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Conversion Attribution: What Is Missed by the Advertising Industry? The OPEC Model and Its Consequences for Media Mix Modeling

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ABSTRACT

Marketers are currently focused on proper budget allocation to maximize ROI from online advertising. They use conversion attribution models assessing the impact of specific media channels (display, search engine ads, social media, etc.). Marketers use the data gathered from paid, owned, and earned media and do not take into consideration customer activities in category media, which are covered by the OPEC (owned, paid, earned, category) media model that the author of this paper proposes. The aim of this article is to provide a comprehensive review of the scientific literature related to the topic of conversion attribution for the period of 2010–2019 and to present the theoretical implications of not including the data from category media in marketers' analyses of conversion attribution. The results of the review and the analysis provide information about the development of the subject, the popularity of particular conversion attribution models, the ideas of how to overcome obstacles that result from data being absent from analyses. Also, a direction for further research on online customer behavior is presented.

JEL classification: M31, M37

Keywords: online customer journey, budget allocation, multi-channel conversion attribution, paid owned earned category media

1. INTRODUCTION

The Internet has empowered consumers by giving them almost unlimited access to product information given by companies, other consumers, and independent reviewers (Kacprzak, 2017, p. 26). At the same time, the marketing industry has developed sophisticated tools to measure the impact of online advertising on the consumer journey and, finally, empowered marketers, who can now collect data about user online behavior in almost real time (Hanssens & Pauwels, 2016; Wedel & Kannan, 2016). Conversion attribution models allow marketers to assign the impact of particular advertising activities to marketing campaign goals (Shao & Li, 2011; Danaher & van Heerde, 2018). Currently, more money is spent on online advertising than on TV, radio, and press put together (Molla, 2018). 54% of marketers recognize conversion attribution as the most difficult obstacle to overcome in their work (eMarketer, 2018). Despite the increasing interest in the subject, there is a paucity of comprehensive literature reviews on the topic of conversion

attribution models. An integration of research findings coming from this subject is, therefore, needed.

Marketers communicate with customers in owned media, paid media, and earned media (Harrison, 2013; Lovet & Staelin, 2016), and use data collected from those areas for media mix modeling (Srinivasan, et al. 2016). Those areas are a space for communication with customers. During the decision-making process, customers do not only rely on the content linked with a single advertiser but also on other product category content provided by independent publishers, users, and competitors (Lecinski, 2011; Lemon & Verhoef, 2016). Several pieces of research confirm the influence of competitors' activities on the brand sales analyzed (Sahni, 2016; Chae et al., 2017; Li et al., 2017). The author of this paper proposes to name this type of content and user activity *category media*, and finally to convert the model of paid, owned, and shared media into the OPEC (owned, paid, earned, category) media model. A comparison of this model with conversion attribution theory and practice brings new findings as well as provokes discussion on the results of some media sources being absent from conversion attribution analyses. A lack of this sort of data may lead to conversion attribution models yielding incorrect results and finally to inappropriate budget allocation. A theoretical analysis of this issue is, therefore, also necessary.

The aim of this paper is to provide an in-depth review of conversion attribution modeling literature and to analyze the potential implications of failure to include partial data in the OPEC model.

The structure of this paper is as follows: a systematic review of conversion attribution models, a proposition of an online content division called the OPEC (owned, paid, earned, category) media model, a presentation of the consequences that the proposed model can have on the results obtained from conversion attribution, and, lastly, conclusions and further research.

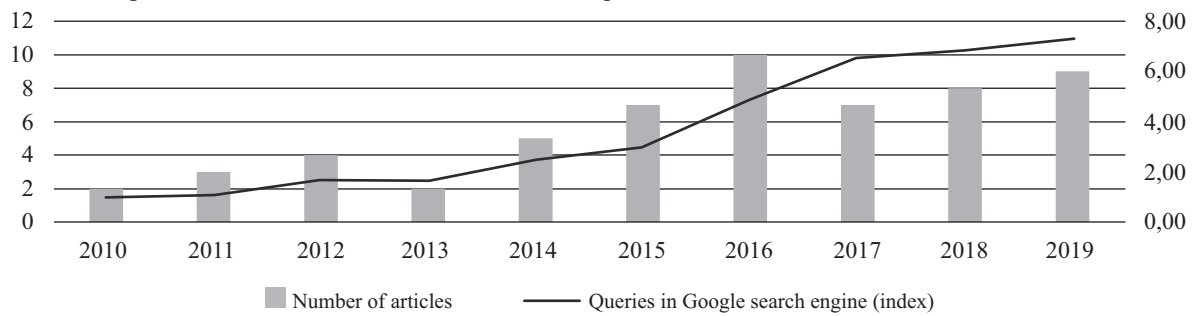
2. SYSTEMATIC REVIEW OF CONVERSION ATTRIBUTION LITERATURE

The systematic review was carried out according to the methodology proposed by Palmatier et al. (2018). The first step was to select the keywords crucial to the subject of conversion attribution: *conversion attribution*, *multi-channel attribution*, *marketing attribution*. The search process involved publications that fell within the timeframe of 2010–2019 as well as 10% of the most frequently cited marketing journals from the Scopus database. The search was conducted by searching for keywords, titles, and abstracts. Because only 17 articles were selected in the process, the next step involved searching for less popular journals indexed in: ProQuest, EBSCO, JSTOR, Web of Science, SAGE Journals, ScienceDirect, Springer, SSRN, Google Scholars and ResearchGate. During the research, several papers originating from international conferences were also found and included in the review. Thus, to be included in the review, a study that would present a theoretical approach to the conversion attribution of online media had to be pursued or a case study based on the conversion attribution of online media methodology and practice included. Articles that only mentioned the issue of conversion attribution without an in-depth, theoretical review were rejected. Out of the 90 articles found, 57 met the aforementioned criteria.

The number of papers treating of conversion attribution has been increasing during last 9 years. In the first half of the decade, this number reached 23, and in the second, it reached 34 (no papers published in 2020 were included so the real estimate will probably be higher). Also, the number of Google Search queries with the aforementioned keywords, from 2010 to 2019, rose 7.2 times worldwide. Conversion attribution will probably be an important scientific subject in the nearest future due to its influence on marketing spending profitability.

Figure 1

Scientific and practical interest in conversion attribution topic



Source: author's own elaboration, index: number of queries in current year to previous year, 2010 = 1.

These articles were selected and classified into one of three categories: theoretical review; data analysis/research, theoretical review, and data analysis/research; and theory in the case of one article. Also, some other areas of interest (type of media channel, attribution methods used) were explored.

Table 1 presents the development of conversion attribution methods in the current decade, types of analyzed data and media channels. The detailed review of literature including key findings is presented in Table 4 in the Appendix.

Table 1

Analysis of conversion attribution literature

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Conversion attribution methods used in case study papers											
Logistic regression		1	1			2	2	2	5	1	14
Shapley value					1	1		1	4	3	10
Markov chains			1		1		1		1	5	9
Probabilistic model		1			1		1	2	2		7
Machine learning			1			2	1		1	1	6
Hierarchical Bayesian model				1	2		1			1	5
Vector autoregression	1	1	1				2				5
Survival analysis						1	1	1	1		4
Neural networks									1	1	2
Other	1	2		1	1	2	3	1	2		13
Heuristic	1	1	1		3	1	4	2	4	3	20
Types of online media channels analyzed in case study papers											
Paid media	2	3	4	2	5	6	7	5	6	8	48
Owned media	2	1	1	1	4	3	4	3	4	6	29
Earned media	0	0	0	0	0	1	2	0	0	1	4
Types of data analyzed in all papers											
Online only data	1	2	4	2	5	6	6	4	8	7	45
Online and offline data	1	1	0	0	0	1	4	3	0	2	12
Total number of articles											
Total	2	3	4	2	5	7	10	7	8	9	57

One article may contain more than one method and more than one type of media channels. Heuristic models are used mostly as a reference point.

Source: author's own elaboration.

It shows a significant number of different approaches to conversion attribution—from logistic regression, through hierarchical Bayesian models and probabilistic models to deep neuron networks and game theory approach. In the last years, models based on Markov chains and the Shapley value have been gathering more and more interest – in the last two years researches used this methods in almost 1/3 of all publications. It is worth mentioning that also Google Data-Driven Attribution model available as an automated campaign strategy in Google Ads ecosystem is built on the assumption of the Shapley value (Google, 2020). Heuristic models, which have always been in use, are also popular, but used mostly as a benchmark to more sophisticated tools and to present a difference in results between proposed or analyzed models commonly used in marketers' approach.

