computers of tens of millions of social media users (Howard, Ganesh, Liotsiou, Kelly, François, 2018).

Narratives from Russia unequivocally show the role of the Russian Federation as a helper, not the one who needs help. At the height of the corona crisis in Europe in mid-March the Russian Federation attracted the attention of the international media when they, together with the People's Republic of China and Cuba, offered aid to Italy who suffered severely from the Covid-19 crisis. The Russian Federation provided Italy mainly with diagnostic equipment and disinfectants (Prothero, 2020). China, on the other hand, mainly supplied respirators and medical devices (Err.ee, 2020). US analyst Mark Galeotti believes that the main purpose of Russia's assistance was related to its intelligence activities

in order to gather as much information as possible about the Western countries' fight against the virus, and among Russian experts sent to Italy were those involved in intelligence (Err.ee, 2020).

The issue of humanitarian aid was used in influence activities against other European Union member states, from which Estonia did not escape either. At the end of March 2020 the pro-Kremlin media claimed that protective masks that had arrived from China to Tallinn Airport were actually Russian humanitarian aid to Estonia because the protective masks were brought to Tallinn by a plane leased from Russia (Einmann, 2020). Russian Foreign Minister Lavrov told Russia's First TV Channel "Bolshaya Igra" (in Russian "Big game") that many NATO and EU member states would be interested in Russia's assistance in halting COVID-19, but their "big brothers" (leading countries) denied it (Tass.com, 2020). With regard to the aid sent to Italy, Lavrov also claimed that the European Union had refused to help Italy, which led the Italian Prime Minister Giuseppe Conte to turn to Russia with the request (Giuffrida, Roth, 2020).

Lavrov intends to convince us that Russia is ready to take responsibility for the functionality of the international system because the countries of the European Union are unable or unwilling to do so. All in all, the nature of Russia's strategic narratives did not change much during the COVID-19 outbreak in Europe. The motive of confrontation with the West remained in the top of strategic objectives, as did the reliance on conspiracy theories in communication. The next chapter deals in more detail with the course of Russia's strategic narratives in information activities during the corona crisis in Estonia, Latvia and Lithuania.

5. STRATEGIC NARRATIVES CONSTRUCTED AND DISSEMINATED BY RUSSIA FOR BALTIC STATES

The Kremlin's official strategic narratives no longer speak about the Baltic states as an integral part of the Russian empire, but they are certainly interested in their connection with Russia's sphere of influence in that Estonia, Latvia, and Lithuania would possibly become a "window to Europe" allowing Moscow to put constant pressure on Western political institutions such as the European Union and NATO (Radin, 2017; Karlsen, 2019). For this reason, the Putin regime is interested in fostering an unstable region with strong Eurosceptic sentiments.

As follows we take a closer look on political and economic narratives that shape the international system and strategic ambitions of Russia, and anti-Western narratives that emphasize the failure of international organizations (EU, NATO) to cope with the crisis and emphasize the decline of European identity and Western liberal democratic values.

5.1. Political and economic narratives

In the current post-truth environment where information is often constructed according to strategic objectives, the political and economic narratives described above may easily lead to the conclusion that only alignment with the Russian Federation can be the lifeline of the Baltic economy brought to the brink of catastrophe by the spread and quarantine of COVID-19, and that the Western world and its political institutions (EU, NATO) will not help them. Avva claims that the pandemic and its many negative effects are destroying the Latvian economy, whereas Latvia, which is in deep crisis, is not expected to get help or support from the West to overcome the crisis it will have. It is for this reason that Avva

recommends Latvia to change the current strategic goals of its foreign policy and instead to consider a strategic partnership with Russia (Avva, 2020).

The coronavirus pandemic is a total disaster for the Latvian economy. The potential consequences are such that the development model of this Baltic country has proved completely non-viable. The only way for Latvia to survive in the new conditions is to return to a strategic partnership with Russia (Avva, 2020).

Information manipulations concerning the economic crisis during the pandemic of COVID-19 have played a big role in the dissemination of Russian strategic narratives in the Baltic states (Ivanov, 2020b; Ivanov, 2020a). Krishtal emphasizes the catastrophic state of the Baltic economy after the pandemic and introduces statistics in his attempt to make the article more reliable, arguing, among other things, that the coronavirus pandemic conditionally divided the countries into two groups (Krishtal, 2020): the first includes countries that have the necessary financial airbag to minimize losses from quarantine measures; the second group includes countries whose economies depend on foreign aid and will suffer under the worst effects of the coronavirus. According to Krishtal's narrative the Baltic states belong to the second category, his text being full of expressions like: "... therefore it is even difficult to imagine what predictions will delight Lithuanians sometime later", (Krishtal, 2020) and the information about the Baltic states is presented with a negative undertone and often in sarcastic way.

Some authors portray the Baltic states as an insecure and unstable economic environment that is unable to secure employment for their people and, as a result, emigration has increase (Krugley, 2020). Ivanov argues that Baltic people can no longer find jobs in their home countries. The author also states that, as a result of increased emigration, the Baltic countries will soon be depopulated.

When at least 500,000 people leave the Baltic states, empty areas appear on the map. It cannot be ruled out that in the near future Eurostat forecasts will be fulfilled, according to which 20 million people will remain in Lithuania, 1.3 million in Latvia and only 1 million in Estonia by 2050 (Ivanov, 2020a).

The article predicts that the demographic situation in the Baltic states has a gloomy future mostly because of economic weakness and the inability to provide jobs for their own people. Russian publications have even compared current emigration from Lithuania to the Stalin era of mass deportations, and refer to Lithuanian politician Romualdas Ozolas (1939–2015), arguing that 60,000 Lithuanians per year are leaving the country, while between 1941 and 1952 about 130,000 people were deported from Lithuania and another 150,000 were placed in Gulag prison camps (Ivanov, 2020a). Russian propaganda channels also paint the situation in Estonia and Latvia quite negatively, pointing out that the unemployment rate in these countries may soon increase in many important sectors of the economy.

5.2. Anti-western narratives

Opposition to the Western world and its liberal democratic values is becoming a part of Russia's identity-based strategic narratives. Recently, the "war of narratives" has become an increasingly influential political-strategic game in which mental constructions by which

people perceive each other follow specific emotional patterns, often expressed in permanently fighting opposing identities, or virtual wars between the identity of “Us” and the identity of “Others” (Mölder, 2016).

The global corona crisis dealt a major blow to international cooperation, including the European Union's cooperation in managing the crisis which was launched much later when national protection measures were put in place. Despite the agreement on the Schengen common visa area, to which a large number of European Union Member States have acceded, the spontaneous closure of Member States' borders began immediately, a move which was not coordinated with other Member States. The threat of the virus was largely ignored in January and February before the crisis had reached its peak when it would have been much more effective to fight against it (Parts, 2020). However, the chaotic actions taken in implementing joint action showed the European Union's lack of interoperability, offering Russia and other competitive powers interested in weakening Europe an easy opportunity to launch a propaganda war.

Russian media outlets often claim that coronavirus destroys the unity and interoperability of the EU, with the help of governments and the political establishment in EU member states that are carrying out destructive and unconstructive policies (See e.g. Armazanova, 2020; Inosmi.ru, 2020; Baltnews.ee, 2020; RuBaltic.ru, 2020; Krugley, 2020; Petrinis, 2020).

Petrinis notes that the impact of the coronavirus in Europe is very tragic, as it has shown Europe's weakness, instability, unsustainability and lack of solidarity, which have directly affected the Russian Federation's strategic narratives about the EU as a failed utopian project. The author predicts decentralization, disintegration and disappearance of the EU, that Europe will return to a past in which fragmented nation-states competed and fought with each other (Petrinis, 2020).

Before the virus “bubble” burst, the European Union, led by French President Emmanuel Macron, seemed to be moving slowly but steadily towards the European federation. Disputes between the EU and the US facilitated this process in particular (the latest example of “friendship” was Donald Trump's decision to close America to the people of Europe without any agreement with its “partners”). Then the coronavirus struck, and the fight against it represents an ideal opportunity for the emergence of real political and institutional leaders. In other words, the EU as an institution and strong supporters of its federalisation could use this “ideal storm” to strengthen Brussels' role. But the result has been quite the opposite (Petrinis, 2020).

On 16 April 2020 *Inosmi.ru* published an article by US paleoconservative ideologue Patrick Joseph Buchanan claiming that the imposition of quarantine will cause a major economic depression around the whole world. The editorial commentary on Buchanan's article wonders that, if Estonia is seriously struggling with a pandemic affecting 1–3% of the population, how is it expected to cope with Russia's imminent nuclear war? According to the editors, Estonia is advised to pay more attention to preserving the country's economy than to threats posed by Russia. Buchanan discusses the value of human life and is concerned about the United States' response to the pandemic of COVID-19, asking if anyone believes that a country collapsed by the coronavirus is ready to fight a nuclear war

that could kill millions and compete with Russia for influence over the Baltic states or with China for control over the South-China sea (Buchanan, 2020).

Russophobia has been strongly emphasized by Kremlin-orchestrated information campaigns, according to which all political forces that do not approve of the policies of the Putin administration are suspected of spreading anti-Russian sentiment (Ventsel, Hansson, Maidsson, Sazonov, 2019; Darczewska, Żochowski, 2015; Feklyunina, 2013). The main message of such a narrative underlines that the Baltic states simultaneously hate and are afraid of Russia; they hate everything about Russians, the Russian language, Russian history, and Russian culture. The Kremlin has used Russophobia as a strategic incentive in influence operations against the Baltic states for decades by referring to conflicting identities, which has been one of the favourite strategic narrative motifs constructed by Russia (Baranov, Afonina, 2016; Nikolayev, 2020; Pyh, 2020; Baburin, 2020; Vinnikov, 2020).

It seems as if there is no news in the world nowadays other than overviews of the battle against the coronavirus, but Estonian hurray patriots can find a trace of the Russian threat in them as well. They were offended by the fact that Russian planes brought medical masks from China to Tallinn ... Inner feelings, if they are precious to you, need to be supported by deeds, it's like a fire in a fireplace - if you don't add fuel, the flame goes out. All that remains is ash, decay, darkness, cold ... a terrible story. Those in love understand this better than drug addicts, for whom a day or two without a stimulating dose is literally painful, and the mere thought of abstinence causes tremors. This somewhat flashy introduction is only necessary to understand the Estonian Russophob, who lives, breathes and feeds on hatred against Russia in both literal and figurative terms (Nikolayev, 2020).

Playing on identity issues belongs to the traditional model of Russian information activities and influence operations that seek to capture nations living in the Baltic states, targeting the feelings and integrity of the Russophone audience. With their influence operations, the Kremlin not only seeks to consolidate the citizens in its own country under policies manifested by the Putin administration, but also to increase its influence in Eastern Europe, including the Baltic states, Ukraine and, more broadly, the post-Soviet space.

6. CONCLUSION

According to the sample of analysed articles published in the pro-Kremlin media from March until May 2020, strategic narratives created by the Russian Federation for the Baltic states (Estonia, Latvia, Lithuania) may emphasize:

- motives to disrupt the international system and Western political institutions (e.g. NATO, EU) with the Baltic membership;
- political and economic motives related to the policies of governments of Baltic states;
- motives indicating conflictual identities between Russian and Baltic nations, which have been often placed in a Russophobic context (with purpose to influence local Russophone community in Baltic states).

These motives reflect the Kremlin's strategic objectives which aim to destroy the unity of Western alliances and to increase ideological fragmentation in the European Union. The Baltic states have become an important and vulnerable target of influence operations

conducted by the Moscow and pro-Kremlin forces, given the widespread use of the Russian language and the significant size of the Russian-speaking population permanently resides in Baltic states.

According to the sample of articles published in the Russian media, the message sent attempts to convince the audience that the Estonian, Latvian, Lithuanian economies depend on future assistance from abroad to restore their pre-crisis economic standards, but that the EU is not interested or able to assist them. The Baltic governments have often shown incompetence in managing the crisis and after the crisis they may face fading economies, a high rate of unemployment and increasing emigration from the Baltic states. Russophobic motives attributed by Kremlin propaganda to the Baltic states have also been discussed in the researched Russian and pro-Russian media outlets. During the outbreak and spread of COVID-19, these articles have incited distrust against the Baltic governments, civil society organizations and the concept of Western liberal democracy and its institutions (e.g., NATO, EU). Propagandistic messages from Russia sought to show the lack of cooperation, incompetent management and lack of sustainability that appeared in the Baltic states during the COVID-19 crisis. Russian strategic objectives in the Baltics during COVID-19 do not differ significantly from their strategic goals in the last two decades. This study does not expect any significant change in narratives spread by Russian influence operations in the near future.

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TRADITIONAL AND ORGANIC PRODUCTS ON EXAMPLE OF “FIGA” FAMILY-OWNED ORGANIC FARM FROM PODKARPACIE PROVINCE

Traditional and organic products are distinguishing marks of a region, reflect a long-established tradition and cultural heritage, as well as show potential for the growth of local businesses. This paper aims to present and demonstrate how traditional and organic products are promoted on the example of products originating from Podkarpackie Province and to indicate barriers, challenges that must be overcome while taking information and promotional actions and building an image. To this end, an interview with one of the leaders in the number of organic and traditional products in the cheese making industry was conducted. Based on that interview, it follows that products are promoted in a variety of different ways, whereas major barriers, but also challenges, include effective communication and ability to reach the consumer.

Keywords: traditional product, organic product, management, quality, marketing, building an image, promotion, public relations.

1. INTRODUCTION

Traditional and organic products are a real asset of a region and also one of priorities of the EU's agricultural policy and the rural development policy. The production of high-quality products (both traditional and organic ones) contributes to the growth of local businesses through the use of local potential.

In Poland, many actions are undertaken with a view to supporting the agri-food industry. Moreover, many initiatives are launched, which are designed not only to support and popularise this sector, but also cherish culinary traditions, *inter alia*, by creating clusters, trails (e.g. culinary, cultural, wine trails), carrying out local, national or international projects (financed by the EU funds etc.).

In Europe, that trend has been seen for a much longer period of time. Consumers consciously look for high-quality products, which are made to traditional recipes and by traditional methods. In other countries, local products can be obtained directly from a maker or purchased in a nearby shop, chain stores, markets or even at petrol stations (i.e. in Austria).

Developing the production of traditional and regional products also increases the economic importance of regions, makes them more attractive to tourists and supports

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activities contributing to the conservation of cultural heritage and the protection of the environment (Krupa, 2009).

A global trend towards returning to natural, simple foodstuffs provides an opportunity for Polish producers. At present, consumers are seeking high-quality products, which can be observed in shops (e.g. shelves containing dedicated organic food), yet this is still not that much compared with the number of mass-produced articles (Jęczmyk, 2015). Greater demand for high-quality foodstuffs has encouraged their growth.

The aim of this paper was to present and demonstrate how traditional and organic products are promoted on the example of products originating from Podkarpackie Province and to indicate barriers, challenges that must be overcome while taking information and promotional actions and building an image. An interview with one of the leaders in the number of organic and traditional products in the cheese making industry was conducted. Furthermore, the article contains information which is based on the author's own experience and professional collaboration in the field of promotion and development of products, as well as uses materials derived from various sources, including from the Internet.

2. TRADITIONAL AND ORGANIC PRODUCTS

Traditional and organic food comprises a small percentage of products in the market compared to mass-produced articles. The production of high-quality products requires a lot of time and work related to natural production, but also the procurement of proper raw materials. Products made in a given region (a raw material, climate) have a unique "flavour and aroma" which is unusual anywhere else and constitutes another distinctive characteristic of this group of products. Due to consumers' and producers' increased interest in traditional and organic products, the distinguishing feature of which is exceptional quality, it is worth paying attention to this market segment when travelling across Poland or abroad – each region can surprise, offering local food and original drinks.

2.1. Traditional Products Included on List of Traditional Products

The distinguishing features of a traditional product are a traditional production method that corresponds with cultural heritage and the quality of product, both of which translate into consumers' confidence. In the European Union, it is a particular national treasure and cultural heritage, as well as an important component of the culinary and tourist promotion of both individual regions and the entire country (Gulbicka, 2014).

As provided for in Article 3 of the Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs (Rozporządzenie Parlamentu Europejskiego, 2012, art. 3) a word "traditional" *means proven usage on the domestic market for a period that allows transmission between generations; this period is to be at least 30 years*. Several years ago, makers were obliged to prove a twenty-five-year period of manufacture.