The review shows that the scientific world has not yet adopted the broadly accepted conversion attribution methodology – logistic regression was a method used in 14 articles, probabilistic models in 7, Markov chains in 9, the Shapley value in 10 cases.

Table 2

Popular conversion attribution models

Category	Type	Model	General rules
Heuristic (arbitrarily given credit)	Single-touch	Last-click	The overall effect on the conversion is attributed to the last activity (source) on the path.
		Last non-direct click	The overall effect on the conversion is attributed to the recent activity on a path that was not a direct access to a website.
		First-click	The overall effect on the conversion is attributed to the first activity on the path.
	Multi-touch	Linear	The impact on the conversion is assigned proportionally to each activity on the path.
		Position-based	The effect on the conversion is assigned depending on the position of the activity on the path; for example, Google Analytics assigns a default of 40% of the impact to the first and last source, and the remaining 20% is divided proportionally between other activities.
		Customized weights	The effect on the conversion is assigned arbitrarily and subjectively to each source (most frequently on the basis of a previous more advanced analysis)
Algorithmic (econometrically given credit)	Multi-touch	Logistic regression	The effect on the conversion is studied on the basis of logistic regression based, in turn, on the decomposition of all conversion paths and the binary assignment of the presence or absence of the channel on the path.
		Markov chain	The effect of sources on the conversion is determined on the basis of an analysis of the incremental impact of the entire source in the population. Based on all conversion paths, chains are created with the probability of user migration between individual sources assigned. During the analysis, individual sources are removed from the calculation area and probability flows are examined in chains without an excluded source. The resulting difference is an incremental impact that illustrates the real impact of a given source on the final conversion.
	Shapley value	The game theory approach and the Shapley value method are a measure of a channel average marginal contribution to each channel set (coalition, which is a unique path to the purchase scheme). The marginal contribution of a particular channel is an average difference between conversion results of channel sets (coalition) with and without a particular channel.	

Source: author's own elaboration based on Jayawardane et al., 2015; Ji et al., 2015; Shultz & Dellnitz, 2018.

Marketers seek and prefer solutions that allow the creation of daily reports which are based on day-to-day budget management (Shao & Li, 2011). Dalessandro et al. (2012) state that proper conversion attribution models must be:

- fair—all channels must be taken under consideration and show a proper impact on the final conversion,
- data-driven—a valuable conversion attribution model should be designed for advertising campaign goals and assess both consumer reaction to advertisements and data on conversions from the campaign,
- interpretable—it should be widely accepted by practitioners involved in the marketing industry; acceptance should arise on the basis of the gained metrics and an intuitive understanding of model rules.

Danaher and van Heerde (2018) distinguish five elements of a good attribution model:

- increases the marginal effect of a particular medium on purchase probability;
- equals to zero when the medium produces no effect;
- is proportional to the number of exposures to a medium;
- accommodates advertising carryover;
- reduces the results of the last-click model when there is no carryover or other interaction effects.

The aforementioned requirements explain the popularity of simplified and heuristic models—these types of models are easy to understand and easy to compute. Models based on the Shapley value and Markov chains in general also meet Dalessandro's requirements. This is why their popularity has been observed to increase. Logistic regression models are difficult to apprehend mostly due to the possible negative coefficients of some channels (Jayawardane et al., 2015). Methods that employ machine learning are also difficult to implement in day-to-day analyses.

The second half of the decade brought more studies that analyze the impact of online and offline marketing channels.

Because majority of studies were based on interaction with customers in terms of clicks, it is worth distinguishing papers focused on the influence of display ads on final conversion. Ren et al. (2018) state that analyses taking into account display impressions have higher accuracy. Display activities increase significantly the number of search clicks and conversions (Kierseyev et al., 2016) – also longer exposition to display ads, a higher probability of user engagement in search channel, especially when it is arranged on the early stage of online consumer journey (Ghose & Todri, 2016).

A huge body of research focuses on data from paid media and owned media while only 4 papers also focused on earned media. Also a minority of case studies involved offline data – only 6 papers analyzed additional data.

3. THE OPEC MODEL AS AN EXTENSION TO THE DIGITAL ADVERTISING ECOSYSTEM OF PAID MEDIA, OWNED MEDIA, AND EARNED MEDIA

Marketers use a widely known division of the online advertising ecosystem that separates it into three areas in which marketing content is published: owned media, which, among other things, include the company's website and social media profiles, paid media, which are simply paid advertising activities (banners, videos, etc.), and earned media, which are pieces of independent content directly related to a brand (reviews, opinions, etc.) and published by a third party (bloggers, influencers, journalists, users), which was extensively described by Harrison (2013), Lovet and Staelin (2016), Srinivasan et al. (2016). Several pieces of research (Xie et al., 2018; Golan et al., 2019) additionally distinguish shared media as part of earned media, which evolved strongly by virtue of the development of social media over the last decade. For the

purpose of this paper, the paid, owned, earned media division was employed. This division is also supported by the Interactive Advertising Bureau (IAB, 2016, pp. 8–12).

This type of media division is built on two dimensions: 1) the ability to control advertising communication in owned and paid media, and 2) the commerciality of the message—the content in earned media, unlike that in paid and owned media, is not paid by advertisers (see Figure 2).

Classical decision-making models—for instance, EKB (Engel et al., 1968, 1978), Howard Sheth (1969), and Nicosia (1966)—assume that, during the decision-making process, consumers assess alternatives and search for the details of a product through the utilization of various sources. Also, more recent models that describe consumer behavior and the impact of advertising on the path to purchase—for instance, the Zero Moment of Truth theory (Lecinski, 2011), the AISAS model (Sugiyama, Andree, 2010), a process model of customer journey and experience proposed by Lemon and Verhoef (2016), and a typology of online decision-making behavior proposed by Karimi et al. (2015)—clearly show that users, during their path to purchase, research the competitors' content, independent product category reviews, etc., and, in general, do not only assess one product but the whole product category.

Sahni (2016) researched the impact of online advertisement on the advertiser's competitors and found that online advertisements increased the chance of a sale for non-advertising brands and produced a positive *spillover effect* in the selected industry in online media. Also, Chae et al. (2017) found multiple positive and negative spillover effects related to word-of-mouth marketing. Rutz and Bucklin (2011) found a positive spillover effect produced between media channels. There are other pieces of research (e.g. Nottorf & Funk, 2013; Lu & Yang, 2017) that present empirical results of the spillover effect in the online advertising industry.

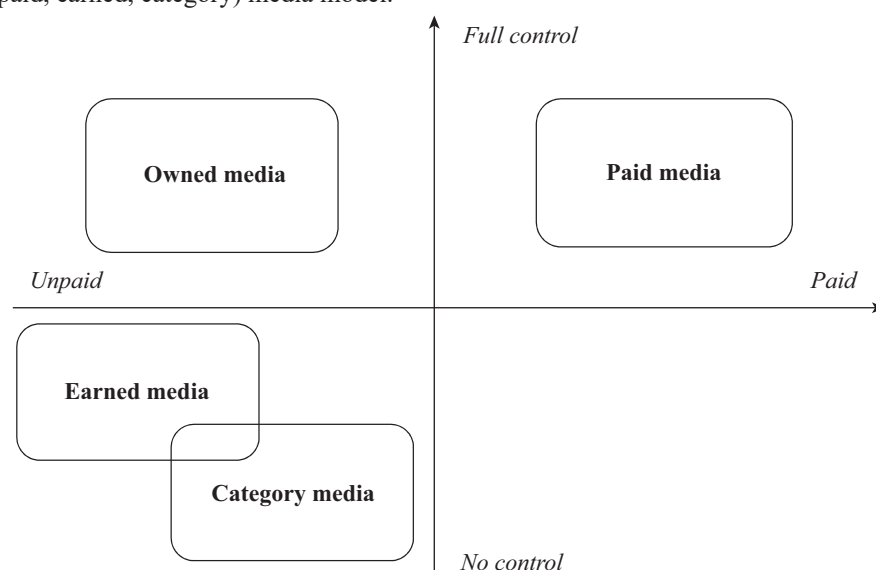
Li et al. (2017) notice that the existing research on conversion attribution analyzes data that comes mostly from paid and owned media (this observation was also made in the author's literature review). They researched the impact of the competitors' websites on the results of conversion attribution and proved that the marketing activities of other companies have an impact on the entire customer journey. Also, Ailawadi and Farris (2017) and Choi et al. (2019) indicated the problem of only studying the marketer's own online touchpoints in scientific literature and market practice. They encourage researchers to explore the contribution of product category websites on the path to purchase more extensively and propose to use survey data if getting actual data is infeasible.

The information about the online customer journey coming from classical and modern decision-making models, the results of spillover research, and conversion attribution literature lead to the conclusion that the advertiser should take into consideration the area of online media not only related to their brand but also to the product category. The author proposes to name this type of media *category media*. Category media cover the competitors' own, paid, and earned media and independent publications related to the product category.

As a natural consequence to this conclusion, the author proposes to extend the existing paid, owned, earned media division (Srinivasan et al., 2016) to the OPEC (owned, paid, earned, category) media model. The type of content included in the four types of media is presented in Table 3.

Figure 2

OPEC (owned, paid, earned, category) media model.



Source: author's own elaboration.

Table 3

Media tools in the different areas of an online customer journey as described by the OPEC model

Area of online promotion	Tools
Owned media	<ul style="list-style-type: none"> • Websites • Blogs • Social media channels • Mobile apps • E-mail and SMS marketing (internal databases) • Search Engine Optimization (SEO)
Paid media	<ul style="list-style-type: none"> • Search Engine Marketing – Pay Per Click (SEM – PPC) • Social media advertisements • Boosted posts • Display • Paid reporters and bloggers • E-mail marketing (external databases) • Affiliate marketing • Video
Earned media	<ul style="list-style-type: none"> • Social media (mentions, likes, shares, comments, retweets, etc.) • Online reviews • Word-of-mouth promotion • Business reporters and bloggers • Search Engine Optimization (SEO)
Category media	<ul style="list-style-type: none"> • Publications related to the topic/product category that do not mention the advertiser's brand and competing brands • The competitors' paid media, owned media, and earned media

Source: author's own elaboration on the basis of Srinivasan et al., 2016; Garman, 2019.

It is worth remembering that, in general, marketers are not able to control communication in the competitor's paid, owned, and earned media. It is also impossible to control and manage the content published by professional or amateur authors that relates to the product category, which may challenge the idea of consumers purchasing products from a selected category. However, marketers are able to analyze the content published in category media and use this data for better budget allocation. To illustrate, a manufacturer of automatic vacuum cleaners may invest money

to build the SEO position of an independent article that compares ordinary vacuum cleaners vs. automatic vacuum cleaners.

4. CONSEQUENCES OF THE OPEC MODEL ON THE RESULTS OF THE CONVERSION ATTRIBUTION MODEL AND ASSESSMENT OF THE ONLINE CUSTOMER JOURNEY

Current conversion attribution models (Markov chains, the Shapley value, logistic regression, etc.) take the complexity of consumers' real decision paths into consideration and are based on analyses of all touchpoints on the path. However, 24.5% of marketers still use the last-click model, 43.2% of them rely on another single-touch model called first-click, which assigns all conversions to the touchpoint that opens the decision path, and less than half of them decide to use multi-touch models (eMarketer, 2018).

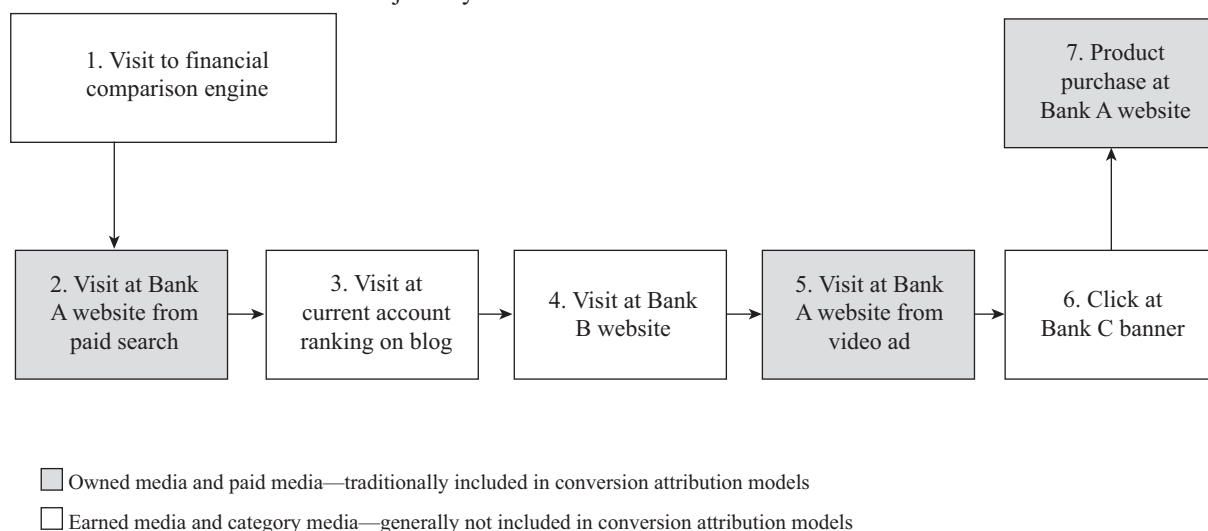
The literature review of the aforementioned paper clearly shows that few studies research the impact of earned media on conversion in multi-channel analyses. Not a single paper focused on category media.

According to the research conducted by Lecinski (2011), customers use, depending on the industry, 5.8 to 18.2 information sources (at least one being the advertiser's website). Hence, it may very well be possible that paid media and owned media constitute only a minority of online customer activities.

Bearing this in mind, two questions related to the problem of measuring the real impact of advertising on the customer's decision path arise: 1) what is the share of consumer activities in earned media and category media? 2) what is the difference between conversion attribution models based on data from paid and owned media activities and data from all activities in all media categories? The theoretical analysis of a customer journey presented in Figure 3 clearly describes the problem and shows potential differences.

Figure 3

An illustration of an online customer journey



Source: author's own elaboration.

Figure 3 illustrates a decision path and demonstrates a research idea of how the study differs from other analyses by taking into account the areas of earned and category media not included in the studies analyzed in that paper.

Figure 3 shows an example of a full consumer decision path, which is comprised of seven interactions with an advertising message regarding a product search—a bank account for micro-companies. The consumer begins their product search by analyzing a ranking of business bank accounts to note that Bank A is a recommended choice (Interaction no. 1). Then, after some time, they search for the phrase “bank accounts for companies in Bank A” and click on a redirecting advertisement (Interaction no. 2). In later steps, they visit a financial blog (Interaction no. 3) and the website of another bank (Interaction no. 4), click on a video advertisement of Bank A (Interaction no. 5), and go to the website of yet another bank (Interaction no. 6). Ultimately, they decide to open an account at Bank A by browsing the website of the institution directly (Interaction no. 7). An analysis of this decision path from the perspective of a marketer employed by Bank A who only has the ability to measure activity from paid and owned media would consist of only three touchpoints: clicking on a Bank A advertisement two times (first interaction in paid search, second interaction after viewing video ad), directly accessing the website of Bank A, and completing the application for a bank account.

Using the conversion attribution methods mentioned above, marketers can use their own methods to allocate the advertising budget. Regardless of which of the conversion attribution methods seems superior, it is easy to notice that skipping four steps out of the seven in a customer decision path carries the risk of error. For instance, in a heuristic multi-touch linear model each owned and paid media activity achieves the credit of 1/3 but, if category and earned media are taken into account as well, the credit plummets to 1/7, and this generates a difference of almost 50% in results.

Applying a conversion attribution model to the same data set causes differences in results and interpretations (Kakalejcik et al., 2019; Zaremba, 2019; Singal et al., 2019), hence the questions of what differences can result from incorporating data from earned and category media into the attribution process, which media are underestimated, and which of them are overestimated.

Going back to the analyzed example, such an approach would require the marketer to find a way to increase visibility on bank account comparison websites and blogs by, for example, investing in search engine positioning or sponsored/display presence. Naturally, then, these media would move from category media to paid media but such an investment could have a significant impact on the effectiveness of the entire advertising campaign. Furthermore, advertisers face the problem of cross-device analysis, which only multiplies the difficulties already present (Brookman et al., 2017).

5. CONCLUSION AND FURTHER RESEARCH

This paper contributes a comprehensive presentation of conversion-attribution-related studies to the existing literature. The research presents the development of the studies in terms of the methods and data sets used as well as the consequent findings. The prepared material may prove helpful for scientists and practitioners looking for a theoretical background on the selected conversion attribution models. The proposed OPEC media model aims to build new perspectives for conversion attribution research and shows a potential direction for further studies.