The Polish Minister of Agriculture and Rural Development has been responsible, since 2005, for compiling the List of Traditional Products at a national level pursuant to the Act on Registration and Protection of Names and Symbols of Agricultural Products, Foodstuffs and Traditional Products of 17 December 2004 (Ustawa, 2004, rozdz. 8, art. 47–56.). This list is also used to prepare producers for the registration of product names it contains at the EU level. In total, the list comprises 1,983 traditional products (September 2020) – table 1.

Table 1. Products Included on List of Traditional Products Broken Down into Provinces

Item	Province	Number of Products
1.	Lower Silesia Province	52
2.	Kujawy-Pomerania Province	92
3.	Lublin Province	223
4.	Lubuskie Province	82
5.	Łódź Province	151
6.	Małopolska Province	224
7.	Mazovia Province	154
8.	Opole Province	68
9.	Podkarpackie Province	246
10.	Podlasie Province	74
11.	Pomerania Province	179
12.	Silesia Province	145
13.	Świętokrzyskie Province	94
14.	Warmia-Mazuria Province	46
15.	Wielkopolska Province	98
16.	West Pomerania Province	55
Total		1,983

Source: Own elaboration based on List of Traditional Products <https://www.gov.pl/web/rolnictwo/lista-produktow-tradycyjnych12>.

When one considers the type of an agricultural product, foodstuff or a spirit drink on the List of Traditional Products in Poland, it includes, but is not limited to, the following categories: fresh meat and meat products (22%), prepared meals and dishes (21%), baker's wares and confectionery (18%), beverages (11%), nuts, seeds, cereals, fruit and vegetables (9%), cheeses and other dairy products (6%), honeys (5%), oils and fats (butter, margarine, etc.) – 3%, and other. Individual types of product, broken down into provinces, are listed in Table 2.

Table 2. Type of Agricultural Product, Foodstuff or Spirit Drink Included on List of Traditional Products in Poland

Province	Prepared meals and dishes	Other products	Fresh meat and meat products	Honeys	Beverages (alcoholic and alcohol-free)	Oils and fats (butter, margarine, etc.)	Nuts, seeds, cereals, fruit and vegetables (processed and unprocessed)	Fishery products, including fish	Cheeses and other dairy products	Baker's wares and confectionery	Total
Lower Silesia Province	8	0	11	6	6	1	4	3	4	9	52
Kujawy-Pomerania Province	27	6	8	1	14	2	9	1	6	18	92

Table 2 (cont.). Type of Agricultural Product, Foodstuff or Spirit Drink Included on List of Traditional Products in Poland

Province	Prepared meals and dishes	Other products	Fresh meat and meat products	Honeys	Beverages (alcoholic and alcohol-free)	Oils and fats (butter, margarine, etc.)	Nuts, seeds, cereals, fruit and vegetables (processed and unprocessed)	Fishery products, including fish	Cheeses and other dairy products	Baker's wares and confectionery	Total
Lublin Province	49	3	29	10	37	8	20	6	11	50	223
Lubuskie Province	8	1	19	7	14	2	8	4	6	13	82
Łódź Province	25	0	39	5	18	3	20	2	8	31	151
Małopolska Province	43	5	78	8	18	1	15	0	13	43	224
Mazovia Province	34	5	39	9	24	5	13	5	5	15	154
Opole Province	18	4	10	3	3	3	8	2	3	14	68
Podkarpackie Province	49	1	80	6	16	4	11	3	25	51	246
Podlasie Province	11	3	12	3	7	3	7	2	11	15	74
Pomerania Province	52	5	27	3	20	5	16	17	4	30	179
Silesia Province	55	1	13	5	7	2	12	5	12	33	145
Świętokrzyskie Province	8	2	25	7	4	4	17	6	4	17	94
Warmia-Mazuria Province	10	0	15	5	3	0	2	1	3	7	46
Wielkopolska Province	24	2	33	2	10	6	8	1	6	6	98
West Pomerania Province	4	1	4	12	9	1	7	6	1	10	55
Total	425	39	442	92	210	50	177	64	122	362	1,983

Source: Own elaboration based on List of Traditional Products <https://www.gov.pl/web/rolnictwo/lista-produktow-tradycyjnych12>.

On a closer examination of the List of Traditional Products, one can point out the leaders as regards the number of traditional products. The region with the greatest number of products registered on the LTP is Podkarpackie Province, which accounts for 12.4%, followed by Małopolska Province (11.3%) and Lublin Province (11.24%).

Table 3. Ranking of Three Provinces with Greatest Number of Registered Products Broken Down into Type of Agricultural Product, Foodstuff or Spirit Drink Included on List of Traditional Products

Type of Agricultural Product, Foodstuff or Spirit Drink	Małopolska Province	Lublin Province	Podkarpackie Province
Total – 1,983	224	223	246
Prepared meals and dishes	43	49	49
Other products	5	3	1
Fresh meat and meat products	78	29	80
Honeys	8	10	6
Beverages (alcoholic and alcohol-free)	18	37	16
Oils and fats (butter, margarine, etc.)	1	8	4
Nuts, seeds, cereals, fruit and vegetables (processed and unprocessed)	15	20	11
Fishery products, including fish	0	6	3
Cheeses and other dairy products	13	11	25
Baker's wares and confectionery	43	50	51
Total	224	223	246

Source: Own elaboration based on <https://www.gov.pl/web/rolnictwo/lista-produktow-tradycyjnych12>.

The List of Traditional Products from Podkarpackie Province includes *kielbasa półsucha z Górną* (semi-dried sausage from Górnó), *proziaki* (flour-based rolls with added sodium bicarbonate), *chrupaczki* (cake made from wholemeal flour, yeasts, eggs, milk pork fat and sugar) or *śliwowica krzeszowska* (plum vodka from Krzeszów) and many more. Traditional products of Małopolska Province include *oscypek* (smoked ewe's milk cheese made in the Tatra Mountains), *bryndza podhalańska* (ewes' milk cheese of Podhale region), *karp zatorski* (carp of Zator), whereas those originating from Lublin Province are *krupnik pszczelowski* (spirit with honey and spices), *lubelski forszmak* (goulash served in a bread bowl with pickled cucumbers) and *gruszka suszona kraśnicka* (dried pear of Kraśnik) etc.

2.2. Organic Products

An organic product is the outcome of organic farming, for which natural qualities of the environment in which it is produced are preserved. This also includes a sustainable agricultural system in which attention is given both to the environment and the welfare of animals. It comprises all stages of the food supply chain: delivery of raw materials, processing, storage, transport, distribution, retail services and product marking (labelling). Organic farming is governed by the provisions of the Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No. 2092/91 (Rozporządzenie, 2007).

Organic farming is based on natural processes taking place within a farm and simple production methods. In order for a product to become a fully organic product, the maker has to meet specific production and quality requirements, which is confirmed by a certification and control process (carried out by specialist institutions).

Cardinal importance is attached to the recognisability of organic products, a so-called small green leaf (an EU's organic logo), which is a guarantee that a product has been manufactured in accordance with the European Union's law relating to organic production.

In Poland, at the end of 2019, there were 20,200 entities that carried out operations within the framework of an official organic farming system (a 2% decline compared to 2018). According to Nielsen's report, organic product sales in Poland in 2019 stood at approx. PLN 620m (Rynek żywności eko, 2020). From the beginning of 2020, organic product sales have risen by more than 20%, which was driven by the pandemic and a desire for healthier nutrition over that time (Produkty BIO, 2020).

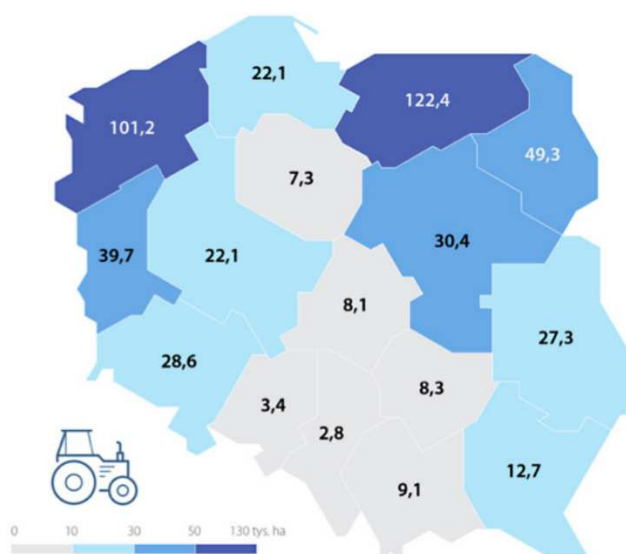


Fig. 1. Area of Organic Farmland in Poland in 2018 Broken Down by Provinces
Source: <https://swiatrolnika.info/uprawy-ekologiczne-w-polsce>.

Having considered multiple regulations, restrictions on organic production, it is clear (Rynek żywności eko, 2020) that *throughout four years the number of organic producers in Poland has declined by 19%, from approx. 25,500 to 20,500 in 2018, whereas the area of organic farmland fell by approx. 25% to approx. 485,000 hectares.* As regards processing, this production is definitely on the rise, however, as far as organic farmland is concerned, one can observe a downward trend, which is completely contrary to what is seen in EU countries.

3. TRADITIONAL AND ORGANIC PRODUCTS IN “FIGA” FAMILY-OWNED ORGANIC FARM

Podkarpackie Province is the leader as regards the number of traditional products (246). Clean environment of the region, dedication to preserving tradition, the availability of many family-owned businesses scattered across the entire province and a passion for natural potential which can be used are real assets.

Podkarpackie Province has seen an increase in the production of high-quality – both organic and traditional – food. Such a growing trend is also manifested through greater interest in new products of the countryside, and consequently, attention given to top-quality life (Strategia, 2020).

A good example of a producer that has managed to use its potential: the nature, green areas, clean environment of the region, family values – and to combine it with an interesting lifestyle and way of living, in line with the Slow Food philosophy, is *Rodzinne gospodarstwo ekologiczne „FIGA” sc. Waldemar i Tomasz Maziejuk*, a family-owned organic farm from Mszana. Products available on the farm's offer are 100% organic (33 products), eight of which are included on the List of Traditional Products – 24.24% (type of agricultural product, foodstuff or spirit drink, see the list: cheeses and other dairy products, oils and fats (butter, margarine, etc.).

The farm is located in Mszana, Krosno District, Dukla Commune (*Przetęcz Dukielska*, The Dukla Pass) and covers an area of 113 hectares (meadows and pastures). It is situated in a place which has perfect natural conditions – an environment conducive to running a farm engaged precisely in cattle and goat rearing and breeding (*Beskid Niski*, The Low Beskids). Ultimately, this translates into flavour and health-enhancing characteristics of products made in this region (Murawski, Kaczor, 2011).

This micro enterprise is owned by Waldemar Maziejuk, the father, and Tomasz Maziejuk, his son. The business is run by members of the family, and currently the third generation is also involved in it (Waldemar – the father, Tomasz and Wawrzyniec – his sons, Albert – Waldemar's grandson and Tomasz's son). This is an example of a family-owned firm from Podkarpackie Province, where approx. 33% businesses are operated by families. In Poland family-owned firms account for 33.9% (Uwarunkowania rozwoju, 2018).

The principal business of the farm is goat and cattle breeding (400 goats and 25 cows) and goat's milk processing. The farm specialises in the traditional processing of unpasteurized milk.

The farm's production includes 33 organic products: 23 goat's and 11 cow's dairy produces, i.e. cottage cheeses, rennet cheeses (*bundz* and *bryndza*), ripened cheeses, farmer's cheeses and Vallachai cheeses (*ser wółoski*), curd cheeses, home butter, which hold a certificate of conformity confirming that organic production methods have been employed, issued by BioCert Małopolska, a certification body from Cracow. Eight of those products are included on the List of Traditional Products.

The traditional production process taking place on the farm stems from long-standing cheese making traditions, which date back to the 16th century. This is, *inter alia*, because of Vlachs – a nomadic tribe of shepherds from the mountains, which came in those days to Mszana through a pass in the Carpathians from the Balkans (Żychowski, Jucha, 2020). In Poland, cheese production has been known for several centuries, and cheese making traditions of Podkarpackie Province date from the 15th century (Serowarstwo, 2020). Milk has recently become a global product; in Podkarpackie Province, there are around 15 registered cheese makers (one of them is “FIGA” Organic Farm in Mszana, run by Maziejuk family, and LEDA-SER Leszek Jakimowicz in Wólka Krowicka).

Table no. 5 presents the full range of traditional and organic products. The Maziejuk's business does not make conventional products. Compared to the period from three years ago, it continues to manufacture the same products (both traditional and organic ones), but the product range has been expanded – new flavours have been added to the offer, i.e. goat's

milk farmer's cheese with black cumin and fenugreek and a new product line for cow's milk produces has been launched.

The offer is very rarely altered so as to meet consumers' expectations. As far as traditional products are concerned, it is difficult to change anything in those products, since the maker has to follow specific production processes. Two products were made at the suggestion of customers, who for many years had urged to introduce them, namely, goat's milk farmer's cheese with black cumin and fenugreek.

Table 4. List of Traditional and Organic Products Made by "FIGA" Family-Owned Organic Farm

Item	Products	Traditional Product	Organic Product
1	<i>Bio śmietana domowa</i> (Bio cream)		x
2	<i>Bryndza kozia tradycyjna</i> (Traditional goat bryndza cheese)	x	x
3	<i>Bryndza lemowska</i> (Lemk's bryndza cheese)	x	x
4	<i>Bundz kozi – naturalny</i> (Fresh goat cheese – natural)	x	x
5	<i>Bundz kozi – wędzony</i> (Fresh goat cheese – smoked)	x	x
6	<i>Bundz lemkowski naturalny</i> (Lemk's fresh cheese – natural)	x	x
7	<i>Bundz lemkowski wędzony</i> (Lemk's fresh cheese – smoked)	x	x
8	<i>Ekologiczne mleko kozie</i> (Organic goat milk)		x
9	<i>Ekologiczne mleko krowie</i> (Organic milk)		x
10	<i>Masło domowe</i> (Home butter)		x
11	<i>Masło domowe klarowane</i> (Home clarified butter)		x
12	<i>Masło kozie Bio</i> (Goat butter bio)		x
13	<i>Maślanka Bio</i> (Bio buttermilk)		x
14	<i>Ser kozi farmerski dojrzewający</i> (Farmer's goat cheese – matured)		x
15	<i>Ser kozi farmerski naturalny</i> (Farmer's goat cheese – natural)		x
16	<i>Ser kozi farmerski z czarnuszką</i> (Farmer's goat cheese – black cumin)		x
17	<i>Ser kozi farmerski z cząbrem</i> (Farmer's goat cheese – savory)		x
18	<i>Ser kozi farmerski z jałowcem</i> (Farmer's goat cheese – juniper)		x
19	<i>Ser kozi farmerski z kozieradką</i> (Farmer's goat cheese – fenugreek)		x
20	<i>Ser kozi farmerski z papryką i chili</i> (Farmer's goat cheese – paprika & chilli)		x
21	<i>Ser kozi farmerski z pieprzem</i> (Farmer's goat cheese – pepper)		x

Table 4 (cont.). List of Traditional and Organic Products Made by “FIGA” Family-Owned Organic Farm

Item	Products	Traditional Product	Organic Product
22	<i>Ser kozi wołoski naturalny</i> (Vallachai goat cheese - natural)	x	x
23	<i>Ser kozi wołoski wędzony</i> (Vallachai goat cheese - smoked)	x	x
24	<i>Ser lemkowski naturalny</i> (Lemk’s cheese – natural)		x
25	<i>Ser lemkowski wędzony</i> (Lemk’s cheese – smoked)		x
26	<i>Ser pasterski dojrzewający</i> (Sheperd’s cheese - matured)		x
27	<i>Ser pasterski naturalny</i> (Sheperd’s cheese – natural)		x
28	<i>Ser pasterski wędzony</i> (Sheperd’s cheese – smoked)		x
29	<i>Twarożek kozi naturalny</i> (Goat cottage – natural)		x
30	<i>Twarożek kozi smakowy</i> (Goat cottage – herby)		x
31	<i>Twarożek kozi z papryką i chili</i> (Goat cottage – paprika&chilli)		x
32	<i>Twarożek zbierany naturalny</i> (Cottage cheese – natural)		x
33	<i>Twaróg zbierany z cząbrem i czosnkiem</i> (Cottage cheese – savory & garlic)		x

Source: Own elaboration based on the List of Traditional Products <https://www.gov.pl/web/rolnictwo/lista-produktow-tradycyjnych12> and Certificate of Conformity <https://www.serymziejuk.pl/>.

The products made by this family-owned business are highly recognisable in big cities, i.e. Cracow and Warsaw. However, as regards Podkarpackie Province, only now is the brand being built, which is due to collaboration with a local chain store (the availability of products on shop shelves). The products and the brand are, first of all, recognised in the country by people (consumers) who are interested in organic food.

When asked about competition, the producer replies that they are an “original” farm with a niche product and are not interested in talking about competitors. Simultaneously, four distinctive features of the farm were highlighted:

- Family ties – family members are close to each other, the business has strong potential and its growth serves for the benefit of generations (currently the third generation is engaged to bring the success);
- Business on a local scale – animal breeding and rearing and product manufacture is located in a particular place (Mszana);
- Ecology and tradition – ecology is both the sense and essence of life (cultivation of land, animal breeding and rearing, production), whereas traditional products have been made since the 17th century;

- Uncomplicated production processes – the simplest production method, which enables the maker to manufacture as clean product as possible – so that the customer knows that it is the healthiest.

As regards the recognisability of marking attached to organic products from farms – a so-called green leaf, today's consumers' awareness in this respect is greater than a few years ago. Therefore, marking has major importance and makes it possible to gain competitive advantage. This is entirely contrary to traditional products, which do not bear any marking on their labels – they only have a certificate. However, this fact does not translate into greater recognisability. When such marking appears on products, this means, first and foremost, that the maker may enjoy prestige (but on the other hand, they can also face a challenge). Also the customer, who is aware of how difficult it is to manufacture such products and include them on the list, finds the marking both prestigious and challenging. This proves strong need for promotion of such products.

The interview revealed that consumers are nowadays more aware of traditional and organic products compared to the period from 15 years ago, when products were certified for the first time – according to the maker. He emphasised that this observation stems from information and promotional activities being performed, such as promotional campaigns relating to the promotion of traditional and organic products, campaigns aimed at supporting Polish products and local makers, i.e. Buy Consciously – Polish Product (*Kupuj Świadomie – Produkt Polski*), which are organised, *inter alia*, by the Ministry of Agriculture and Rural Development, the National Centre for Support of Agriculture or other industry-related organisations. However, people are also more aware because they started to pay greater attention to what they eat, which is possible, among other things, due to useful applications installed on their mobile phones, i.e. *Zdrowe Zakupy* (Healthy Shopping)² or *Pola. Zabierz ją na zakupy* (Pola. Take it for shopping)³.

It is noteworthy that Polish customers are very diversified (which depends on their awareness, affluence, lifestyle, but also individual preferences). Therefore as regards information and education, both customers and makers have much to do.

Nobody at the Maziejuk's business conducts any customer-satisfaction surveys or seeks any opinions, even though they consider doing so. They often receive information regarding positive reactions via email or through Messenger⁴. Feedback is given at trade fairs or during events, that is when face-to-face meetings are possible.

Products are sold not only in brick-and-mortar shops, located mainly in bigger cities, but also through the online shop www.serymaziejuk.pl (since March 2020) – however, 60% of customers do the shopping by means of mobile phones. Moreover, the Maziejuk's business is involved in an initiative of the Subcarpathian Flavours Cluster (*Klaster Podkarpackie Smaki*), where products are sold through www.sklep.podkarpackiesmaki.pl and sales are made as part of a so-called initiative LokalnyRolnik.pl (local farmer) (cities: Wrocław, Cracow, Opole).

² Aplikacja Zdrowe Zakupy – aplikacja na telefon, która pozwala na otrzymanie informacji na temat produktu (składniki, dodatki, e-składniki, konserwanty, emulgatory, stabilizatory, alergeny) poprzez zeskanowanie kodu kreskowego (<https://zdrowezakupy.org/>).

³ Aplikacja Pola. Zabierz ją na zakupy – aplikacja na telefon, która pozwala na otrzymanie informacji na temat produktu i firmy (kapitał polski czy zagraniczny, produkcja, miejsca pracy), która go wyprodukowała poprzez zeskanowanie kodu kreskowego (<https://www.pola-app.pl/>).

⁴ Messenger – komunikator internetowy, który umożliwia rozmowy tekstowe oraz głosowe, a także przesyłanie zdjęć, plików, filmów (<https://www.messenger.com/>).

The farm does not carry out any operations nor make any sales abroad, but receives various foreign visitors, who purchase products on the site and explore the entire area. The Maziejuk's business participates in many trade fairs, for instance, in one of the world's largest fair for organic food called BIOFACH (for ten years), Foodex Japan fair in Tokyo, Summer Fancy Food Show in the USA or the Polish Food Festival in Singapore. These activities have not translated into product sales yet, however, they constitute an essential activity designed to explore other markets and promotions. This is proved by the fact that trade fairs have rather become information exchange centres and marketing activity instruments (Gębarowski, 2006).

As the maker claims, in recent years the promotion of high-quality products and the way of reaching the customer have changed dramatically. The owners are aware that both marketing and Public Relations are the key to a successful family business. The Maziejuk's farm promotes itself on Facebook and Instagram (free-of-charge posts), at trade fairs (within the region, country, abroad), but what must be given considerable importance in the case of a promotion strategy is human contact and contact with the product. Responsibility for promotional activities rests with one of the brothers (Wawrzyniec), who has a vision and pursues a strategy for information and promotional activities. The strategy of Maziejuk's business is designed to show "genuineness".

As for marketing activities, a tool that is used the most often is the Internet: the farm's website www.serymaziejuk.pl, its profile on Facebook www.facebook.com/sery.maziejuk, Instagram www.instagram.com/sery.kozie.maziejuk, participation in trade fairs and interpersonal contact. The Maziejuk's firm has recently mounted an advertising campaign in local newspapers (with a circulation of 70,000 covering four districts), but this did not bring any effects in terms of sales, which was – according to the maker – due to a multitude of advertisements. There are plans to launch a billboard campaign and rent a car with an advertising trailer (a mobile ad) to promote the Maziejuk's firm in Podkarpackie Province.

The farm is involved in Public Relations, in which the main focus is given to the customer, the good reputation of products and the business itself. The Maziejuk's business co-operated with Public Relations agencies, although for the past several years they have been carrying out actions and strategies on their own. As it has been emphasised by the maker, it plans to collaborate with agencies, which results from changes in the customer's profile, their convenience, the simplification of purchasing decision. The greatest challenge for the farm is to ensure effective communication and reach the consumer in an efficient way.

As regards managing an enterprise which has such a difficult product (shelf life, products which are not considered to be the basic necessities, price, organic production, organic raw materials, e.g. spices etc.), the maintenance of a business offering high-quality products and being stable on the market – constitutes a challenge.

The farm works with many institutions and organisations, i.e. the Polish Association of Processors and Producers of Organic Products "Polish Ecology", the Association for the Development and Promotion of Podkarpacie "Pro Carpathia", the Polish Chamber of Regional and Local Product, the Subcarpathian Flavours Cluster and the Organic Food Polish Ecology Cluster, as well as with local governments, such as the Marshal's Office of Podkarpackie Province.

The farm also co-operates with the cultural tourism industry, *inter alia*, travel agencies, tour operators, as well as with the hotel and restaurant industry (hotels and restaurants as part of a local product card), and through cultural trails – products for tourists, i.e. the

Wallachian Culture Trail, the Subcarpathian Flavours Culinary Trail, or by participating in initiatives related to food tourism. In 2019, the farm was visited by approximately 450 people.

4. SUMMARY

Traditional and organic products are distinguishing marks of a region, reflect a long-established tradition and cultural heritage, as well as show potential for the growth of local businesses.

The aim of this paper was to present and demonstrate how traditional and organic products are promoted on the example of products originating from Podkarpackie Province and to indicate barriers, challenges that must be overcome while taking information and promotional actions and building an image.

Based on the interview, it follows that products are promoted in various ways, e.g. through the Internet, by participation in trade fairs in Poland and abroad, as well as face-to-face contact and so-called buzz marketing. Major barriers, but also challenges, include effective communication and reaching the consumer in an efficient manner. Traditional and organic products require specific marketing activities and Public Relations, also in order to build an image.

As the owners emphasise, to manage such a broad product range (33 organic products, including 8 traditional ones) and maintain high quality of products – it is quite a challenge. According to the maker, the industry needs support with regard to fast-evolving channels of promotion (participating in trainings, collaborating with agencies, following prevailing market trends). Greater and greater importance is attached to collaboration with the cultural tourism and culinary tourism industry – with a view to preparing a common offer (mapping places as attractions, one of travel destinations) – as well as to promotion and sales resulting from that collaboration. There is also a need for greater co-operation with the hotel and restaurant industry (sales of local products, e.g. local cheeses served for breakfasts), case-by-case co-operation with local governments (surveys, specific solutions, discussions) to enable the makers of high-quality products and the entire industry to adapt appropriate actions – a campaign (for micro-, small and medium-sized entrepreneurs).

Furthermore, one has to recognise immense significance that is attached to building the potential of respective regions having a rich abundance of traditional and organic products. The popularisation of these products is extremely relevant not only to local makers, but also to the entrepreneurship of respective provinces and to the growth of the Polish agriculture on the international scene.

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THEORETICAL ASPECTS OF CONSUMER BEHAVIOUR TOGETHER WITH AN ANALYSIS OF TRENDS IN MODERN CONSUMER BEHAVIOUR

The history of consumer behavior dates back to the beginnings of man's existence because he has always felt the need and strived to satisfy it. However, consumer behaviour as a subject of research is considered a relatively young field. Its interdisciplinary character is evidenced by the fact that consumer behavior is considered on many scientific levels, such as psychology, sociology or economics. There is, therefore, no single definition of consumer behavior that can be considered mandatory, as each of them draws attention to different aspects of consumer behavior. Consumer behavior has been evaluated over the years, leading to a change in the perception of consumption and the emergence of trends that help to create a profile of the modern consumer. Knowledge of current trends and the needs that the modern consumer feels helps companies create a marketing strategy that gives them a market advantage. The purpose of this study is to explain the origins, changes in consumer behavior, as well as to define the profile of the modern consumer and the characteristics of selected trends in consumption.

Keywords: consumer behaviour, consumer, consumption, trends.

1. INTRODUCTION

Dynamic environment in which people live has affected customers behaviour, which caused changes in modern businesses. Today, consumers have richer and more varied range of goods and services, which creates the freedom to choose and purchase goods and services, promotes the genuine consumer preferences and free choices, and creates the conditions for an ever greater individualisation of their satisfaction. This has also led to increased attention being paid to issues related to consumer behaviour. Knowledge of these behaviours allows companies to adapt their marketing communications methods and their offer to their customer's needs. Latest trends play crucial role in clarifying customer's needs, while in the same time creating new operating principles for business. The real challenge for business is not only to follow the existing trends, but to use them as an inspiration for the future in the first place. The complexity of the problem of consumer behaviour, the variety of decisions and the factors that determine it, causes interest in these

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aspects among representatives from various scientific circles. The consumer is one of the most frequent discussion topics and subjects of theoretical concepts presented. (Bartosik-Purgat, 2011).

2. CONSUMER AND CONSUMPTION – ORIGINS

In order to properly understand consumer behaviour, we should focus on specifying the term consumer or consumption in the first place. The term of consumption comes from the Latin word 'consumere' and has been subject to evolution over the centuries transforming its meaning. In antiquity, the word 'consumere' had two meanings, where one meant the consumption and using goods and the other the removal or different ways of obtaining them (Maciaszczyk, 2014).

A. Aldridge believes that the word 'consumere' dates back to the 14th century, when such meanings as: to consume, destroy, waste, squander, exhaust – this is indicated by the pejorative overtones of the term (Aldridge, 2006). According to F. Bylok in German the word "consumieren" in the sense of consumed goods was first used by the German theologian and writer J.B. Schupp in 1663 (Bylok, 2005).

R. Williams traced the modern evaluation of the word consumption meaning in English. In his publication he points out that the word consumption as a neutral and abstract meaning, describing the action of a market participant opposed to production, did not occur until the 18th century, with establish of the "bourgeois social economy" (Williams, 1976).

Since the 19th century in Poland, the word consumption has been synonymous with ingestion and was understood as the final purpose of production. It was less frequently used as a synonym for cachexia – in this sense, it referred in particular to the development of lung disease, formerly referred to as dryness, nowadays it is called tuberculosis (Bylok, 2005). Considering the dictionary definitions of consumption from the mid-20th century, it can be seen that they focused mainly on: eating, ingesting, using goods by buyers (Hostyński, 2006). Nowadays, most authors recognise this word as everything that leads to satisfying demands (Iwański, 2014).

As far as the word consumer is concerned, it only appears in the early 14th century. However, its meaning is far from its current understanding and has definitely negative connotations (Kieźel, 2004). The breakthrough period was the middle of the 19th century, when the word began to evolve into an economic term, implying the appearance of an abstract individual on the impersonal market. In this perspective, the consumer replaced the customer – so far perceived as a unit having its own needs, which were satisfied by the supplier, leading to a lasting personal relationship between the buyer and the supplier. Unlike the customer, the consumer is a person living in a world saturated with advertising, where his needs are generated by people (Aldridge, 2006). Currently, a consumer is defined as any person who feels a need to consume, makes a purchase (or otherwise obtains a product) and satisfies his or her need by consuming or using products. In marketing literature, 'consumer' is often replaced by 'customer' or 'buyer' (Smyczek, Sowa, 2005).

3. CONSUMER BEHAVIOUR DEFINITIONS

Consumer behaviour as a research subject is a relatively young scientific field. However, the history of consumer behaviour can be traced back to the beginnings of human existence and consumption. Man has always felt needs and strived to satisfy them (Maciaszczyk, 2014). He has also always looked for food, as well as other available resources, which

enabled him to live. In a broad sense, behaviour is understood as: every observable reaction to environmental stimuli, all reactions and attitudes of a living organism to the environment (*Encyklopedia powszechna*, 1996). Therefore human behaviour should be considered as a reaction to specific internal and external stimuli (Zatwarnicka, 2016).

The concept of consumer behaviour derives from the American term “consumer behaviour”. It began to appear in Western literature in the mid-1960s, while in Poland it did not appear until the late 1980s. The period until 1940 can be called the pre-scientific period. Consumer behaviour was then subject to observation and analysis from a social and philosophical point of view (Kieźel, 2004). The main reason for the development of research on consumer behaviour is accepted to be the changes related to their behaviour on the market, which were caused by an increase in the variety of offers and a noticeable increase in the society's wealth (Woźny, 2012). It was then when ordinary people started to be treated as consumers who made their own choices according to their own needs and tastes (Wolanin-Jarosz, 2006).

The development of research on the theory of buyer behaviour has changed the definition and significantly broadened the scope of the concept of consumer behaviour, which may take on different meanings, proving its interdisciplinary character (Woźny, 2012). Consumer behaviour has become the subject of research in many scientific disciplines such as psychology, sociology and economics. Each of these disciplines brings specific theories and interpretations of consumer behaviour (Wolanin-Jarosz, 2006). Psychology focuses on the research of individual aspects of consumer behaviour, considering among other: psychological state, emotions, personality of a given individual. On the other hand, social psychology, studies human behaviour from the social point of view, and also explore communication processes (Kędzior, Karcz, 1988). In sociology, consumer behaviour refers primarily to social aspects, where microsociology is concerned with small social units (e.g. reference groups, families and relations between members of these groups), and macrosociology studies interactions within large organisations, which include, among others: political parties or cultural associations (Wolanin-Jarosz, 2006). In economics, consumer behaviour refers primarily to the process of consumption, which is understood as the process of satisfying human needs (Zalega, 2012).

The literature defines the subject of consumer behaviour in various ways, drawing attention to its various aspects.

Table 1. Review of selected definitions of consumer behaviour

Authors	Definitions
Hansen (1972)	These are all the activities and perceptions of the consumer that make up product selection, choice and consumption.
Fabiunke, Fischer, Jager, Koppert (1976)	Consumer behaviour is the result of an individual's sense of need, encompassing a set of objectively and subjectively defined, rational and unreasonable, conscious and unconscious actions in preparation for decision-making about the purchase and during consumption.
Szczepeński (1976)	Consumer behaviour should be understood as the feeling of need and their hierarchy, the choice of ways to meet these needs according to an established hierarchy, the choice of available means of consumption and their use.