The literature review shows that there is no broadly accepted conversion attribution model and there are numerous pieces of research that introduce entirely novel lines of approach. There are many discussions among researchers referring to choosing the best approach. An increasing amount of research in the last two years on models based on Markov chains and the Shapley value is because of their fairness and easy interpretability. The Shapley value method appears to be difficult in computation as Singal et al. (2019) and Zhao et al. (2018) proposed simplified Shapley value methods for the attribution problem. Simplified multi-touch algorithmic models may deter marketers from employing heuristic models. According to eMarketer (2019, 2019a),

more and more companies apply multi-touch attribution models but still less than 40% of CMOs rate themselves as good or excellent at the topic. This figures shows that simplified algorithmic methods of conversion attribution are needed.

Theoretical and conceptual papers related to the conversion attribution topic focus mostly on usage of this methods to predict and manage customer experience, loyalty, customer lifetime value. Researchers state that it may be difficult due to the long media-planning cycles and limitations of available technology in terms of gathering data of users behavior out of advertiser's media touchpoints. But necessity of that kind of studies seems obvious.

Most research studies rely on clickstreams, and this may lead to incorrect results and suboptimal media budget allocation—ad impression always has a significant impact on the final purchase. The influence is not direct – display ads encourage users to use other channels finally driving to conversion, especially in an early stage of the path to purchase.

Researchers analyze data form paid and owned media and, in general, miss information from the other parts of a customer path to purchase. This approach is currently loudly criticized due to the evidence based on conversion attribution methods of the strong impact of, for instance, the competitors' websites on the final purchase decision.

Because of this, the author of this paper proposes a new classification of media activities, where not only paid, owned, and earned media are included but also user activities related to product category content. This type of content is called *category media* and is part of the OPEC (owned, paid, earned, category) media model.

The OPEC media model combined with conversion attribution methods and literature review raises numerous questions that can, in turn, stimulate further research.

- How many user activities are there in earned and category media?
- How does data from earned media and category media affect conversion attribution models based on paid media and owned media?
- Which paid and owned media are overestimated and which are underestimated?
- Do the competitors' display impressions create a significant demand for brand analysis?
- What are the differences in a customer journey seen through the OPEC model in different industries?
- What are the differences in a customer journey seen through the OPEC model for high-engaging and low-engaging product categories?
- What is the contribution of earned and category media viewed on mobile devices to the final conversion?
- Is there any simplified method to involve the effects of earned and category media without having a complete view on the entire customer journey? (as proposed by Dalessandro et al. (2012) for display advertising without experiments and extended data sets)
- What is the impact of touchpoints coming from particular OPEC model areas on customer experience, loyalty, customer lifetime value?
- Does the quality of the content faced by customers in earned media and category media significantly influence final purchase?

Due to technological limitations, a precise measurement of user activities in earned and category media may be difficult, but an adequate combination of conversion attribution methods with other methods (e.g. surveys) may provide helpful and yield results that will lead to a better understanding of media mix modeling.

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APPENDIX

Table 4

A collation of papers and the related conversion attribution topics

T – theoretical/conceptual paper, CS – case study paper, P – paid media, O – owned media, E – earned media, ON – online channels/environment, OFF – offline channels/environment (e.g. sales data in stationary points of sales)

Study	Type	Media	Channels	Methods	Findings / Implications
Sikdar & Hooker (2019)	T, CS	P, O	ON, OFF	<ul style="list-style-type: none"> • Markov chains 	<ul style="list-style-type: none"> • Development of a multivariate hidden semi-Markov model framework. • The proposed model helps to determine the expected length of channel activity and inactivity of customers and to identify the risk of customer attrition.
Kaatz et al. (2019)	CS	P, O	ON	<ul style="list-style-type: none"> • Markov chains 	<ul style="list-style-type: none"> • Mobile users mostly rely on direct traffic. • Social paid touchpoints have great impact on purchase decisions.
Singal et al. (2019)	T	–	ON	<ul style="list-style-type: none"> • Markov chains • Shapley value • Heuristic 	<ul style="list-style-type: none"> • Proposition of a new simplified metric (counterfactual adjusted Shapley value) for the attribution problem. • Provided an underlying axiomatic framework motivated by game theory and causality for the proposed model.
Zaremba (2019)	CS	P, O	ON	<ul style="list-style-type: none"> • Heuristic 	<ul style="list-style-type: none"> • Varied results of conversion attribution between heuristic and simplified models. • Every heuristic and simplified model should be used for other reasons and problems/questions.
Kadyrov & Ignatov (2019)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Gradient boosting over decision trees (machine learning) • Logistic regression • Markov chains • Shapley value 	<ul style="list-style-type: none"> • Development of gradient boosting over the decision trees approach and algorithm. • The new solution gave the best results among all models analyzed in terms of ROC and AUC (Receiver Operating Characteristic and Area Under Curve).
Du et al. (2019)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Recurrent neural network + Shapley value 	<ul style="list-style-type: none"> • Presentation of a practical system for multi-touch attribution.
Kakalejcik et al. (2019)	CS	P, O, E	ON	<ul style="list-style-type: none"> • Markov chains • Heuristic 	<ul style="list-style-type: none"> • High-value customers use some marketing channels differently than low-value customers. • High-value customers take more steps in the interaction with the website before purchasing than low-value customers.
Winter & Alpar (2019)	T, CS	P	ON	<ul style="list-style-type: none"> • Hierarchical Bayesian model 	<ul style="list-style-type: none"> • Proposition of a model that analyzes user considerations: whether and where to click, whether to convert, what and how much to buy. • Each effect may be regressed and quantified in the search context.
Choi et al. (2019)	T	P	ON, OFF	–	<ul style="list-style-type: none"> • A lack of a perspective on the entire customer journey is a research gap.

Study	Type	Media	Channels	Methods	Findings / Implications
Berman (2018)	T	–	ON	<ul style="list-style-type: none"> • Shapley value • Heuristic 	<ul style="list-style-type: none"> • More accurate measurement of the uncertain state of the campaign always benefits advertiser. • The last-click model may lower the advertiser's profits compared to not using attribution at all. • A model based on the Shapley value should increase the profitability of a campaign.
Ren et al. (2018)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Recurrent neural network • Survival analysis • Logistic regression • Probabilistic model 	<ul style="list-style-type: none"> • Analysis not only of the impact of clicks but also of impressions. • Analysis that takes into account impression information significantly improves accuracy. • Proposition of a dual-attention, recurrent neural network.
Li et al. (2018)	T, CS	P	ON	<ul style="list-style-type: none"> • Deep neural network • Logistic regression • Markov chains • Heuristic 	<ul style="list-style-type: none"> • Introduction of a deep neural network model for conversion attribution.
Zhao et al. (2018)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Shapley value 	<ul style="list-style-type: none"> • Proposition of a simplified Shapley value model.
Danaher & van Heerde (2018)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Dorfman-Steinman theorem • Probit model • Heuristic 	<ul style="list-style-type: none"> • Presentation of a new approach: marginal increment in the purchase outcome variable in the presence versus absence of a medium, relative to the increments in all media. • Proposition of 5 requirements for a proper attribution model. • Allocation decisions should be proportional to elasticities rather than proportional to attribution weights – common attribution models drive to wrong conclusions and lower purchase conversion rates
Zhao et al. (2018)	T, CS	P	ON	<ul style="list-style-type: none"> • Linear regression • Logistic regression 	<ul style="list-style-type: none"> • Proposition of two revenue-based attribution models. • Differences between applied multi-channel models are not significant except for small channels.
Nisar & Yeung (2018)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Shapley value • Logistic regression • Heuristic 	<ul style="list-style-type: none"> • The last-click model overstates display. • Social media are underestimated and may have strong behavioral impact not visible in used conversion attribution methods.
Mahboobi et al. (2018)	T, CS	P	ON	<ul style="list-style-type: none"> • Shapley value • Logistic regression • Probabilistic model 	<ul style="list-style-type: none"> • Attribution methods blur the differences between contribution and efficiency. • The use of the Shapley value gives better results when compared to other models.
Kannan & Li (2017)	T	–	ON, OFF	–	<ul style="list-style-type: none"> • The crucial research gaps in the subject of conversion attribution are the impact of offline media and attribution across different devices.
Ailawadi & Farris (2017)	T	–	ON, OFF	–	<ul style="list-style-type: none"> • The current attribution models only study behavior across the marketer's own online touchpoints. • There is a strong need to expand analyses to include all of the customers' activities during their journey to purchase, including the competitor's website.