Table 1 (cont.). Review of selected definitions of consumer behaviour

Authors	Definitions
Pohorille (1980)	It is a way for the consumer to prioritise his or her needs, choosing the goods and services that will be used to satisfy them and way of using those goods.
Engel, Blackwell, Miniard (1993)	Consumer behaviour can be understood as any activity that involves the acquisition, usage and having at disposal of consumer goods, together with the decisions that precede and condition them, which shows that this behaviour consists of two types of purchase and consumption reactions.
Światowy (1994)	Consumer behaviour should be treated as a set of activities, actions and practices aimed at obtaining and handling resources to meet needs. In this approach, consumer behaviour can be defined as activities relating to the search for, purchase and evaluation of goods and services that meet a given need.
Antonides F. van Raaij (2003)	Consumer behaviour consists of mental and physical activities (individuals and small groups), including their motives and the reasons for this, concerning the orientation, purchase, use, maintenance and disposal of the product from the market, public sector and the household, enabling the consumer to function and achieve his or her objectives and values (taking into account the individual and social consequences and thereby achieving satisfaction and well-being.

Developed based on: (Śleszyńska-Świdorska, 2017).

These definitions show that consumer behaviour is a series of logical, orderly actions, linked to consumer's decision to purchase specific products to meet his or her needs. Behaviour is also linked to the buyers attitude. Shaped through their own experiences or modern media, they often influence consumer behaviour. Product, advertisement, brand or place of sale can be regarded as marketing attitudes, and the evaluations of such objects can be shaped and changed under the influence of marketing activities (Baran, Marciniak, Taranko, 2017). Attitudes therefore involve judging someone or something, while consumer behaviour is a way of acting that involves with the satisfaction of his or her needs (Sobczyk, 2018).

4. MODERN CONSUMER

Dynamic changes in the environment have led consumers to seek new ways of meeting their needs. This has an impact not only on changes in the consumer decision-making process, formulation of new goals in the consumption process, but above all on the forming of a new type of consumer - the modern consumer. The behaviour of modern consumers is much more complex and much more difficult to predict than it used to be. Nowadays, consumers have become specialists in purchasing, who have very quickly adapted to the changing reality.

The modern consumer behaviour is primarily influenced by:

- increase in the role and importance of information,
- diversity of the market offer,
- modern technologies,

- new position in the market forces,
- changes in living conditions,
- the Internet.

Unlike a traditional consumer, the consumer of the 21st century is an independent, committed individual who actively seeks market information. Consumer has knowledge about brands, is more aware of his or her rights, and has a rational attitude towards the commercial offer, which is related to the fact that his or her strategic skills in budget management have been developed (Małysa-Kaleta, 2010). Modern consumer also likes to use personalised products, wants to have an influence on the product he/her chooses. He or she also eagerly shares their opinion on products and services with other consumers.

Table 2. The characteristics of the traditional and modern consumer

Traditional consumer	Modern consumer
Looks for convenience	Looks for authenticity
Adapts to the market	Emphasises individuality
Little involved	Highly involved
Conformist	Independent
Poorly informed	Well-informed
Low consumer awareness	High consumer awareness
Unethical behaviour	Ethical behaviour
Low level of responsibility	High level of responsibility

Developed based on: (Małysa-Kaleta, 2010).

An interesting approach to the silhouette of a modern consumer is presented by T. Słaby, characterising him among others as a person (Słaby, 2006):

- dynamic, demanding, constantly creating new needs,
- having experience, gained through their activities and outside processes,
- wanting to live, seeking to satisfy their needs on different levels of life and to experience new experiences
- having knowledge and skills in modern information media
- not showing significant loyalty to the purchased products ,
- having knowledge of the techniques and principles of marketing instruments,
- wishing to have more free time, which is very valuable to him,
- with greater mobility.
- multicultural, which makes his or her needs similar to those of other societies,
- aware of their role in the market and, consequently, their new power.

Other characteristics of the consumer of the 21st century are presented in his works by E. Kieźel. According to her, the modern consumer is more willing to take inconsistent actions to distinguish himself from others. His behaviour is unconventional, changing the determinants of social status and creating his needs to the limits of unreality (Kieźel, 2006).

5. TRENDS IN CONSUMER BEHAVIOUR

In order to meet the needs of today's customers, companies must not only keep track of current changes, but should also focus on forecasting future trends in their buyers behaviour.

According to J. Tkaczyk, the trend in consumer behaviour can be defined as: the direction of a changes in the consumer's lifestyle, which was created as a result of the influence of the economic, demographic, social, legal or technological environment (Tkaczyk, 2012). It is worth noting that global consumption trends in particular countries may occur with different intensification and to varying degrees contribute to consumer choices.

Among the many trends in consumption, we can distinguish:

- Hybridisation of consumption – This manifests itself in the fact that certain cultural patterns are imposed through products. This trend is linked to the progressive process of economic globalisation (Zalega, 2012).
- Conscious consumption – The consumer pays attention to the economic practices of the manufacturer. Otherwise, ethical consumption - The consumer pays attention to whether the manufacturer does not use cheap labour or whether the packaging is recyclable (Płażyk, 2011).
- Multi-channel sales – This is where companies offer their products and services in multiple channels simultaneously. It is important that the distribution channels are consistent with each other. This allows buyers to change them at will during the transaction. The consumer can familiarise themselves with the offer of an online shop, contact the sellers using their personal advice, order the product and pick it up at the point of sale, or buy it there (Łodziana-Grabowska, 2014).
- Consumer ethnocentrism – this is patriotism in the area of consumption. It involves consumers choosing native products: national, regional or local in the first instance, and only then imported products (Płażyk, 2011)
- Virtualization of consumption – The virtualization of consumption, as well as its mediation, can be understood as increasing the level of satisfaction of financial needs for education or culture through electronic media such as the Internet, television or telephone (Jaciow, Wolny, 2011). The progressing process of virtualization of consumption is primarily related to the increasing in the number of purchases of products and services made over the Internet.
- Cocoonisation of consumption – Transfer of services that the consumer had previously used outside to the house – e.g. shopping with delivery, exercising at home instead of gym, or settling bills via the Internet (Płażyk, 2011).
- Shopoholism – its manifestation is the purchase of goods and services which the consumer cannot control, often making useless purchases (Zalega, 2012).
- Deconsumption – This is a deliberate and fully conscious restriction on the purchase and consumption of goods and services to levels that are reasonable from the buyer's point of view (Zalega, 2012).
- Lifestyles of Health and Sustainability (LOHAS). It is about leading a healthy, active and responsible lifestyle. Consumers also attach great importance to environmental protection, social justice and sustainable development (Mróz, 2013).
- Freeganism – It is the re-use of products that have been thrown away and are still fit for consumption. It is often characterised as an anti-consumptionary lifestyle, which primarily consists of boycotting the current economic system. It is most adapted by young people (Płażyk, 2011).
- Self-treatment (Do It Yourself Doctor) – It manifests itself through consumers increased interest in their own health, physical and mental condition. Consumers

themselves try to control the functioning of their own body. They make their own diagnosis and look for ways to cure the disease on their own (Mróz, 2013).

- Gender blending – It is blurring of the boundaries between traditional roles that have been attributed to women and men. Men take actions that were previously reserved for women (childcare, running a house, fulfilling themselves in professions dominated by women at the time). Women, on the other hand, are increasingly oriented towards self-fulfilment at work, competition or personal development (Mróz, 2013).
- Seeking consumer (trysumer) – This trend is related to the willingness of consumers to test market novelties, to seek new sensations and experiences. Seeking consumer checks the credibility of marketing messages on his own. He is eager to look for new ways to meet his requirements, checks opinions about products, uses different types of guides and learn from more experienced users (Mróz, 2013).

The trends presented above shows steadily increase of consumer awareness, therefore consumer expectations are growing too. The behaviour of consumers as purchasers on the market for goods and services are varied. On the one hand, there is a process of unifying consumption and taking over patterns from other countries, and on the other hand, there is an individualisation of shopping preferences and lifestyles.

6. SUMMARY

Changes in economies operate over the years all around the world have led to changes in consumer behaviour. Consumption has taken on a positive role. It is no longer a means of achieving goal, it become goal itself. It can be said that it has evolved from a tool for meeting needs into an action that sets the goal of a life situation. Knowledge of the changes taking place in consumption and consumer behaviour is important for businesses, so that they can discover not only the opportunities but also the risks that arise from exploring new markets. The change in the role of the consumer in the market for goods and services is worth noting. From a purchaser who is not very committed, looking for convenience and not very conscious, he has become a conscious consumer, open to novelties, who is willing to look for innovative ways to satisfy his needs. Consumer behaviour is an integral part of every economy and is one of the main factors determining its growth. The active participation of consumer behaviour in the processes of economic and social development makes the changes taking place in this area subject to continuous analysis in practice. Science field focused on issue of consumer behaviour is constantly evolving, showing it as a complex phenomenon that can be studied from different scientific disciplines.

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Matti SUOMENARO¹

CONSTRAINED BY THE PAST: HOW THE EXPERIENCE OF AFGHANISTAN, IRAQ, AND LIBYA LIMIT U.S. POLICY OPTIONS IN SYRIA

The U.S. is involved in multiple interventions in Syria, Iraq, Afghanistan, Libya, and Yemen with no end in sight for any of these interventions. The Presidency of Donald J. Trump was interpreted as an isolationist turn in U.S. foreign policy. However, this is the wrong conclusion to draw. U.S. policy elites are willing to engage in military interventions, but they place severe constraints on what the U.S. military can and cannot do. These constraints result in incoherent and contradictory military interventions which ultimately fall short of achieving their objectives. The origin of these constraints lie in the experiences of U.S. policy makers during the interventions in Iraq, Afghanistan, and Libya. This paper analyses how these constraints came into being and argues that because of these constraints and the interventions they influenced; the U.S. has a dead-end Syria policy with no effective way to influence the conflict's trajectory.

Keywords: U.S. foreign policy, Syria, Middle East, intervention.

1. INTRODUCTION

Intra-state wars are a complex problem set for the United States. The U.S. is directly or indirectly involved in Syria, Iraq, Afghanistan, Libya, and Yemen, but these interventions have become what some refer to as “forever wars” (Wong, 2020) with no end in sight. The Presidency of Donald J. Trump has been interpreted as an isolationist turn in U.S. foreign policy. The current trend of U.S. foreign policy may appear to be heading in the direction of early 20th century American isolationism, but this is the wrong conclusion to draw from US involvement in Syria. US policy elites firmly believe that the U.S. is a force for good in the world, but they are afraid of the unintended consequences of their actions. U.S. policy elites want to act, but their experiences and the experiences of their colleagues' place constraints on what policy tools they can use to pursue U.S. national security interests. These constraints result in incoherent and contradictory policies which ultimately fall short of achieving their objectives. Understanding the nature of these constraints, their origin, and their impact on U.S. policy is important for both U.S. allies and partners. These constraints are unlikely to change with the Presidency of Joe Biden because the experiences of Iraq, Libya, and Afghanistan are intimately familiar to Biden and his staff from his tenure as Obama's Vice President.

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This paper will analyze the constraints placed upon U.S. policy makers and analyze their impact on U.S. policy in Syria, by examining the discourse of key U.S. policy makers and the policies they advocated. This paper outlines the key U.S. objectives in Syria, discusses the key policy constraints and argues that their origin is in the U.S. experience in Iraq, Afghanistan, and Libya. Our focus is purposefully limited to the post-2001 era because the War on Terror marked the most significant turn in US foreign security policy since the end of the Cold War. The paper then demonstrates how these constraints undermined U.S. policy in Syria during key decision points. The paper ultimately argues that as result of these constraints and the policies they influenced, the U.S. has a dead-end Syria policy with no clear strategy to meaningfully influence the trajectory of the conflict and achieve US national security interests in Syria.

2. U.S. GOALS IN SYRIA

In 2011–2013, the U.S. sought a negotiated UN-backed settlement to the civil war. The Americans were adamant that they would not use force to topple the Syrian President Bashar al Assad, however. This was a low-cost position to take during the Arab Spring which ultimately toppled several regional regimes. However, the U.S. added a new goal to deter the use of chemical weapons following reports that Assad intended to use chemical weapons (CW). This again was also a relatively low-cost commitment to make, because upholding the taboo against CW use is a shared norm among the U.S. foreign policy elites.

The U.S. expanded its goals in Syria in response to ISIS in 2014–2019. Both Obama and Trump set the lasting defeat of ISIS as the primary U.S. policy goal in Syria. During this period, the U.S. also elevated the importance of countering Iran. In 2019 Secretary of State Mike Pompeo outlined that the U.S. would use diplomatic and economic means to expel Iranian forces from Syria. This is a part of a wider U.S. counter-Iran policy in the Middle East which gained importance after the U.S. left the Joint Comprehensive Plan of Action (JCPOA) or the Iran Nuclear Deal in May 2018. Syria is a key part of Iran’s land bridge connecting Tehran to Beirut. However, the U.S. policy towards Iran in Syria is beyond the scope of this paper as it would necessitate a discussion of Yemen, Hezbollah, Iraq, and Israel.

3. CONSTRAINTS ON U.S. POLICY IN SYRIA

The pursuit of these objectives is constrained by past U.S. experiences. U.S. policymakers tend to choose policy tools which comply with these constraints, rather than choosing policy tools best suited to achieving the stated objective. This need to adhere to the constraints when designing policy results in an inconsistent and incoherent Syria policy, because policy makers prefer policies which are consistent with the constraints over policies best suited to achieved stated objectives. These constraints include (1) no new wars, (2) no nation-building, (3) no regime change, and (4) no “boots on the ground.”

No new wars

Both Obama and Trump campaigned on a promise of not involving the U.S. in new conflicts abroad. Both presidents hoped that they would end the wars they inherited. However, neither shied from using military power to pursue American objectives. Both have been willing to use force, but both have wanted to keep it as limited as possible to avoid another war. Both the Obama and Trump administrations were concerned over

“*catastrophic success*” (Fox News, 2015). George W. Bush coined the term when he used it to describe the post-Saddam security vacuum in Iraq. The term has since come to mean a situation in which a limited military action inadvertently topples a regime creating a security vacuum.

No nation-building

The U.S. similarly does not want to engage in nation-building. This is a direct result of the multi-trillion-dollar cost of failed nation-building efforts in Iraq and Afghanistan during the past two decades. Even the term “nation-building” is taboo in U.S. national security discourse².

No regime change

The U.S. is afraid of the unintended consequences of regime change. This is closely associated with the no nation-building constraint as regime-change interventions often leave a security vacuum and require subsequent nation-building to restore the state. This constraint is closely associated with the “Pottery Barn Rule” made famous by Secretary of State Colin Powell with his “you break it you own it” view during the lead up to the 2003 invasion of Iraq. The Pottery Barn Rule and concerns about the “day after” are now a staple of U.S. foreign policy debates. If the U.S. topples a regime, it needs to be there to build a new one.

No boots on the ground

The U.S. public opposes the deployment of US ground forces into combat missions in countries which do not pose a direct military threat to the U.S. This policy constraint has consistently prompted Obama to state there will be no US boots on the ground in Syria (Korte, 2015). President Trump goes a step further and has on at least two occasions announced a troop withdrawal from Syria, although his administration did not implement a full withdrawal.

These constraints are a result of the Iraq and Afghanistan experiences. A brief discussion of the NATO intervention in Libya showcases that these policy constraints shape U.S. policy. However, the experience of implementing a no-fly zone (NFZ) in Libya also expanded the list of constraints to include no NFZs. Implementing the NFZ was not an easy decision for the White House. Obama himself admitted that he was split on the issue, but ultimately agreed to the NFZ after being persuaded by Secretary of State Hillary Clinton (Becker & Shane 2016). Clinton’s own experiences of past U.S. interventions played a key role in pushing her to support an NFZ. During her husband’s presidency, the U.S. failed to prevent the Rwanda genocide in 1994 but a U.S. NFZ in Kosovo after 1995 succeeded in preventing additional massacres during the Kosovo War. Clinton was reportedly influenced by the Srebrenica massacre which killed some 8,000 Muslims in 1995. Clinton’s deputy in 2011 James B. Steinberg noted that “the reason Bosnia and Kosovo figured so importantly is they demonstrated there were ways of being effective and there were lessons of what

² This discourse was made clear to the author during a private briefing attended by senior U.S. civilian and military leaders. After a discussion of what is needed to prevent an ISIS resurgence, one participant noted “what you are describing is nation-building, you’re just not using that word” to which the presenter responded “yes I am describing nation-building, we need to do nation-building in Syria, but if you use that word people stop listening to you”.

worked and didn't work" (Becker & Shane 2016). In essence, Clinton believed that even though Afghanistan and Iraq have been mired with policy failure, the U.S. at least has the experience of implementing a successful NFZ.

The rest of the White House was not as convinced. Obama did not want to commit US forces to another war in a Muslim country. The White House reportedly opposed intervening in Syria precisely because of the ongoing experience of Iraq and Afghanistan. For example, then Vice President Joe Biden stated he was concerned about "not the day after, but the decade after" and the security vacuum left over after intervention in a direct reference to the Pottery Barn Rule discussed above (Becker & Shane 2016). Secretary of Defense Ashton Carter and National Security Adviser Robert Gates on the other hand stated they "did not want to divert American air power or attention away from Afghanistan and Iraq" (Becker & Shane 2016). Obama did, however, ultimately approve the UN-mandated intervention. The Obama administration nonetheless tried to communicate to the U.S. public that regime change is not the goal of the intervention.

The intervention in Libya confirmed the Obama administration's that the NFZ will have unintended consequences. The 10-day operation eventually transformed into a multi-month commitment. Deputy National Security Adviser Ben Rhodes noted the initial NFZ mission was to destroy Libya's air defenses³ but this soon expanded to protecting civilians in Benghazi and beyond (Becker & Shane 2016). Later the U.S. began supplying lethal assistance to the Libyan opposition, but the State Department remained concerned that the weapons may fall into the hands of Islamist extremists, including al Qaeda, as they had done in Iraq and Afghanistan (Becker & Shane, 2016).

The anti-Ghaddafi uprising in Libya eventually transformed into a complex civil war with multiple third-party interventions. Obama's top advisers and aides would later recount that Libya "has strongly reinforced the president's reluctance to move more decisively in Syria" (Becker & Shane, 2016) while Obama said in 2016 that "failing to plan for the day after" in Libya "probably" was his worst mistake as President (BBC News, 2016). The Libya experience played a particularly important role in constraining Obama in Syria, because unlike Iraq and Afghanistan, Obama was responsible for initiating the intervention in Libya.

4. U.S. ACTIONS IN SYRIA

This section will discuss five key policy decisions the U.S. faced during the Syrian civil war. The cases selected here present the key strategic level decisions which played the most significant role in shaping the nature of the U.S. intervention in Syria. The cases demonstrate the experiences of Afghanistan, Iraq, and Libya play a significant role in limiting the policy options of U.S. administrations. In each case, the policy constraints undermined the US ability to pursue its objectives. The cases include: (1) the start and end of covert support to the anti-Assad armed opposition, (2) domestic U.S. debate over a Syrian NFZ, (3) U.S. response to Assad's use of chemical weapons (CW), (4) the evolution of the

³ Even though the U.S. ultimately intervened, Obama made it clear that the NATO intervention was led by its European allies. This meant that the U.S. would only supply "unique capabilities" which in this case meant the ability to destroy Libya's air defenses in order to allow the French to operate freely within Libyan airspace.

Pentagon's train-and-equip program, and (5) the decision to partner with the Syrian Kurdish People's Protection Units (YPG)⁴.

5. START AND END OF TIMBER SYCAMORE

Timber Sycamore was a covert CIA program to put pressure on Assad to "accept a political solution, but not enough to risk the regime's stability" between 2012–2017 (Itani, 2017). The program ultimately failed to put enough pressure on Assad because the U.S. was consistently afraid that the Assad regime might collapse and make the U.S. responsible for another security vacuum (Itani, 2017). As a result, the program was chronically underfunded and eventually phased out by Trump in 2017 once it became clear that Assad would not negotiate a political transition.

Iraq had been a "catastrophic success" (Pollack, 2015) for the U.S. and the Obama administration was worried about the same happening in Syria (Melhem, 2015; Fox News, 2015; Gordon, 2004). The administration tasked the CIA to support rebels just enough to make sure they did not lose, but not enough for them to win (Miller, 2013). Yet even this conservative and limited objective was under resourced. Republican Chairman of the House Intelligence Committee Mike Rogers complained that "inconsistent resource allocation" (Miller, 2013) hindered the program while CIA veterans did not believe the program would have "any meaningful effect" on the war (Miller, 2013). The Russian intervention in 2015 to support Assad made it even more difficult for the U.S. to put pressure on Assad to negotiate. Despite this, the White House remained unwilling to increase CIA support because it feared a conflict with Russia (Itani, 2017).

President Trump ended the program in 2017 and with it the last direct U.S. military effort to force Assad into a negotiated settlement. By the end of the Obama administration, several U.S. officials were advocating for the end of the CIA program, arguing it would not achieve its objectives if the U.S. does not escalate support (Jaffe & Entous, 2017). The Trump administration closed the door on supporting the Syrian armed opposition, by informing rebel leaders in 2018 that they should not base their "decisions on the assumption or expectation of a military intervention" (Al-Khalili, 2018) by the U.S. when negotiating with the regime.

The U.S. nonetheless wanted to continue working with some of the groups and began pressuring them to abandon the fight against Assad and focus on ISIS. For example, the U.S. cut ties with opposition group "Martyrs of Qaryatayn" after the group refused to stop fighting against the Assad regime. The U.S. promptly ceased support to the group and Operation Inherent Resolve spokesperson Col. Ryan Dillon stated that the U.S. gives support "only to groups committed to fighting the Islamic State" (Sisk, 2017).

The U.S. also constrained its regional partners from providing too much support to the rebels. The rebels had been asking for the CIA to provide man-portable shoulder-launched air defense systems (MANPADS) since the beginning of Timber Sycamore (Engel, 2015).

⁴ Kurdish politics is complex and a superficial discussion of it would not benefit the reader. The complex relationship between the Kurdistan Communities Union (KCK), The Movement for a Democratic Society (TEV-DEM), the Democratic Union Party (PYD), their various Kurdish and other ethnic opposition parties, and the various armed formation formations (not to mention their various non-Syrian branches) are beyond the scope of the paper. For the sake of clarity, this paper uses YPG to refer to both the YPG and its political wing the Democratic Union Party (PYD). The conflation of the two is not problematic for the arguments presented here.

Worried about catastrophic success and a potential conflict with Russia, the U.S. refused these requests and vetoed regional partners such as the Gulf State from supplying MANPADS to the rebels (Borger, 2012; Jaffe & Entous, 2017).

6. U.S. DOMESTIC NFZ DEBATE

The U.S. considered implementing an NFZ in Syria, but ultimately decided against this due to fears of catastrophic success and a direct war with Syria and potentially also Russia after 2015. The NFZ would have served two objectives. First, it would have increased the pressure on Assad to negotiate a settlement to the conflict. Second, it would have enabled the U.S. to uphold the Responsibility to Protect (R2P) norm.

The NFZ debate occurred in two manifestations. First in 2013 and later during the U.S. Presidential race in 2016. However, the two debates were remarkably similar. In 2013, Chairman of the Joint Chiefs of Staff Martin Dempsey testified in Congress that an NFZ in Syria would cost 1 billion USD a month and risk war with Syria. Echoing the debate over the Libya NFZ, Dempsey stated “[the NFZ is] essentially an act of war, and I’d like to understand the plan to make peace before we start a war” (U.S. Department of Defense, 2013). In 2016, David Deptula, who commanded the NFZ in northern Iraq in 1998–1999, stated “until a strategy that defines the desired end-state is clearly laid out in a comprehensive way, it’s difficult to advocate for a no-fly zone” (U.S. Department of Defense, 2013; Ackerman, 2016). The same year, Chairman of the Joint Chiefs of Staff Dunford testified in the Senate Armed Services Committee that an NFZ would require “going to war with Russia and Syria,” but walked back this comment in response to pressure from Republican Chairman John McCain (*Graham Seeks Answers from Sec. Carter and Gen. Dunford on U.S. Military Policy in Syria*, 2016, 03:15–05:21).

Candidates in the 2016 Presidential race were significantly more in favor of implementing an NFZ. Republican presidential primary candidates including Jeb Bush, Chris Christie, John Kasich, Carly Fiorina, and Ben Carson all supported an NFZ. (SOFREP, 2016) Obama, however, dismissed these comments as empty campaign talk and not legitimate policy proposals. Candidate Trump’s opposition to the NFZ was similar to Dempsey’s and Dunford’s views. Trump stated that an NFZ would “lead to world war three” (Gambino, 2016).

It is worth noting that the Obama administration argued that an NFZ would be technically unfeasible citing Syria’s more advanced air defense network. Deputy National Security Adviser Ben Rhodes argued that an NFZ in Syria would be more dangerous than in Libya (U.S. National Archives and Records Administration, 2013). However, Dempsey noted that even though Syria has an advanced air defense network, the U.S. would overcome it, adding that “the bigger issue [he would like to understand] is the plan to make peace before starting a war” (U.S. Department of Defense, 2013). Numerous Israeli airstrikes targeting Iran in Syria⁵, Turkey’s 2019 drone strike campaign against Assad’s forces, and

⁵ Israel conducts airstrikes against Iranian targets in hostile airspace. In February 2018, Syrian air defenses successfully shot down an Israeli jet during an air raid. Israel responded with a series of retaliatory airstrikes and later launched Operation House of Cards in May 2018. Following the February 2018 incident, Israel began adopting more aggressive tactics to suppress Syrian air defenses. In September 2018, Syrian air defenses accidentally shot down a Russian intelligence plane during an Israeli air raid. Putin and Netanyahu nonetheless overcame the crisis and Israel as of writing continues its air campaign in Syria.

various U.S. force protection and cruise missile airstrikes since the NFZ debate has nonetheless shown that hostile warplanes can operate in Syrian airspace and conduct strikes against the Assad regime and its Iranian allies.

7. U.S. RESPONSE TO THE USE OF CHEMICAL WEAPONS (CW) IN SYRIA

The U.S. foreign policy elite in general believes in the value of upholding international norms against the use of CW. However, both Obama and Trump have failed to deter Assad from using chemical weapons in Syria. Both presidents were too constrained in their policy responses to punish Assad for using CW and establish a credible deterrent against their future use. Obama did not frame his policy thinking in terms of what would be required to punish and deter Assad. His priority was ensuring the U.S. did not get publicly involved in a regime change intervention in Syria. Trump similarly did not want to expand the U.S. involvement in Syria, and therefore resorted to symbolic strikes to send a message, rather than to meaningfully degrading Assad's will and capability to use CW in the future. Despite Trump's strikes in 2017 and 2018, Assad has reportedly continued the small-scale use of CW⁶.

The faulty US intelligence reports used to justify the invasion of Iraq constrained Obama's policy options in response to the CW attack in Damascus in August 2013. Obama had outlined his infamous "red line" in August 2012, stating that the U.S. has been "very clear to the Assad regime" that there would be "enormous consequences" should Assad use chemical weapons. (U.S. National Records and He nonetheless did not follow through with this threat.

The Iraq Weapons of Mass Destruction (WMD) experience made Obama hesitant about launching a military strike against Assad, according to Deputy National Security Adviser Ben Rhodes (U.S. National Archives and Records Administration, 2012). The U.S. intelligence community assessed that Assad had used chemical weapons, but they refused to make their assessment public due to the WMD fiasco. CIA Director James Clapper even interrupted a routine intelligence briefing to tell Obama the CIA assessment was not a "slam dunk" (U.S. National Archives and Records Administration, 2012). Clapper allegedly used this phrase as a reference to Former CIA Director George Tenet who described the WMD assessment to then President George W. Bush as a "slam dunk".

Obama was equally concerned about Libya-style catastrophic success. According to Rhodes, Obama feared that the intervention may expand beyond its original intent, as it had done in Libya. Obama was likewise worried that if the strikes result in regime collapse, then extremist groups such as al Qaeda may gain possession of the regime's CW stockpiles.

The Republican party also constrained Obama's options. Speaker of the House John Boehner and other senior Republican leaders sent a letter stating that Obama will violate his authorities if he does a strike without congressional approval especially when America is not directly threatened (Fuller, 2013). This was a common Republican argument against

⁶ Organization for the Prohibition of Chemical Weapons-UN Joint Investigative Mechanism (OPCW-UN JIM) did not complete and publish its assessment. Russia vetoed a resolution to extend the OPCW-UN JIM mandate in November 2017. The OPCW by itself does not have the mandate to attribute the use of chemical weapons. Syrian opposition sources, independent local Syrian news, local Syrian activists, and U.S. officials have all consistently claimed that small scale use of CW by the Assad regime is frequent in Syria. The 2013, 2017, and 2018 CW attacks are merely the most attention-grabbing cases.

Obama after the Libya intervention. The Republicans demanded a congressional vote, but many congressmen were expected to vote against the strikes, because they did not want their voting record showing they voted in favor of another war in the Middle East. After all, even 17 years later, the voting record of U.S. politicians on the Iraq War is consistently brought up in domestic debates.

Obama ultimately agreed to pass the decision on strikes to Congress, but the vote did not occur. Russia provided a “*deus ex machina*” before the vote and offered to mediate a deal with Assad for the removal of CW from Syria (Gordon, 2013; Borger & Wintour, 2013). According to the September 2013 deal Russia would guarantee the collection and destruction of Assad’s chemical weapons stockpiles in cooperation with the United Nations (U.S. National Archives and Records Administration, 2013). The implementation of the agreement did not remove all CW from Syria, however, and Assad conducted an additional two high casualty CW attacks in 2017 and 2018.

President Trump’s response was limited. Unlike Obama, Trump chose to launch retaliatory strikes against Assad in order to send a symbolic message that the U.S. will not stand by as Assad uses CW (Gordon, 2017). The strikes had two objectives: first they would degrade Assad’s CW capabilities, and second deter Assad from using CW again in the future. For the first set of strikes, Secretary of Defense John Mattis presented Trump with three options during the National Security Council meeting. Trump reportedly chose the most limited option to ensure that the strikes remained a one-off event and did not escalate US intervention in Syria. Despite the media spectacle surrounding the strike, the U.S. only targeted the airfield which Assad had used to conduct the CW attack. The strike on the airfield was so minor that it resumed regular activities after only two weeks of repairs (Defense World, 2017). The strike also failed to deter Assad, who would use chemical weapons again on April 7, 2018 in Damascus.

The US response to the second CW attack on April 2018 was equally limited. Although the 2018 strike included more missiles and aircraft, and targeted CW warehouses and production sites, the US policy remained unchanged (Cooper, 2018; Congressional Research Service, 2018). The strike had the same objectives, and the limited nature of the strike was again emphasized in official discourse. The U.S. did not intend to escalate its involvement in Syria.

There have been no mass casualty CW attacks since 2018. However, this more likely indicates that Assad does not have a military need to use CW, rather than suggesting that the U.S. has successfully deterred Assad. More importantly, the international community has not held Assad responsible for the use of CW, so it is questionable to what extent the U.S. has managed to uphold the international norm against the use of CW.

8. EVOLUTION OF THE TRAIN-AND-EQUIP PROGRAM

The Pentagon’s train-and-equip program is a mixture of failure and short-term success. This section discusses the first iteration of the program roughly between the end of 2014 and the September-October of 2015. The program would create a New Syrian Army composed of Sunni Arabs willing to fight against ISIS. This public program is entirely separate from the covert CIA program. While the CIA’s mandate was to focus on Assad, the Pentagon’s mission was to destroy ISIS. By September 2015 it was clear that the program had failed to achieve any of its objectives due to the strict constraints placed upon it. This failure and increased support from the U.S. Congress for broader civilian protection

led the Obama administration to fundamentally alter the nature of the Pentagon program in October 2015.

The train-and-equip program is a direct consequence of the U.S. experience in Iraq. On the one hand, it is consistent with the *no boots on the ground* constraint. On the other hand, it builds on the successful use of local Sunnis against extremist groups in Iraq. The decision to use a local partner instead of U.S. ground forces is a direct result of the constraints imposed on Obama by past U.S. interventions.

Obama emphasized that U.S. forces will not have a “combat mission” instead they will “advise and assist” and “destroy [ISIS] without American troops fighting another ground war” in the Middle East (U.S. National Archives and Records Administration, 2014). The success of the Sons of Iraq or Anbar Awakening in 2005–2013 in Iraq made the U.S. confident that it could use a local Sunni Arab force to fight against Salafi Jihadi organizations. The train-and-assist program was essentially an attempt to recreate the successful model used in Iraq.