Study	Type	Media	Channels	Methods	Findings / Implications
Abhishek et al. (2017)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Game Theory • Shapley value • Heuristic 	<ul style="list-style-type: none"> • Popular multi-touch models might not lead to the most effective choices for both advertisers and publishers. • In industries where the cost of creating awareness is similar to the cost of displaying ads to drive conversion, the advertisers should use channels showing ads in awareness and consideration stages of the funnel. • If advertiser knows that brand awareness is higher than conversion probability in the consideration stage, they should spend more on brand building.
Li et al. (2017)	T, CS	P, O	ON, OFF	<ul style="list-style-type: none"> • Logistic regression 	<ul style="list-style-type: none"> • The competitors' advertisements influence product information search, alternative evolution stages, and purchase.
Diemert et al. (2017)	T, CS	P	ON	<ul style="list-style-type: none"> • Probabilistic model • Heuristic 	<ul style="list-style-type: none"> • Proposition of a novel, effective bidding policy leveraging attribution modeling.
Ji & Wang (2017)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Survival analysis • Additive hazard • Probabilistic model • Logistic regression 	<ul style="list-style-type: none"> • Proposition of an additional multi-touch attribution model based on two objectives: <ul style="list-style-type: none"> – The effects of advertising exposure are fading with time. – The effects of advertising exposure on the search path are additive.
Zantedeschi et al. (2017)	T, CS	P	ON	<ul style="list-style-type: none"> • Hierarchical Bayesian model 	<ul style="list-style-type: none"> • Proposition of a new model that allows accounting for differences in conversion propensity and response. • Targeting the most responsive customers increases the predicted ROI by 70% versus traditional recency, frequency, and monetary value-based targeting.
Wedel & Kannan (2016)	T	–	ON	–	<ul style="list-style-type: none"> • Solving the attribution problem is an intermediate step toward predicting its effects on the whole customer journey and complete media mix. • A lack of better understanding of the impact of marketing mix elements and simultaneously accommodating planning cycles is a research gap.
de Haan et al. (2016)	T, CS	P, O, E	ON, OFF	<ul style="list-style-type: none"> • Vector autoregression • Heuristic 	<ul style="list-style-type: none"> • Last-click attribution underestimates content-integrated marketing activities generating 10–12% less revenue. • The last-click method overestimates the power of e-mail and branded paid search while underestimating comparisons and portals.
Anderl et al. (2016)	T, CS	P, O	ON	<ul style="list-style-type: none"> • Markov chains • Logistic regression • Heuristic 	<ul style="list-style-type: none"> • Markov chains attribution models outperform heuristic models and simple logit models • Company-initiated channels are underestimated by simplified lines of approach. Direct and paid search are overestimated. • The new approach to attribution based on Markov chains allows the calculation of the probability of conversion to a single customer, and this might be beneficial for real-time bidding decisions.

Study	Type	Media	Channels	Methods	Findings / Implications
Kanaan et al. (2016)	T	–	ON, OFF	–	<ul style="list-style-type: none"> The use of conversion attribution methods for the purpose of analyzing the influence of particular touchpoints on customer experience, loyalty, retention, and customer lifetime value constitutes a chief research gap. Media-planning cycles are long (spanning months or quarters) and not in line with attribution solutions (short perspective, data taken from a short, frozen period, etc.).
Kireyev et al. (2016)	T, CS	P	ON	<ul style="list-style-type: none"> Multivariate time series 	<ul style="list-style-type: none"> Display advertisements increase search conversion significantly. Display advertisements increase the number of search clicks and increase search advertising costs.
Grewa et al. (2016)	T	–	ON, OFF	–	<ul style="list-style-type: none"> Attribution problems originating from mobile marketing are similar to the problems of digital advertising in general. The inclusion of the user's location in attribution analysis may be an interesting research gap.
Li et al. (2016)	T, CS	P	ON	<ul style="list-style-type: none"> Simultaneous equations model Heuristic 	<ul style="list-style-type: none"> A group of keywords performs better under last-click or first-click; therefore, it is crucial to identify the groups that open or close the conversion path.
Ji et al. (2016)	T, CS	P	ON	<ul style="list-style-type: none"> Survival analysis Additive hazard Probabilistic model Logistic regression Heuristic 	<ul style="list-style-type: none"> Proposition of a new approach: probabilistic multi-touch attribution model. The new model presents high accuracy in attribution and conversion prediction.
Srinivasan et al. (2016)	T, CS	P, O, E	ON, OFF	<ul style="list-style-type: none"> Vector autoregression 	<ul style="list-style-type: none"> One of the few pieces of research that include earned media in the data set. Online activities are strongly affected by offline activities. Consumer disengagement measured through Facebook unlikes has a substantial negative effect on sales. Online metrics may assess the efficiency of TV campaigns (e.g. paid search).
Ghose & Todri (2016)	T, CS	P, O	ON	<ul style="list-style-type: none"> Difference-in-differences matching 	<ul style="list-style-type: none"> The research involved information about ad impressions. Display advertising engages users in both active and passive search. The longer the duration of display exposure, the higher the probability of search engagement. Display advertising has a higher impact on the final purchase when arranged in an early stage of the path.
Klapdor et al. (2015)	T, CS	P, E	ON	<ul style="list-style-type: none"> Logistic regression 	<ul style="list-style-type: none"> The number of different channels in a path to purchase is a new predictor of purchase probability. Purchase probability increases with the number of channels used. A transition from information (affiliate, blogs, etc.) to navigation (paid search, SEO, etc.) channels increases conversion probability.

Study	Type	Media	Channels	Methods	Findings / Implications
Dalessandro et al. (2015)	T, CS	P, O	ON	<ul style="list-style-type: none"> Proxy model (machine learning) 	<ul style="list-style-type: none"> Presentation of a novel methodology for insufficient sets of data. Site visits are a good predictor of purchase while clicks are not. Using CTR to build or optimize targeting models is suboptimal.
Yadagiri et al. (2015)	T, CS	P, O	ON	<ul style="list-style-type: none"> Logistic regression + Shapley value Logistic regression Random forest (machine learning) 	<ul style="list-style-type: none"> Implementation of a non-parametric approach to conversion attribution modeling to counter high levels of synergy between marketing channels in a parametric approach.
Woof & Anderson (2015)	T, CS	P, O	ON	<ul style="list-style-type: none"> Sequential analysis Heuristic 	<ul style="list-style-type: none"> Proposition of a time-weighted attribution model.
Barajas et al. (2015)	T, CS	P	ON	<ul style="list-style-type: none"> Bayesian estimation 	<ul style="list-style-type: none"> CPA (cost per action) campaigns incentivize the selection of converting users. The results of optimization should be used to target high-potential customers.
Jayawardane et al. (2015)	T	–	ON, OFF	–	<ul style="list-style-type: none"> Proposition of a categorization of conversion attribution models. The review of methods used for conversion attribution
Zhang et al. (2015)	T, CS	P	ON	<ul style="list-style-type: none"> Survival analysis 	<ul style="list-style-type: none"> Proposition of a new approach to conversion attribution and conversion probability.
Li & Kannan (2014)	T, CS	P, O	ON	<ul style="list-style-type: none"> Hierarchical Bayesian model Heuristic 	<ul style="list-style-type: none"> Proposition of a conceptual framework that includes carryover and spillover effects across online channels. The framework constitutes a functional tool with the capacity to identify incremental contributions of a channel.
Liu et al. (2014)	T, CS	P, O	ON	<ul style="list-style-type: none"> Monte Carlo simulation 	<ul style="list-style-type: none"> Presentation of a time response and revenue to spend response model.
Geyik et al. (2014)	T, CS	P, O	ON	<ul style="list-style-type: none"> Probabilistic model Heuristic 	<ul style="list-style-type: none"> Implementation of a new model with multi-channel attribution that optimizes ROI.
Xu et al. (2014)	T, CS	P	ON	<ul style="list-style-type: none"> Hierarchical Bayesian model 	<ul style="list-style-type: none"> Presentation of the new attribution model. Display advertising has a small direct effect on purchase but stimulates visits to other advertisements.
Anderl et al. (2014)	T, CS	P, O	ON	<ul style="list-style-type: none"> Markov chains Shapley value Heuristic 	<ul style="list-style-type: none"> Development of practical framework for conversion attribution using Markov chains SEO, display, newsletter, retargeting are overestimated by all heuristic approach.
Karande et al. (2013)	T, CS	P, O	ON	<ul style="list-style-type: none"> Game theory 	<ul style="list-style-type: none"> Introduction of the concept of fair allocation (analogous to the Nash equilibrium).

Study	Type	Media	Channels	Methods	Findings / Implications
Nottorf (2013)	T, CS	P	ON	<ul style="list-style-type: none"> Hierarchical Bayesian model 	<ul style="list-style-type: none"> Proposition of a new approach to conversion attribution that uses Bayesian methods. Paid search advertising seems to be overestimated and retargeting underestimated.
Chaffey & Patron (2012)	T	–	ON	–	<ul style="list-style-type: none"> Introduction of the RACE (Reach, Act, Convert, Engage) model framework that optimizes the performance of online marketing.
Abhishek et al. (2012)	T, CS	P, O	ON	<ul style="list-style-type: none"> Markov chains Logistic regression Heuristic 	<ul style="list-style-type: none"> Display advertising brings a lot of value to the results of a campaign. Proposition of an attribution methodology based on the marginal effect on consumer conversion probability.
Rosales et al. (2012)	T, CS	P	ON	<ul style="list-style-type: none"> Machine learning 	<ul style="list-style-type: none"> Creating a foundation for post-click conversion predictions based on contextual information (CTR, CVR, click-to-conversion delay, etc.)
Dalessandro et al. (2012)	T, CS	P	ON	<ul style="list-style-type: none"> Causal effect estimation methods 	<ul style="list-style-type: none"> Examination of the causal effect of display advertising on post-impression conversions. Presentation of the new approach for assessing the display effect without the need for controlled experiments (even A/B tests).
Shao & Li (2011)	T, CS	P	ON	<ul style="list-style-type: none"> Logistic regression Probabilistic model Heuristic 	<ul style="list-style-type: none"> Proposition of two statistical multi-touch attribution models.
Wiesel et al. (2011)	T, CS	P	ON, OFF	<ul style="list-style-type: none"> Vector autoregression 	<ul style="list-style-type: none"> The profit impact of customer-initiated contacts is higher than company-initiated.
Rutz & Bucklin (2011)	T, CS	P, O	ON	<ul style="list-style-type: none"> Nerlove–Arrow model Bayesian dynamic linear model 	<ul style="list-style-type: none"> Generic search activities positively affect future branded search activities. Spillover is asymmetric—branded search has no impact on generic search.
Lee (2010)	T, CS	P, O	ON	<ul style="list-style-type: none"> Assist correlation Heuristic 	<ul style="list-style-type: none"> Conversion attribution modeling may be financially beneficial.
Srinivasan et al. (2010)	T, CS	P, O	ON, OFF	<ul style="list-style-type: none"> Vector autoregression 	<ul style="list-style-type: none"> Mindset metrics (awareness, consideration, liking) show their value as a diagnostic measure. Mindset metrics may explain sales performance beyond the part explained by marketing mix actions.

Source: author's own elaboration.

Procedure for Assessing the Investment Attractiveness of Foreign Markets. Comparative Analysis of Former USSR Countries

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ABSTRACT

One of the natural stages of development of the enterprise is the desire to expand its business abroad. Globalization, global trade integration, technology development, the emergence of political, economic, customs unions, the existence of international courts of arbitration, the emergence of elements of world culture and other factors reduce the barriers between potential investors and countries to internationalization. This phenomenon has a positive impact on the decisions of companies in different parts of the world about the expansion abroad. The main goal of a foreign investor who plans to internationalize is making the most optimal choice of a foreign market where prevailing realities on business environment will enable the achievement of competitive advantage. Because of this, before internationalization, foreign investors should evaluate the investment attractiveness of all potential directions of internationalization in order to be able to realistically assess their own capabilities in these markets and assess all the risks and opportunities that may arise during the operation. The quality of the analysis which assess the level of investment attractiveness of potential directions has a large impact on the success of the company abroad. The article presents the procedure of comparative analysis taking as an example former USSR countries at the macro level.

JEL classification: F23, F21, M31, M19

Keywords: Investment attractiveness of foreign markets, procedure of country attractiveness assessment, country attractiveness comparative analysis, foreign investments, USSR countries.

1. INTRODUCTION

Foreign market attractiveness analysis is a sequential process that involves eliminating unattractive directions of internationalization first at the macro, then meso (sector) and micro level. The first step in the analysis of the attractiveness of foreign markets is a preliminary research during which foreign markets are compared by macro factors. For this comparison, secondary data are often used that are easily available and do not cause a drastic increase in the cost of the study. The aim of preliminary research is to eliminate these directions of internationalization which do not have a large market potential. An analysis of the macro environment is very useful for a potential investor, because it informs about the general situation and trends in the countries

surveyed. The question arises whether such general information about the target market may be sufficient for the investor to make the most optimal decisions for internationalization. The problem lies in the fact that macro indicators cannot describe factors that have a direct impact on the operations of the company. In other words, the methods used during preliminary research did not take into account the specific nature of the sector (Papadopoulos & Denis, 1988; Cavusgil & Nevin, 1981; Douglas & Craig, 1983; Gaston-Breton & Martin, 2011). An investor who decides to internationalize based on the analysis of macro-environment is exposed to the risk of loss of invested funds. Therefore, there is a need for additional research of potential markets not only at the macro but also meso and micro levels.

The next step in the analysis is the process of identification. After the designation of countries with the highest attractiveness based on the analysis at the macro level, the investor should focus on the economic sector which it plans to enter. During the identification phase, a foreign entity should try to evaluate the attractiveness of the target industry. At this stage of analysis, the main objective of the investor is to find out about the characteristics of the target sector, those that are unique for the sector and which were not taken into account during the preliminary research. Various descriptive indicators are used for this purpose in various sectors of the economy. Every industry has its own characteristics, its own unique way of functioning and prosperity. Indicators that are used to describe one sector can have no informative value for another sector. For example, for a hotel, quite high validity may be carried by the number of tourists coming to the country during the analyzed period. But from the standpoint of mining this information has no value. Of course, the selected indicator, the descriptive criterion, may be important for many sectors of the economy. For example, you can take the current price level of electricity. Unambiguously electricity is used almost everywhere in the economy, but the question is whether the price of electricity has the same importance to all sectors. The problem is that there is no indicator that can describe specific information about all sectors. Even if there are common indicators describing several markets, their importance for each of the sectors is different.

After a positive assessment of the attractiveness of the industry, at the end, a foreign entity should focus on the analysis at the micro level – the production and marketing tools that must be used to gain a competitive advantage in a new market abroad. In order to maintain flexibility, low cost and simplicity, most studies of the attractiveness of foreign markets use a macro approach by focusing on general domestic factors (Cavusgil, Kiyak, & Yenyurt, 2004; Sheng & Mullen, 2011; Papadopoulos, Chen, & Thomas, 2002; Samli, 1977; Cavusgil, 1997; Iazzi, Trio, & Pandurino, 2015; Ocampo Figueroa, Osuna, & Fong, 2014). However, there are authors who pay attention also to sectors or products (Douglas & Craig, 1982; Root, 1994; Kumar, 1994; Whitelock & Jobber, 2004; Sakarya, Eckman, & Hyllegard, 2007; Pallapothu, 2013; Liberman-Yaconi, Hooper, & Hutchings, 2010). However, there can be a misconception that there is no need to do the analysis of the macro environment, because each entrepreneur operates only in a specific sectors and a sector analysis is sufficient to take the appropriate decision. It must be remembered that each sector is only a small part of the economy of the country and cannot function independently. The functioning of each sector of the economy is somehow dependent on other sectors, the general economic situation in the country, political stability, the level of society development and many other factors. On the other hand, the changing trends at the macro level can have a noticeable impact on the selected sector. Even if the analysis of the specific sector indicators proves that the industry sector in a selected country is the most attractive among all other sectors, that does not mean that the investor has to choose the direction, because there may be many factors at other levels or aspects of the enterprise which will create additional difficulties and barriers for the operation. Thus, the investment decision can be changed due to the unfavorable environment of the selected sector of the economy in a given country. The importance of the sequentiality and indivisibility of assessing the attractiveness of foreign markets becomes clear.

The aim of this article is to emphasize the identified differences of the main approaches/methods of analyzing the market attractiveness and to propose the procedure which will combine the strengths of that methods and will be suitable not only for the countries which are characterized by low quality of statistical data but also for those with high quality. For a comparative analysis, former USSR countries have been selected in order to present the usefulness of proposed procedure by comparing the attractiveness of the chosen cluster of countries.