Despite the success of the Iraqi model, the White House was concerned about unintended consequences of the train-and-equip program in Syria. Israeli ambassador to the U.S. Michael Oren said on his meetings with American officials in 2013 that three themes were constantly present. First the “ghosts” of Afghanistan and Iraq were ever present in the discussions. Second, the U.S. was concerned about giving weapons to rebels because of its experience arming rebels in Angola, Nicaragua, and elsewhere. Lastly, the White House was afraid that Obama will be dragged into another Middle Eastern War (Mazzetti, 2013). These ghosts weighed heavily on Obama who had “asked the CIA to analyze examples of America financing and supplying arms to an insurgency in a country that actually worked” but admitted that the CIA “couldn’t come up with much [*sic.*]” (Chollet, 2015).

These fears translated into strict constraints on who can and cannot be funded by the Pentagon, ultimately leading to the program’s failure. Instead of using the CIA’s approach and vetting the leaders of pre-existing opposition groups, the Pentagon decided to vet every single potential recruit individually. The recruits had to pledge and sign a document that they would fight only ISIS and not Assad. The recruits were also not allowed to have any connections to al Qaeda’s then Syria affiliate Jabhat al Nusra, and they must have combat experience (Youssef, 2015; Brook, 2015). These strict requirements led to an “exceptionally small” pool of potential recruits. (Brooke, 2015). By August 2015, the Pentagon admitted it had only trained 60 fighters out of the target 5,400 and put the blame on “rigorous vetting of recruits” (Youssef, 2015).

9. PARTNERING WITH THE YPG

In September-October 2015 the Pentagon shifted to a “transactional” and “performance-based” approach. The U.S. would now loosen partnership criteria and focus on recruiting pre-existing groups (Congressional Report Service, 2018). The Pentagon’s first choice of partners was the Syrian Kurdish People’s Protection Units (YPG). Multiple past experiences contributed to this decision.

First, the YPG had proven itself as a capable and organized fighting force against ISIS during the Siege of Kobane which began in September 2014. In October 2014, the US acknowledged it was providing weapons, airstrikes, and intelligence in support of the YPG. With this help, the YPG broke the ISIS siege in March 2015. The YPG performance led key U.S. leaders such as U.S. Special Envoy to the Counter-ISIS Coalition Brett McGurk

and Defense Secretary Ashton Carter to advocate for partnering with the YPG (Barfi, 2016). Second, the U.S. has a long history of working with the Kurdistan Regional Government (KRG) and Masoud Barzani's Kurdistan Democratic Party (KDP). The U.S. No-Fly Zone in Northern Iraq protected the Kurds against Saddam Hussein in 1991–2003. The KRG also supported the U.S. during the 2003 invasion of Iraq. Third, key U.S. policymakers have good personal perceptions of Kurds⁷ because of their experience working with Kurds in Iraq. This includes influential Congressmen such as John McCain, Joseph Lieberman, and Lindsey Graham who have all personally visited the Kurdish leadership in both Iraq and Syria (Krajieski, 2013). Lastly, the post-invasion situation in Iraqi Kurdistan was a source of comfort to Obama. Obama noted in 2014 that “the Kurds” had used the time given by U.S. “sacrifices in Iraq” well. To Obama, “the Kurdish region is functioning the way [the U.S.] would like to see. It is tolerant of other sects and other religions in a way that [the U.S.] would like to see elsewhere” (Friedman, 2014). For Obama, the KRG is one of the rare examples of a functional proto-state to have emerged in the aftermath of a regime-change intervention.

The alternative to partnering with the YPG was to accept a Turkish proposal to utilize Arab opposition groups “without even being shown evidence that these groups existed in sufficient numbers, organization, training to actually” fight ISIS, according to a former U.S. official (Szuba, 2019). In addition, the U.S. did not trust its NATO ally Turkey to follow through on the proposal. The significant flow of foreign fighters through Turkey, Turkish uncooperativeness during the Siege of Kobane, and the decision to not allow the U.S. to use Turkish territory to open a second front in Iraq in 2003 contributed to this mistrust (Hof, 2017).

Ultimately the U.S. made the right short-term decision to partner with the YPG. With U.S. support the YPG liberated the key city of Raqqa and defeated the last bastion of the physical caliphate in Baghuz in March 2019. The YPG continues to guard thousands of ISIS detainees and their families in several camps across eastern Syria.

Unfortunately, the YPG's long-term ability to stabilize post-ISIS eastern Syria and ensure the lasting defeat of ISIS is questionable. The YPG faces multiple challenges including lack of funding, tensions between Kurds and Arabs, massive number of detained foreign fighters, lack of reconstruction assistance, consistent threats of a new Turkish offensive against the YPG, the withdrawal of U.S. forces, and the uncertain future of the YPG's relationship with the central government in Damascus. These are significant and complex issues, but they will not be discussed here due to space limitations.

⁷ U.S. policy makers and international media discourse uses the term “the Kurds” when referring to any Kurdish organization in the Middle East. “The Kurds” is a floating signifier and a term which obfuscates the plethora of various armed and civilian Kurdish groups which pursue a wide variety of similar and conflicting policies in Turkey, Iraq, Syria, and Iran. This conflation of the Syrian and Iraqi Kurds into one homogenous imagined group played a key role in shaping the perceptions of U.S. civilian and military officials. Yet this conflation is not consistent. For example, the U.S. policy pretends that the YPG fighters fighting an insurgency against the Turkish occupation in northwestern Syria are somehow different from the YPG fighters fighting against the ISIS insurgency in northeastern Syria. Following the Turkish intervention into northeastern Syria in October 2019, the US policy discourse used phrases such as “abandoning our allies” about the events and called for sanctions on Turkey. In contrast, no such discourse materialized when Turkey intervened in northwestern Syria in January 2018.

Some of these issues stem from three crucial contradictions created by U.S. policy. First, the U.S. aims to ensure the lasting defeat of ISIS but is not ready to commit to this. To achieve the lasting defeat of ISIS, the U.S. must restore services, secure the population, and restore a normal civilian economy in YPG-areas. This requires the U.S. to engage in nation-building and post-war reconstruction. Neither of these are options for the U.S. Trump himself stated that the U.S. is not doing nation-building in Syria and that a reconstruction effort requires a political settlement to the Syrian Civil War. The U.S. cannot achieve the lasting defeat of ISIS due to this policy constraint.

Second, the YPG's reluctance to fight the Assad regime has ensured that Assad does not need a political settlement to end the war. Assad is determined to achieve a military victory. By ending *Timber Sycamore* and announcing that the U.S. will withdraw from Syria as soon as possible, the U.S. has made it difficult to achieve the political settlement it desires.

Third, the U.S. cannot ensure the long-term stability to northern and eastern Syria without resolving the YPG-Turkey conflict. The YPG is undeniably a member of the same overall organization as the Kurdistan Workers Party (PKK)⁸. The PKK is a terrorist organization, according to the European Union and U.S., engaged in a secessionist insurgency against the Turkish state since the 1980s. Turkey has already launched two major cross-border offensives against the YPG, one in Afrin in northwest Syria in 2018 and the other in the northwest in 2019. Both operations directly undermined anti-ISIS efforts by forcing the YPG to relocate its forces and prioritize fighting Turkey to the detriment of counter-ISIS operations.

The choice to partner with the YPG was controversial within the U.S. foreign policy establishment. The YPG's connections to PKK were an obvious source of problem for the State Department who opposed the partnership. The State Department emphasized the need to maintain good relations with Turkey because as U.S. Ambassador to Turkey and Iraq James Jeffery noted "Turkey is important. We are just bred on the importance of Turkey. You name the issue, beyond North Korea and the South China Sea, and you have got Turkey in the middle of it" (Lemmon, 2017).

The Pentagon sought ways to alleviate Turkish concerns. U.S. Army General Raymond Thomas, the head of Special Operations Command, told the YPG leadership that Turkey opposed the partnership. Gen. Thomas recommended the YPG to change its "brand" and the next day the YPG "declared that they are the Syrian Democratic Forces" (Reuters, 2017) or SDF⁹. The U.S. military assumed that with the rebranding and time Turkey would come to accept the U.S.-YPG partnership and adapt relations like those it has with the KRG. Turkey nonetheless continues to oppose the partnership.

⁸ The YPG-PKK connection is highly politicized, but undeniable. For additional discussion see: Barfi, Barak. *Ascent of the PYD and the SDF*. The Washington Institute for Near East Policy, Apr. 2016. Access on the internet: www.washingtoninstitute.org/uploads/Documents/pubs/ResearchNote32-Barfi.pdf.

⁹ This paper uses the term YPG when referring to the SDF. The role of the YPG within the SDF is politicized, but it is undeniable that the YPG maintains significant command-and-control over the SDF, controls resource allocation, and comprises the most effecting fighting component of the group. The YPG made up the majority of the forces used to take over Raqqa City and the last ISIS stronghold in Baghuz. Arabs have consistently called for a real leadership role in the SDF. See for example Kittleson, Shelly. "Arabs Need Leadership Role in Deir Ez-Zor, Says Council Chief." *Al Monitor*, 25 Feb. 2020. Access on the internet: www.al-monitor.com/pulse/originals/2020/02/syria-deir-ez-zor-civil-council-sdf-tribes-islamic-state.html.

Fourth, the U.S. is inconsistent about the nature of its relationship with the YPG. On the one hand, the U.S. reaction to the Turkish invasion and occupation of YPG-held Afrin in northwestern Syria in January 2018 was muted. On the other hand, the U.S. reacted strongly and sanctioned Turkey for launching an offensive against the YPG and occupying YPG-held northeast Syria in October 2019. It is possible that the U.S. reacted differently because the Turkish-American relationship was more strained during the second invasion compared to the first. For example, the arrival of the first Russian S-400 systems in Turkey in July 2019 led the U.S. to suspend Turkey from the F-35 program. However, the actions of U.S. congressmen show that the U.S. acted primarily to protect its YPG partner in 2019. Congressmen Lindsey Graham, John McConnel, and Chris Van Hollen introduced a bill to sanction Turkey for attacking the Kurds. Van Hollen called the YPG “our most effective ally” and said, “throwing them under the bus is not only an act of betrayal, but it also will undermine our national security by sending the signal that we are an unreliable partner” (Groll & Gramer, 2019). The consistent use of the word “ally” in the discourse surrounding the YPG in among U.S. policymakers and news media is indicative of elite attitudes. The U.S. does not have an alliance treaty with the YPG, but it does have one with Turkey.

10. LOOKING AHEAD

It is unlikely that these constraints will be removed with the Presidency of Joe Biden. As discussed previously regarding Libya, Biden holds many of the same reservations as Obama. Furthermore, the first half of the Biden presidency will be preoccupied with the COVID19 induced economic downturn, the polarization of the US electorate, and the revitalization of America’s alliances and partnerships. The nomination of Anthony Blinken for Secretary of State may be a turn to a more active U.S. policy in Syria. Blinken is known for his hawkish stance on interventions and support for the Iraq invasion in 2003. Blinken further acknowledges the constraints on US policy noting the U.S. “rightly sought to avoid another Iraq by not doing too much, but [...] made the opposite error of doing too little [in Syria]” (Herszenhorn & Momtaz, 2020).

However, the policy constraints placed upon Obama and Trump and the foreign and national security establishment by past U.S. actions abroad has left U.S. policy in Syria in a dead-end with no clear way forward. The Biden administration will similarly struggle to achieve the objectives under these constraints. The U.S. cannot engage in regime change and is afraid of causing it by accident, therefore it under resourced and then later gave up on the anti-Assad opposition. This ensures that Assad has no need to negotiate a settlement to the war and can pursue a military victory. The U.S. did not establish an NFZ, because it was worried of an NFZ gradually expanding to regime change or provoking a war with Russia. This ensured Russia and Assad can prosecute their air war with impunity, further reducing the need for Assad to negotiate. The U.S. could not deploy ground forces, creating the need for a local partner force. Yet, strict vetting criteria made this task impossible and led to the YPG partnership. This set the seeds for a future YPG-Turkey conflict which will destabilize post-ISIS Syria and facilitate an ISIS resurgence. The U.S. could not engage in or fund nation-building, forcing it to adopt a stabilization approach which falls short of the required post-war reconstruction necessary to establish sustainable governance and prevent the return of ISIS. The U.S. now hopes to fund the stabilization effort using oil fields

captured from ISIS. This nonetheless creates the long-term risk of a conflict with Assad because most of Syria's crude oil resources are now under YPG control.

The current U.S. policy is to guard the oil fields, mediate the YPG-Turkey conflict, and support counterinsurgency operations against ISIS. There is no long-term strategy other than to continue these efforts and wait. USCENTCOM commander Gen. McKenzie admits he does not "know how long we're going to remain in eastern Syria", but recognizes that "over time, [Assad] is probably going to turn to the east and increase pressure on us, and we'll deal with that as it happens" (Rempfer, 2020).

11. POLICY ALTERNATIVES

This dead-end policy is not the result of a lack of alternative policy options, but a consequence of the constraints. The U.S. Congress established the Syria Study Group (SSG) for "the purpose of examining and making recommendations on the military and diplomatic strategy of the United States with respect to the conflict in Syria" (Sing et al., 2019). The SSG published its final report and recommendations in September 2019 but it did not have a meaningful impact on the policy discourse (Lister, 2020). While the SSG's recommendations represent a sound alternative to the current U.S. policy in Syria, they nonetheless reflect the constrained nature of U.S. policy in Syria and do not mark a significant departure from the current policy equilibrium. A brief discussion of some of the key points of the SSG report will illustrate this.

First, the SSG recommends maintaining a counterinsurgency force in northeastern Syria and support local governance and stabilization to ensure the defeat of ISIS. This recommendation is a constrained version of state-building discussed above. The U.S. ultimately seeks to build a stable and democratic alternative governance model in Syria to challenge the legitimacy of the Assad regime. This is a difficult objective to achieve because Assad has not shown willingness to engage in a negotiated settlement even when his regime was under much more pressure than it currently is. The SSG's recommendations do not meaningfully increase pressure on Assad to compel him to negotiate. Second, the SSG's recommendation to continue working with the YPG and mediating the Turkey-PKK conflict is a continuation of the current policy. The U.S. remains committed to a light footprint and working with local Kurdish partners and does not seek to build a new partner force. Third, the SSG's recommendations to pressure Assad into negotiations and expelling Iran from Syria do not represent a departure from the current constrained U.S. military intervention against Assad and his allies. The U.S. is effectively pursuing regime change through a negotiated settlement but is unwilling to commit the military resources needed to effectively compel Assad to negotiate. Again, the U.S. cannot adequately resource the pursuit of regime change through a political settlement due to the constraints placed on U.S. interventions. Fourth, the SSG recommends the U.S. continues to maintain Syria's pariah status diplomatically and work with Russia towards a political settlement. This is a continuation of past policy. Similarly, by supporting Israeli air strikes and maintaining the Tanf garrison, the SSG is effectively recommending a continuation of the current constrained military campaign against Iran in Syria. In short, while the SSG's recommendations may have an impact on future U.S. policy in Syria, their recommendations are nonetheless consistent with the policy constraints discussed above.

12. REACTIVE POLICIES IN A PROACTIVE REGION

Given the constraints, the current U.S. policy is akin to a “wait and see” strategy. The U.S. is working to secure its gains and continue pursuing its objectives with minimal resources. Meanwhile, other regional actors such as Iran, Israel, Russia, and Turkey continue to pursue their objectives proactively. As a result, US policymakers and practitioners are forced into a reactive cycle. Because the policy constraints prevent the U.S. from actively shaping the balance of power in the Syrian conflict, the U.S. finds itself in a situation in which it is continuously reacting to other actors. “Wait and see” is a legitimate approach if it is accompanied by a strategy to achieve stated objectives. In the Syrian case, the U.S. did not deliberately choose a “wait and see” strategy, instead, a “wait and see” strategy is the default policy option given the constraints placed on the U.S. The fact that even the SSG’s recommendations mirror these constraints is indicative of this. A brief discussion of key regional actors will illustrate this reactive vs. proactive dynamic in Syria.

Iran

The U.S. seeks to counter and expel Iran from Syria. This is a part of Washington’s overall regional strategy to balance against Iranian revisionism in the Middle East. The U.S. approach to Iran has roughly two components: first, put maximum pressure on the Iranian regime through sanctions to compel a change in Iranian foreign policy and induce regime transition in Iran and second, militarily counter Iranian proxies in the region. In addition, US endorsement for a political settlement to end the conflict is conditional upon Iran leaving Syria. Again, the U.S. has set a clear objective, but is unwilling to resource its pursuit. The U.S. is unlikely to change Iran’s calculus in Syria unless it changes the balance of power. The U.S. is unlikely to achieve this without direct military action against Iran in Syria and the sanctions campaign’s success is questionable.