2. LITERATURE REVIEW

The process of assessing the attractiveness of foreign markets is quite a difficult process due to a large number of different barriers that may appear in the internationalization process. A slight change in some factor, e.g. the state of the country, the general situation in one of the spheres of life of the state, traditions, the worldview of the society and many other factors, may more or less affect the level of distance and the investor's decisions regarding the choice of the direction of internationalization. The entity examining the distance between the target country and the investor aims to clarify whether selected factors can constitute a barrier to the internationalization of the enterprise. The number of such factors is very large, and they may refer to various aspects of the functioning of the country. To facilitate the process of assessing the attractiveness of countries, it is worth dividing all factors into groups. Each of these groups comprehensively describes one of the basic spheres of state life. For grouping, the PESTEL method can be selected (Obłój & Wąsowska, 2014; Qupurjuu & Uuhuljuu, 2013). Factors that will define the country's attractiveness from the investor's point of view can be divided into the following groups (Kotler & Keller, 2012): political-legal (including geopolitical), economic, social (including cultural), technological, environmental (including geographical). Different authors draw attention to the mentioned aspects of the functioning of countries in order to clarify those factors that have a significant impact on the attractiveness of the country. These factors are further used during the development of different approaches to foreign market attractiveness analysis (Górecka & Szałucka, 2013; Arbatli, 2011; Birnleitner, 2014; Du, Lu, & Tao, 2012; Whitelock & Jobber, 2004; Ocampo Figueroa, Osuna, & Fong, 2014; Mullen & Sheng, 2006; Crespo & Fontoura, 2007; Cavusgil, 1997; Dow & Ferencikova, 2010).

There are many different attempts to formalize the foreign investor's decision-making process in the literature (Górecka & Szałucka, 2013; Papadopoulos, Chen, & Thomas, 2002; Cavusgil, Kiyak, & Yeniyurt, 2004; Mullen & Sheng, 2006; Natarajarathinam & Nepal, 2012). In these studies, the authors have attempted to develop techniques that can help assess the attractiveness of foreign markets. When analyzing the relevant literature, it can be seen that the authors try to multilaterally analyze the issues of assessing the attractiveness of foreign markets by proposing unique techniques.

The relevant literature describes two basic methods to choose the most attractive foreign markets for expansion. The first approach is called country clustering, where the investor needs to identify a group of countries based on some grouping factors. Such factors can be, for example, political, geographical, economic, socio-cultural, technological factors, etc. This way of choosing the target market additionally informs about possible synergies within groups. In this way, the investor can standardize his offer and marketing strategies within one group of countries. This in turn can reduce costs, for example, through economies of scale and economies of scope (Liander, Terpstra, Yoshino, & Sherbini, 1967; Sethi & Holton, 1969; Sethi, 1971; Huszagh, Fox, & Day, 1985; Cavusgil, Kiyak, & Yeniyurt, 2004; Cojanu & Popescu, 2007; Akkucuk, 2011). The main disadvantage of the clustering approach was identified as the dependence on macro indicators, without taking into account sector-specific indicators (Papadopoulos & Denis, 1988; Douglas & Craig, 1983; Cavusgil & Nevin, 1981; Saint-Arnaud, & Bernard, 2003; Akkucuk, 2011).

Critics propose to include sector, product/service-specific variables. But this is more feasible and sensible in the later stages of the analysis, when groups of countries for expansion are already selected. Sector indicators are not readily available as secondary data and require extensive and costly market research. And at the initial stages of choosing the direction of internationalization, it makes no sense to examine specific market factors, due to the increased costs for research. Therefore, comments of critics are only relevant when a limited number of potential countries for expansion have already been identified. The second criticism of this approach is based on the assumption that countries are indivisible, homogeneous units (Jain, 1996; Kale & Sudharshan, 1987). In other words, whether the country should be a unit of analysis. According to Kale and Sudharsan (1987), diversity within the country is not taken into account. This remark is valid in the case of large countries where there are noticeable differences in various aspects of life. Similarities between buyer groups across national borders are not taken into account. So, at the internationalization planning stage, the investor does not consider the opportunities arising from economies of scale in production, research and development, marketing and advertising. But on the other hand, this remark is valid for large corporations, because small and medium-sized enterprises rarely have sufficient resources to enter many markets at the same time. For them, this remark will make sense in the long term, provided that the company succeeds and develops. The last disadvantage of grouping results from the use of secondary data. Obtaining primary data for a large number of countries is almost impossible, so investors should use secondary data for the process of choosing a foreign market. Data are not always of high quality, may not be comparable in different countries, may be outdated and unreliable (Papadopoulos & Denis, 1988; Cavusgil & Nevin, 1981)

The second approach is to create a country ranking. The ranking generally assesses countries in terms of their overall market attractiveness, taking into account all factors that may have a significant impact on the investor's decision to internationalize (Cavusgil, Kiyak, & Yenyurt, 2004; Birnleitner, 2014; Lee, 2016). With this method, the investor at the initial stages analyzes almost all potential countries for internationalization in order to choose the best direction among them (Samli, 1977; Harrell & Kiefer, 1981; Cavusgil, 1997; Lee, 2016). The main objections to creating rankings are similar to the criticism of the grouping method. The main disadvantage is the lack of sector specificity in the indicators (Papadopoulos, 1988). Cavusgil (1997) also confirms this weakness. It is worth emphasizing that similar rankings can be used or transformed depending on the needs of the researcher. This in turn means that similar rankings can be used, for example, during the identification process (selecting the country with the most attractive sector of the economy). It is important to remember that the ranking should not be used to ultimately choose the direction of internationalization, it is a tool that helps to eliminate less attractive directions at the macro and meso levels.

The question may arise which of the two approaches to the preliminary analysis should be used by a foreign investor. Cavusgil argued that the grouping method is useful for entities that try to standardize offers and marketing strategy in various foreign markets, because this technique presents structural similarities between markets. Grouping can be a useful tool for segmenting foreign markets according to indicators relevant for an internationalizing enterprise. On the other hand, companies that want to identify the best possible market for internationalization lean towards ranking as a way to identify several countries that deserve a deeper analysis (Cavusgil, Kiyak, & Yenyurt, 2004).

But sometimes investors make decisions arising, for example, from their own preferences (manager's subjective decision), from psychological distance (fewer entry barriers) or from the investor's environment (social, economic, political, ecological, technological, legal) that comparative models do not take into account. For example, the comparative model does not take into account the fact that internationalization should take place within some economic union, to countries where there is a warm climate, to countries with one religion, to countries

with which the investor has psychological proximity, etc. But the most important thing is that none of the models for assessing the attractiveness of foreign markets takes into account such a very important factor as “liability of outsidership”, which shows the investor’s unique skills to create business contacts abroad (network) and to gather specific business knowledge (specific for a given market) (Johanson & Vahlne, 2009). This means that it makes no sense to include certain countries, because in no case will these countries be selected. Even if one of these countries proves to be the most optimal direction for internationalization, the investor will not choose it due to the above-mentioned reasons. Including these countries only increases the cost of the study. In other words, due to the specifics of the business, business environment, personality and skills of the investor, at the initial stage of the analysis there are restrictions that create a specific group of countries for the analysis of attractiveness. It can be concluded that there are factors such as the human factor that will not allow to create a model that will show the most optimal direction for internationalization. So, the investor’s goal is to minimize subjectivity during the process of selecting a country for internationalization under existing conditions. This in turn means that any comparative analysis of the attractiveness of foreign markets should be created for a specific group of countries, which, depending on the investor’s preferences, may be considered as potential directions for internationalization.

Globalization, technology development, the emergence of political and economic unions and elements of the world law and other factors reduce barriers between investors and potential countries for internationalization. This, in turn, means that new countries are emerging next to the traditional directions of internationalization of enterprises. The overall investment attractiveness and attractiveness of the selected economic sectors of these countries are rarely studied in the literature. This may be due to the low quality and reliability of the secondary data available (most models use secondary data to minimize costs and optimize time and process of selecting the target market). Existing models and procedures for assessing the attractiveness of foreign markets and separate economic sectors do not take into account the specificity of countries characterized by low quality of statistical data and are not flexible enough to use for assessing the attractiveness of various groups of countries that have some common features.

While analyzing the available methods, models and techniques for assessing the attractiveness of foreign markets, one can try to develop a procedure that presents sequential actions that can allow for creating a comparative analysis of a specific group of countries at the macro level. After appropriate modifications, this procedure may also be useful for an assessment at the economic sector level. The procedure is based on the assumption that the specifics of the business, business environment, personality and skills of the investor already at the initial stage of the analysis limits the list of potential directions of internationalization and creates a specific group of countries for the analysis of attractiveness. It is characterized by flexibility, because a given procedure can be used to compare different groups of countries (at the macro and meso levels) that have a common feature and which, due to the investor’s subjective point of view, may be potential directions for internationalization. In addition, a given procedure can be used both to create a comparative analysis for countries with high quality statistical data and for groups of countries that have low quality data. The usefulness of a given procedure is particularly important for countries with low quality secondary data, due to the fact that often foreign investors do not internationalize in such directions, because analyzing these countries is labor-intensive, time-consuming and expensive. It should also be emphasized that the universality of the presented procedure allows assessing the attractiveness of various economic sectors for various groups of countries.