The U.S. engages with Iran reactively. The U.S. refers to these as “force protection strikes” used to counter an imminent threat against U.S. servicemen in Syria. For example, when the Iranian-backed Iraqi Shia militia Kataib Imam al Ali advanced on the Tanf garrison, the U.S. responded with air strikes against the group in May 2017. Similarly, when a joint Russo-Iranian proxy force attacked U.S. forces near Khasham in February 2018, the U.S. responded with force protection strikes. These force protection strikes demonstrate that the U.S. has both the capability and the will to militarily confront Iran in Syria. However, the U.S. is concerned that attacking Iranian forces in Syria may destabilize the Assad regime leading to catastrophic success. As a result, U.S. policy is reactive, and Iran determines when it chooses to put military pressure on the U.S. and sustain casualties.

Israel

The U.S. seeks to protect Israel from Iranian aggression. Israel conducts regular airstrikes against Iranian targets in Syria, to degrade Iran’s ability to establish a second front on the Golan Heights and use Syria as a springboard for future operations against Israel. The U.S. shares these objectives but is constrained from pursuing them militarily. As one Washington D.C.-based analyst said, “the U.S. has effectively outsourced the war against Iran to Israel”. As a result, the dynamic between Iran and Israel in Syria sets the tempo of kinetic operations against Iran. In June 2018, an Israeli airstrike targeted Iraqi terrorist organization Kataib Hezbollah in Albu Kamal on the Iraqi-Syrian border. The strike was unusual because at the time the Israeli air campaign against Syria did not extend to the Iraqi-Syrian border. In response to the strike, Kataib Hezbollah and other Iranian-backed

Iraqi Shi proxies vowed to retaliate against the U.S. and in September 2018, Iranian proxies attacked the Baghdad Green Zone with mortars (Times of Israel, 2018).

This puts the U.S. in a reactive position for two reasons. First, Israeli airstrikes tend to target imminent threats posed to Israel such as drone control rooms, missile warehouses, weapons shipments, commanders, and air defense systems. The Israeli campaign is calibrated to degrade Iranian capabilities in Syria, but not to compel an Iranian withdrawal. Due to this target selection, the Israeli air campaign in Syria is unlikely to create conditions to compel an Iranian withdrawal from Syria. Second, the U.S. must react to Iranian responses, especially if Iranian proxies retaliate against the U.S., even though Israel carries out the strikes. To meaningfully change the balance of power in Syria, the U.S. would need to actively increase the military costs of Iranian involvement in Syria. An Israeli campaign aimed at degrading Iranian efforts to open a second front against Israel falls short of achieving U.S. objectives in Syria.

Turkey

The U.S. seeks to create a stable and inclusive alternative governance model based on the YPG and SDF to challenge the regime in Damascus. However, this effort is undermined by consistent threats by Turkey to launch an offensive against the YPG. Turkey has already done this twice and in both instances, Turkey directly degraded the U.S. ability to pursue the fight against ISIS. Both Operation Olive Branch in 2018 and Operation Peace Spring in 2019 resulted in the YPG redeploying its forces away from the front lines with ISIS towards a defensive fight on the Turkish-Syrian border. In addition, the Turkish offensives replaced the YPG/SDF governance system in the captured territories with a Turkish-backed Syrian opposition system. As a result, the U.S. must react to Turkish activities when shaping its stabilization strategy instead of proactively pursuing its own counterinsurgency strategy.

The U.S. is unlikely to achieve its objectives if it continues its “wait and see” in northern Syria. Turkey sees the YPG and PKK as an existential threat and this perception is unlikely to change without addressing the Turkish-PKK conflict. While the SSG recommends the U.S. mediate this conflict and current U.S. policy seeks to increase security cooperation between the Russians, Americans, and Turks along the Turkish-Syrian border, Turkey is unlikely to change its policy if a PKK-linked proto-state exists on its border. If U.S. policy makers remain guided by their positive experiences working with “the Kurds” and remain weary of working with Turkish-backed local partners due to their connections to violent extremist groups, then the U.S. is unlikely to create a stable and inclusive alternative governance model based in areas captured from ISIS.

Russia

Russia is potentially positioned to act as a diplomatic liaison between the key parties to the conflict. Russia maintains amicable relations with the U.S., Turkey, Israel, and YPG, is partnered with Assad and Iran, and was the architect behind the current UN-sponsored Constitutional Committee. If the U.S. seeks a negotiated settlement to the conflict, it must work with Russia.

Unfortunately, past U.S. constraints on policy put the U.S. in a reactive position in the peace process. While the U.S. is the primary backer of the YPG which controls about a third of Syria’s territory, neither the YPG nor the SDF are included in the peace process. This is due to Turkish opposition. Consequently, while the U.S. seeks a negotiated settlement and an alternative governance model based on the SDF, the SDF is not included in the peace

process nor the constitutional committee. The U.S. currently does not have a strategy to address this issue beyond mediating between Turkey and the YPG. It is unclear how the U.S. can achieve a negotiated settlement if it does not take active measures to include the SDF in the process.

Relatedly, the U.S. decision to end support to the rebels in 2017–2018 (see start and end of Timber Sycamore above) ensured no U.S.-backed group is involved in the peace process. The U.S. was worried about catastrophic success and so it underfunded the rebels. As a result, the rebels underperformed on the battlefield and eventually surrendered in southern Syria where the revolution originally started in 2011. Thus, the U.S. does not have a Syrian armed opposition partner involved in the peace process, even though a legitimate peace process is a stated U.S. objective.

13. CONCLUSION

In conclusion, an analysis of the U.S. policy elite discourse surrounding the interventions in Afghanistan, Iraq, and Libya demonstrate that U.S. policy elites such as members of the Obama and Trump administrations and congress directly drew from their past experiences when constraining their Syria policies. These policies fell short of achieving their stated objectives and their constrained nature resulted in the current dead-end policy in Syria. U.S. elites nonetheless maintain both the capability and the will to “do more” more in Syria. Even though a “wait and see” approach may be a legitimate strategy, it is not the case in Syria. The U.S. did not choose a wait and see strategy, instead it was the default strategy given the constraints. While these policy constraints have limited what the U.S. can achieve, they have not limited what the U.S. wants to achieve. As a result, the U.S. has an incoherent and contradictory Syria policy, which falls short of achieving U.S. national security interests in Syria and the Middle East. This trend is unlikely to change in the near term. Given the constrained nature of even the SSG’s recommendations, the economic downturn caused by COVID19, and the polarized U.S. public, it is unlikely that the ghosts of Afghanistan, Iraq, Libya, and now Syria will leave policy makers alone any time soon.

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WECHAT – A CHINESE CYBER-CULTURE PHENOMENON

The main purpose of this article is to understand the phenomenon of WeChat. Due to number of options and its popularity, WeChat is truly one of its kind. China nowadays is a rapidly developing country with a huge potential of e-commerce market. Modern social media play a great role in Chinese economy but also at life of ordinary Chinese people. WeChat Wallet is much more popular in some regions of China than traditional wallet with cash. Social media are no more only means of communication, via WeChat people may pay taxes, prove ID or make grocery. Popularity of WeChat is not limited with Chinese borders, strong Chinese business presence in the world pushed non-Chinese people to download the app.

Keywords: WeChat, eCommerce, China, marketing, social media.

1. INTRODUCTION

Social media is a new concept for area of research which emerged at the beginning of 2000's. Most of the scientists are focusing on the psychological aspect of WeChat like Liena C.H. and Cao Y. (2014) or Gan C. (2017). The purpose of this paper is to identify the unique features of WeChat and understand why it is so popular among Chinese people.

Main research question of the article is "What makes WeChat so unique at the social media market". I will try to understand the phenomenon of the WeChat popularity, what makes it one of its kind. The world is constantly changing, technologies used just 20 years ago are considered as antiques today. The rapid development of modern technologies forces companies and technology users to adapt in the new environment. Year 2000 is considered as a birth of a new social media, the new era of rapid communication has just started. Soon everyone on the planet will use one of many available social media apps to communicate, share important moment, follow new trends or even pay taxes or prove ID.

One of the fastest growing social media is WeChat (Chinese 微信; pinyin Wēixìn). WeChat is often compared to Facebook. Many people call WeChat a "Chinese Facebook" (Chernavina, 2019). Is it really a good comparison for the app which soon is going to be a very first social media to be used as an official ID for over 1 billion Chinese people worldwide (Pascu, 2019)? Tencent company (the owner of WeChat) is on a right path to totally digitalize the life of Chinese people.

A breakthrough moment for WeChat was introduction of online payments and virtual wallet on a massive scale. WeChat users are able to transfer money with each other via one application. It is a great step in social media as it opens new frontiers for social media

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development. Social media are no longer only means of information transfer but also a mean of financial transactions.

In addition to the very interesting review made by Christian Montag, Chunmai Gan and Benjamin Backer (2018), I am also going to discuss the financial/business aspect of the application on the example of WeChat Wallet. Finally I will try to understand the reasons of growing popularity of WeChat around the world.

The article consists of eight parts. Each section is related to a certain aspect of WeChat unique features.

- The second section considers socio-economic background of WeChat,
- In the third section I will discuss the origins of WeChat,
- Fourth section “Online Shopping” – due to introduction of WeChat Wallet users split into two groups buyers and sellers. Both with the equal access to the application,
- Fifth section “New online shopping culture” – rapid development of social media in China and lack of access to non-Chinese social media like Facebook led to establishing an unique Chinese online shopping culture,
- Sixth section “WeChat presence in other states” – the success of WeChat is also its presence in other states due to strong Chinese economic presence,
- In the last section we will summarize the article.

2. SOCIO-ECONOMIC BACKGROUND OF WECHAT

China nowadays is a combination of communist market with a free trade and capitalism. This unique combination of policies led China to the pedestal of world’s economy. In 2019 China was a top exporter in the world leaving a gap of 800 billion USD between itself and second in a ranking USA (Workman, 2020).

Deng Xiaoping was a man who pushed China towards the “Western Capitalism”. Communist economy with an elements of a free market, that was an idea which many people considered as a pure fiction. However Deng Xiaoping understood that without reforms China will not be able to keep economic growth, thus will not be able to rebuild the country after the horror of the cultural revolution. In April 1979, China announced its very first Special Economic Zone (SEZ) (Fang, 1994). Five SEZ were established next year in Zhuhai, Shenzhen, Xiamen, Shantou and Hainan. That was truly a turning point in Chinese economic history. Since that moment western companies had access to Chinese market. Panasonic was a very first foreign company followed by giants like Coca-Cola, IBM, Motorola, Pierre Cardin and others started to settle their business in China.

Time has passed and new means of communications started to spread around the globe. Facebook popularity in China begins with the inflow of the Western capital and companies. Foreign employees from SEZ preferred to communicate via Facebook instead of its Chinese equivalents. Chinese government was never denying its internet censorship, and put its first serious regulation related to the foreign social medias as a reaction to Tibet riots before 2008 Olympic Games (Gibson et al., 2009). After the 2008 Olympic games, there was a brief policy relaxation, but China banned Facebook in 2009; which was a serious hit to the company (Gibson et al., 2009).

China already had one big social media called QQ which was still far behind Facebook in terms of popularity. Chinese needed well developed and modern social platform for communication. Just a year after Facebook ban in China, Tencent a Chinese social media

leader started to develop WeChat a platform which has changed not only Chinese social media but the entire Chinese culture.

3. THE ORIGINS OF WECHAT

In October 2010, a small group of passionate application developers from Tencent Holdings Limited started to work on a new application called WeChat (Millward, 2018). Next year on January 21st (Millward, 2018), Tencent released a very first version of WeChat. The very first version of WeChat had much less options in comparison to current WeChat. Its main function was sending and receiving messages (text, picture and emojis). However, the creators of WeChat had much more ambitions than creating another application like already existing popular among Chinese QQ (IMQQ ©2018).

WeChat gained popularity among Chinese users much faster than Facebook. The rapidly growing number of users gave incentives for further developments of WeChat and worldwide expansion what is presented on chart 1. It is important to mention that at its first years WeChat attracted mostly users from China.

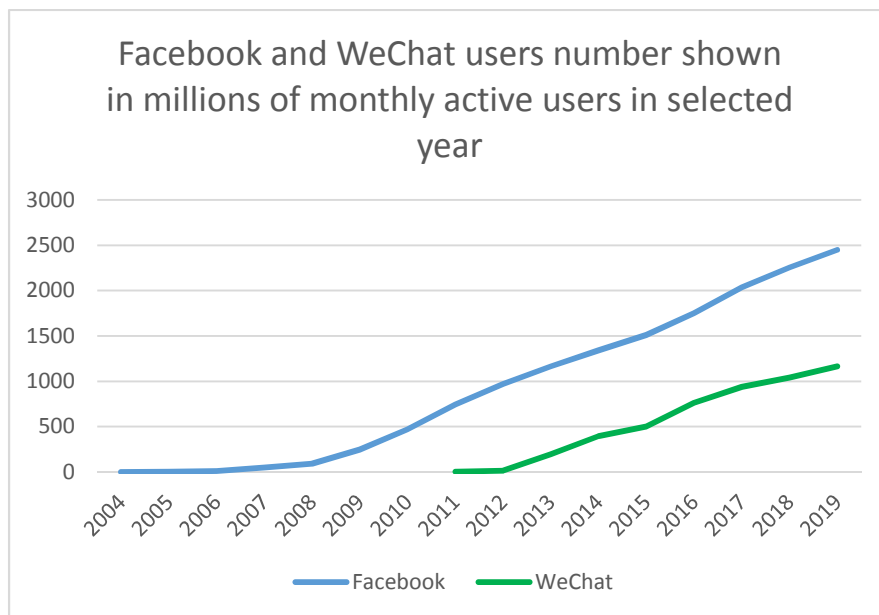


Chart 1. Facebook and WeChat users number shown in millions of monthly active users in selected year

Source: Based on data from Statista (2020) & Richter (2019).

4. ONLINE SHOPPING

In August 2013 (Millward, 2018) WeChat announced its new feature New function let people to use their use WeChat as a tool for money transfer. Since that very moment WeChat users could send each other money with only one click on their phone.

WeChat wallet might be simply top up with many ways, the most popular ones are (Graziani, 2019):

- TopUp with a Card – user adds a Visa/MasterCard to their accounts and choose the amount they want to transfer to WeChat Wallet,
- TopUp at a Retailer – at the retailer store user pays a selected amount of money for an EasyPay barcode which should be scanned by WeChat in order to transfer money,
- TopUp with Instant Money – clients of some banks like Standard Bank may top up their WeChat accounts at ATM's, via Cellphone Banking or Internet Banking.

Proceeding with the payment at WeChat app might occur in various ways. First option is transferring money as an end-user (mostly refer to individual clients), second option is money transfer of Companies (refer to corporate clients).

For end-users WeChat structure is rather simple. WeChat Pay end-users may transfer money to other users (both end-users and companies); pay bills; order taxi; invest in various funds; purchase products via WeChat based e-commerce platforms. In the context of online payment WeChat Wallet is a revolutionary app which substituted “real wallets” of many Chinese. Most of Chinese use WeChat as a mean of payment for their grocery, hairdressers, food etc.

WeChat is strongly focusing on online shopping, thus many functions are introduced in order to make B2C contact much more intuitive at the online environment. In order to do so, WeChat has created various ways to proceed the payment such as QR Code Payment, In-App Payment, Mini-program payments, Quick Pay. Picture 1. presents the QR codes at Chinese market, clients may purchase meat using WeChat Wallet as a payment method.



Picture 1. QR codes at one of the Chinese apple shops

Source: Picture from The Foreign Policy (Yoshida & Matsuda, 2019).

QR Code (WeChat Pay ©2020) – is a simple and one of the most popular method of payment among SME who are using WeChat as a mean of payment in China. WeChat is

first social media platform that is using QR Code Payment method on such a scale. There are four steps to transfer money from WeChat Wallet to the Company's Wallet.

- A user scans the QR Code with WeChat QR Code scanner.
- A user enters the amount of money for transfer.
- A user enters a payment password.
- A user receives the confirmation of the payment transferred to he's WeChat Account.

WeChat Wallet is using blockchain is a technology. The technology is also used by fintech leaders including Bank of China (Cant, 2019). Blockchain technology is a tool that uses a complicated set of algorithms in order to enable safe online money transfers from one WeChat account to another. Each transaction must be verified and registered in order to complete transaction.

The number of online payment users is constantly growing, soon all Chinese population is going to use online transactions instead of cash (Statista, 2020). As seen in Chart 2, 2015 and 2020 saw the greatest increase in the number of online payment users. At the first quarter transactions made via WeChat grew to 805 million USD. People tend to use more online transactions while the economic situation is unstable than when the situation is under control. In 2015, China experienced a stock crisis which caused many people to lose their jobs and panic within the market (Allen, 2015). The current situation caused by COVID-19 also influenced WeChat users to make online purchases instead of traditional shopping purchases (European Parliament Think Tank, 2020).

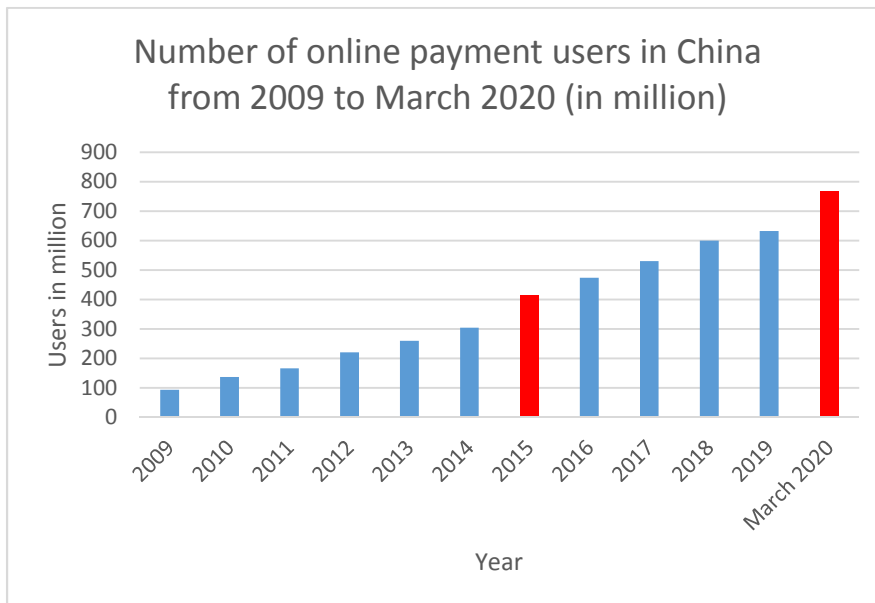


Chart 2. Number of online payment users in China from 2009 to March 2020 (in million)
Source: (Statista 2020).

Everyday millions of users transfer money via WeChat Wallet. Is WeChat going to get a first place in world's e-commerce market? WeChat has all the necessary tools to become a global leader. The question is if WeChat decides to use cryptocurrency? Nowadays both WeChat and Alipay do not allow any cryptocurrency related activities (Valera, 2019). The prohibition of using any sort of cryptocurrency in China may soon cause problems for WeChat. Facebook has announced a new cryptocurrency Libra which might be released in 2020 (Wąsowski, 2019). Libra is a huge threat for WeChat in terms of its current superiority as the leading social media with financial transaction options, the statement of the company proves the fear of new Facebooks currency "If Libra successfully launches, it will undoubtedly significantly bring an impact on the global payment space, and the entire financial industry around the world. It will drive the industry's innovation and development in user experience, service cost, technology and business model, it will also lead to further industry reshuffle" (Ejnsight, 2019).

In order to open an online shop, a company has to register itself at the TenPay Account. The TenPay account is a financial platform established by Tencent Company for the purpose of providing advanced financial service for Corporate clients who aim to open online shop at the WeChat app (Alternative Payments ©2020). TenPay uses WeChat wallet for financial transfers, making online B2C contacts possible. Online shops at the WeChat app are called Weixin Xiaodian (in Chinese 微信小店).

The problem arises when non-Chinese nationals wants to open an online shop at WeChat, as WeChat restricted WeChat online shopping option for only Chinese citizens. However, this restriction is used as an opportunity for a number of Chinese and international companies to circumvent the restriction. The most popular method for opening the online shop for a foreigner is to change VPN or register the account with a Chinese phone number.

Online shops have advantages over "real shops" as there are only pre-paid transactions, so the seller does not have to purchase the products at first. Pre-paid transactions help sellers reduce the risk of investing in product which people would not be willing to buy. In a broader perspective, pre-paid transactions may reduce the price of products as the sellers reduce the risk, thus the clients have more money to purchase more products and the factories have more orders. This is the breakthrough moment not only for WeChat users but for the entire economy, as the WeChat redefined the definition of shopping.

5. NEW ONLINE SHOPPING CULTURE

China has rapidly changed in a past decade. The change relates to both economic and cultural standards of the Chinese nations. Chinese society nowadays is focused on working for money and spending money. China has a population of 1,438 million people, out of whom over 350 are billionaires USD according to Forbes Magazine (Forbes China, 2019). People tend to buy luxury products in order to show off their status. In Chart 3, we see that the market for luxury goods in China is blossoming. Since 2012, the market of luxury goods in China is constantly growing. According to analytics, the growth may reach US\$50B in 2023.

In 2020 due to pandemics, the demand for luxury goods is expected to fall, nevertheless the trend of luxury shopping in China is constantly growing. Consumerism of Chinese population has three levels. In the movie “Have a nice day,” (IMBD ©2020) those three levels are divided as three freedoms:

1. Farmer Freedom – a situation when a person has unlimited access to the farm products.
2. Supermarket Freedom – a situation when a person has unlimited to all products available at the supermarket.
3. Online Shopping Freedom – a situation when a person has unlimited access to all the goods available at the online shopping.



Chart 3. Revenue of Luxury market in China (in million USD)

Source: (Statista 2020).

WeChat undoubtedly helps to achieve “Online Shopping Freedom” in a way it enables people to trade online. Every WeChat user has an access to the growing number of online shops, easy access and intuitive layout of the application makes it a perfect spot for online trade.

The culture of shopping is an irreversible process of changing the mentality of people. Since 2017 the number of users have raised by over 200 million, soon the number of e-commerce users in China will exceed one billion users. Shifting shopping malls to the virtual reality is only question of time.

Showing off the standards of the life is getting a priority among many Chinese people, especially the ones who are not living at the major cities. Such a trend has its benefits and drawbacks. The pursuit of money in China led to higher depression symptoms (DS). Pressure to show a status is much higher among villagers from the rural area than inhabitants of Shanghai, thus they are much more prone to DS (Liu et. al., 2018).

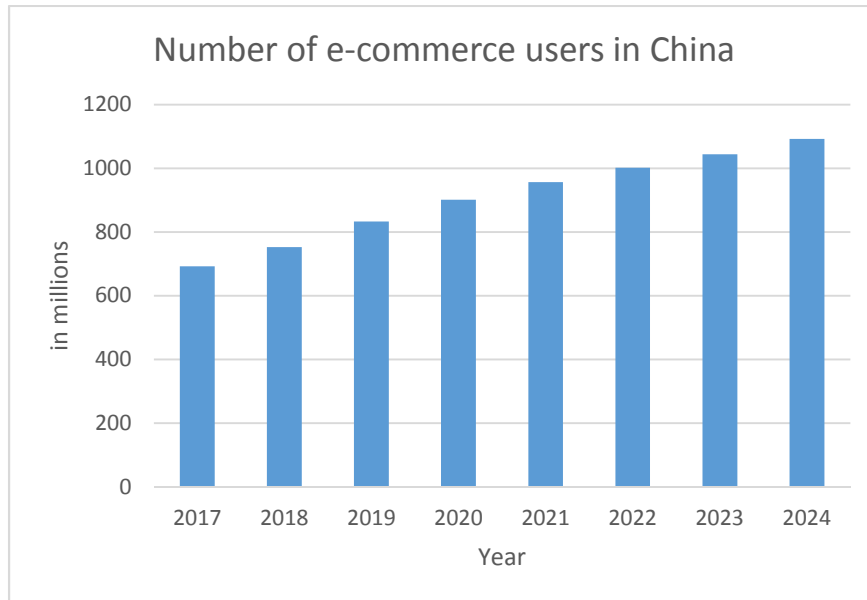


Chart 4. Number of e-commerce users in China

Source: (Statista 2020).

WeChat plays a very specific role in the ecommerce market, it both drives the changes and absorbs the signals from the market. Most of the new trends on a Chinese ecommerce market found its reflection in WeChat functions, but at the same time WeChat is the company that promotes its new functions and creates supply for its service.

6. WECHAT PRESENCE IN OTHER COUNTRIES

WeChat is the biggest social media in China and one of the biggest players at social media market in the Asia-Pacific region. What is the potential of WeChat? What are the directions of WeChat expansion? Those are the questions with two simple answers. Answer for the first one is “huge”. From the social media platform which has only a purpose of connecting people to an advance financial tool for e-commerce transaction, WeChat has truly a great future. The answer for the second question is “everywhere where Chinese people or where Chinese’s business partners are”. Popularity of WeChat is strong enough to attract non-Chinese users to download the app. WeChat symbolize two elements of Virtual China, which are culture of communication and commercial services. Thus non-Chinese people who interact with Chinese people or Chinese business are to certain extent obligated to download the app in order to have contact with their friends or business partners/clients.

WeChat has a great potential for expansion to other Asian countries. About 2/3 of Chinese population is using mobile social media (about 926 million people) (Thomala, 2020), it is a relatively high number comparing to India where the number of mobile social media users is much below 1/2 of the country’s population (about 448 million people) (Keelery, 2020). Low prices of electronic devices and safety of WeChat Wallet in

comparison to caring money may create space for various social medias to fight for future users.

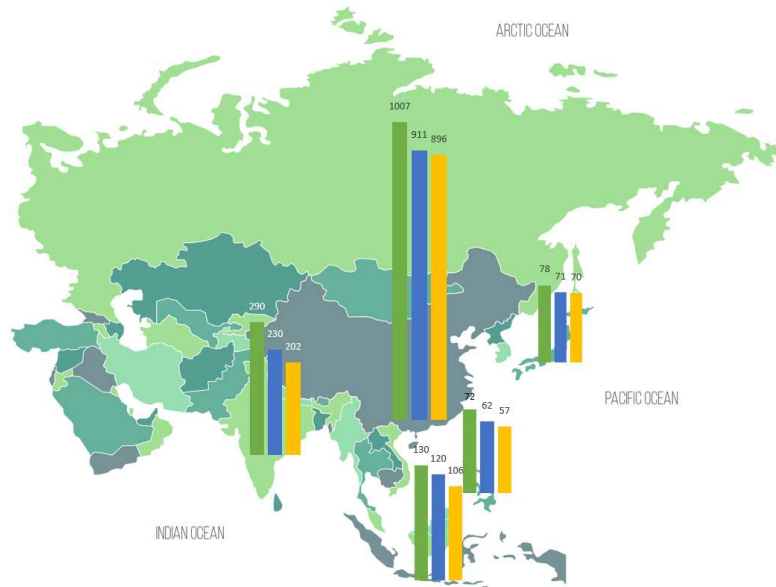


Chart 5. Top 5 countries of Asia-Pacific region with the highest number of active mobile social media users from 2017 to 2019, by country (in million)

Green – number of active mobile social media users 2019;
Blue – number of active mobile social media users 2018;
Yellow – number of active mobile social media users 2017.

Source: Chart based on the information from Moor (2019) and design taken from Freepik (©2020).

Clearly the biggest competitor of WeChat is Facebook. Facebook is the most widely spread social media in the world. Why is Facebook more popular? Simply because Facebook was a first social platform of its type. Moreover Facebook was developed by American Mark Zuckerberg, thus the interface fits more into western culture of its users who had much more access to the Internet compare to Africa or Asia at the time when Facebook was invented. The cultural barrier between China and West might be very difficult to overcome. Previously mentioned India is country with great potential for social media market development. However the question appears when it comes to the cultural approach to social media. India as a part of Commonwealth is in favor of Western life style, thus in favor of Facebook.

According to chart 6 World might be easily divided into two areas of influence, Chinese and American sides. Facebook is more popular in countries of Europe and both Americas, while WeChat is widely spread at the countries of Asia and is commonly used by Chinese diasporas all over the world. Such a division nowadays in many cases is much more visible than political agreements as it allows WeChat and Facebook influence their users and exercise censorship over unwanted information.

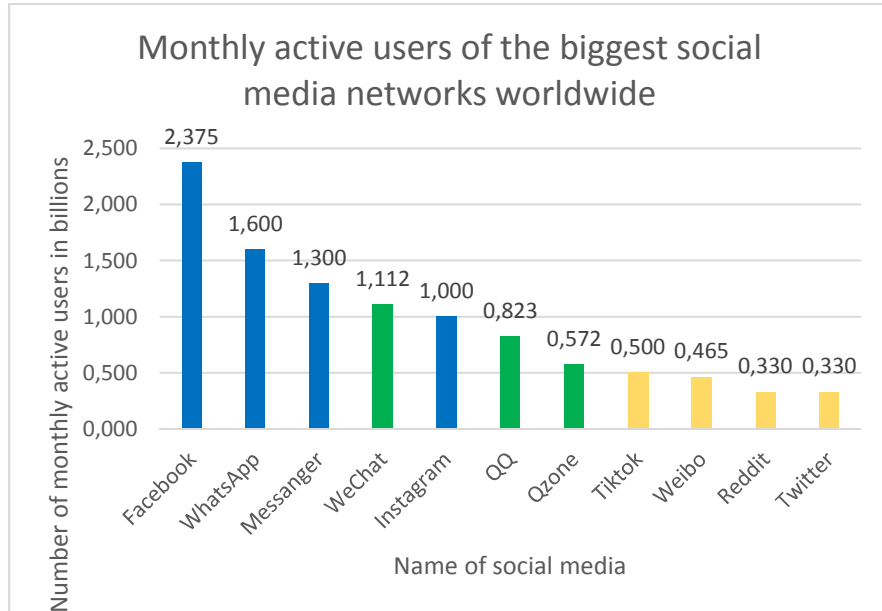


Chart 6. Number of monthly active users of biggest social media network worldwide

Blue – Facebook, Inc.;

Green – Tencent Holdings Limited;

Yellow – Others.

Source: Chart made based on information from Zia (2019).

Based on Table 1, WeChat deserves its international recognition due to much wider range of options. In comparison to its biggest competitor Facebook WeChat has well developed financial system that allows users from all over the world to transfer money. Moreover Facebook does not provide so well developed opportunities for online shops. Facebook is still associated with communication only, even though Facebook introduced marketplace (Facebook ©2020) a platform which connects sealers with a buyers, its recognition as a ecommerce platform is still far behind WeChat.

Table 1. Comparison of WeChat and Facebook

	WeChat	Facebook
Paying taxes via application	✓	✗
Fast financial transactions	✓	✗
Advanced system of online shopping	✓	✗
Main target Chinese customers	✓	✗
Client to client platform for trade	✓	✓
Worldwide mean of communication	✓	✓

Source: Own study.

7. SUMMARY

China is a country with a very rich history and culture. Through the past 50 years, China has made an incredible step forward; from being exhausted by the wars and revolutions to a world export leader with a bright innovative ideas. WeChat is a symbol of China's progress as well as a strong communications tool and financial operations platform.

Same as the Chinese economy, WeChat has made a rapid progress over only 10 years' time. The success of WeChat is a combination of several social, economic and political factors. Chinese government decision on Facebook censorship of WeChat in 2009 was a main factor which made a space for WeChat. Second is a cultural aspect used by WeChat designers.

As opposed to Facebook, WeChat was designed by Chinese people for Chinese people. WeChat users felt much more affiliated to the Chinese WeChat community than to multicultural American Facebook. Finally, financial services provided by WeChat Wallet made every day with WeChat much more convenient. WeChat users could pay their taxes, bills, or even buy grocery with a help of one click at the app. Chinese business was probably the most important factor of WeChat spread among the Asian countries. Over 1 billion people worldwide are using WeChat due to influence of Chinese business. China's first place at world export puts WeChat as a major tool of communication between foreigners. WeChat is clearly unique due to its multitasking and perfect design for Chinese users.

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Reviewing standards, information for authors, the review form, instruction for authors and contact details to MMR Editors and to Publishing House are also published in the fourth number of *Modern Management Review*, no. 27 (4/2020).

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Journal Modern Management Review

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A Please respond to the following questions

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Jan KOWALSKI¹ (czcionka 10 pkt, pogrubiona, wyrównanie do lewej)

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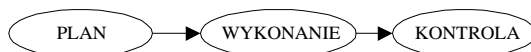
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		Po tabeli należy zostawić odstęp 6 pkt
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Przykład zapisu wzoru:

$$A_2^1 = \sum_{i=1}^n \frac{b_i \cdot \cos^2 \alpha}{2 \cdot a \cdot c} \quad (1)$$

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