1. Defining a preliminary group of countries for internationalization;
2. Pre-selection of evaluation criteria and indicators based on literature analysis for assessing the attractiveness of countries at the macro level;
3. Selection of countries for which data will be collected (whether only for 1. the initial group of countries selected by the investor 2. for countries observed regularities of which may

- repeat in countries to which the investor plans to internationalize 3. for all countries that provide similar data);
4. Evaluation of data quality based on the five characteristics defined (taking into account the selection of countries in points 1 and 3) in order to eliminate low quality indicators. Creating a list of indicators of acceptable quality;
 5. Conducting a correlation and regression analysis;
 6. Creating a list of indicators having a significant impact on the attractiveness of the country;
 7. Conducting surveys or interviews with experts in order to assign weights to statistically significant indicators;
 8. Conducting a comparative analysis for a pre-selected group of countries at the macro level in order to eliminate less attractive countries.

The given procedure is an attempt to create a ranking for a specific cluster of countries created on the basis of the investor's subjective preferences.

In addition, in order to check the reliability of the comparative analysis carried out on the basis of the technique proposed, the results of comparative analyses based on other approaches will be presented. The final results of these analyses will be compared to check the results and increase the reliability of the basic model.

The article will compare the attractiveness of the former USSR countries. After the collapse of the USSR, countries adapted to new economic, social and geopolitical realities at various rates. Assessing the attractiveness of these countries and a competitive analysis can allow the investor to find alternative directions for internationalization instead of traditional ones. On the other hand, this comparison may be useful, for example, for investors originating from former USSR states (small cultural and language distance), for those who are looking for countries with low-middle income, those who want to be present in that geographical location, etc.

3. BUILDING AN ASSESSMENT OF THE ATTRACTIVENESS OF THE FORMER USSR COUNTRIES

1) Defining a preliminary group of countries for internationalization – Assessment of the attractiveness of foreign markets will be created from the point of view of an investor who, because of the specifics of his business, business environment, his personality and skills, chose the countries of the former USSR for internationalization (excluding the Baltic States, due to other realities in which these countries are currently functioning)¹.

2) Pre-selection of assessment criteria and indicators based on literature analysis for assessing the attractiveness of countries at the macro level – In order to clarify the distance between a potential foreign investor and countries from the sample group selected for the assessment of attractiveness at the macro level, first identify factors that may have an impact on the perception of the country's attractiveness for the investor. Such factors describe the business environment in potential directions of internationalization of the company from various points of view. The most important factors may include, for example, political, economic, social, technological, environmental and legal factors. Subsequently, these factors will be explained using many different assessment criteria. It should be emphasized that assigning criteria to factors is conditional and results from a defined group of factors, the specificity of selected criteria and assessment indicators, and a subjective assessment of similarities between these criteria and indicators by the author. After choosing the criteria for assessing the countries of the former USSR, the researcher should find indicators that can help explain and examine the strength of

¹ The Baltic countries (Latvia, Lithuania and Estonia), despite being part of the former Soviet Union, after its collapse found themselves in other economic and geopolitical realities, which had an impact on the direction of further development of these countries. Due to the different development directions of the Baltic States and EU membership, these countries will not be included in this comparative analysis.

the impact of selected factors on the country's attractiveness at the macro level. The initial list of indicators was created on the basis of an analysis of the literature on the subject. Different authors use various criteria that describe various factors influencing the attractiveness of countries. For example, some pay attention to economic factors (Gaston-Breton & Martin, 2011; Górecka & Szałucka, 2013; Barassi & Zhou, 2012; Cavusgil, 1997; Sheng & Mullen, 2011; Barassi & Zhou, 2012; Iazzi, Trio, & Pandurino, 2015, etc.). They utilize criteria describing economic growth, taxation, international trade, economic freedom, etc. Other researchers emphasize the importance of political-legal factors (Barassi & Zhou, 2012; Malhotra, Zhu, & Locander, 2010; Cavusgil, 1985; Jekanyika Matanda, 2012; Tocar, 2018, etc.). They pay attention, for example, to the corruption level, political stability, country risk, etc. Socio-cultural factors are also widely used by different authors (Whitelock & Jobber, 2004; Tocar, 2018; Dow & Ferencikova, 2010; Sheng & Mullen, 2011; Iazzi, Trio, & Pandurino, 2015, etc.). Criteria like the level of education, cultural distance, language differences were used in order to describe the chosen factor. Criteria describing the technological, environmental or other factors are also present in the literature under study (Cavusgil, 1997; Sheng & Mullen, 2011; Papadopoulos, Chen, & Thomas, 2002; Górecka & Szałucka, 2013; Arbatli, 2011; Tocar, 2018; Barassi & Zhou, 2012; Bhardwaj, Dietz, & Beamish, 2007; Crespo & Fontoura, 2007; Dow & Ferencikova, 2010; Saint-Arnaud, & Bernard, 2003; Drogendijk & Martin, 2015; Du, Lu, & Tao, 2012; Lee, 2016).

3) Selection of countries for which data will be collected – After the collapse of the USSR, the countries that gained independence found themselves in a new economic and geopolitical situation. The lack of a decision-making center, the collapse of the centrally planned economy, an attempt to build a market economy from the beginning, and local military and political conflicts in various parts of the former union caused huge problems in almost every country of the former USSR. These countries focused on expanding their own economies. This had an impact on the reporting of indicators describing situations in these markets. Only after some time, after stabilization of the situation in these markets and joining various world organizations, indicators describing these countries started to appear. Therefore, statistical data describing these countries are not characterized by continuity. The second major limitation is related to the reliability of data from different years from these countries. The emergence of authoritarian regimes of power (in some countries even up to now) has led to a situation in which the data reported by the main statistical offices of these countries were very often used for political purposes. The falsification of data for the purpose of manipulation and increased control over societies by the political elites of these countries resulted in statistical data convenient for the authorities (Michalski & Stoltz, 2013). Even some international organizations, due to the lack of direct access to source data, partly relied on data provided by the statistical offices of these countries. As a result, indicators describing situations in these countries in different years are not highly credible. To sum up, the indicators describing the situation on the markets of the former USSR are not of high quality due to the lack of continuity and reliability of some data. Using such data to build a statistical analysis will result in a model of low quality and reliability, and the survey results will not reflect the actual situation and attractiveness of these markets. Creating a model based on a global scale, using data from all countries is also not recommended, because the observed regularities on a global scale will not necessarily be useful for a group of countries of the former USSR, and at the same time will significantly increase the time and costs of the study.

In this situation, in order to create a comparative model of the countries of the former Soviet Union, it is necessary to choose a group of countries with which the former member states of the USSR have the most similarities. For example, civilizational, cultural, historical, locational, environmental, geographical, political or economic similarities. Particular attention should be paid to the existence of similar economic and geopolitical features. In the specific situation described, the best choice is the European Union for the following reasons:

- a) Despite the collapse of the Soviet Union and the existence of numerous military and political conflicts between former members of the alliance, there are still strong economic, political, military and cultural ties between these countries. The evidence for this assumption can be, for example, the existence of various organizations and unions of which these countries are members – C.I.S (Commonwealth of Independent States), EAEU (Eurasian Economic Union), C.S.T.O. (Organization of the Collective Security Treaty), trade relations between these countries, the status of the Russian language in these countries, etc. The member states of the European Union also have strong geopolitical, economic, military and cultural links with each other.
- b) Like the EU, the level of economic and social development in the former USSR countries varies.
- c) Due to the historical geographical proximity of European countries with this region, the existence of civilizational similarities can be observed.

From the above-mentioned similarities between EU countries and the countries of the former Soviet Union, it can be assumed that trends in the flow of foreign investment detected for EU countries may be repeated in the countries of the former USSR. In addition, the lack of another better alternative to a group of countries and the high quality of data in the EU countries substantiates the decision to use data from the EU countries in the regression and correlation analysis.

To guarantee the possibility of detecting existing current market trends and sufficient observations for high precision of the estimation of parameters, data since 2000 will be taken into account.

4) Assessment of data quality based on five characteristics and creating a list of indicators of acceptable quality – Preliminary selected indicators should be analyzed on the basis of the following five characteristics: data reliability, data acceptability, data continuity, data timeliness, data availability. These five characteristics define the quality of the indicators analyzed. It is worth mentioning that for another group of countries, some of the preliminary selected indicators could prove to be of sufficiently good quality and qualify for subsequent parts of the study. The result of this assessment should be a list of indicators of sufficiently high quality. The list of indicators selected for a given cluster of countries after the quality assessment can be seen in Appendix 6.

5) Conducting a correlation and regression study – After creating a list of factors, criteria and indicators for assessing the attractiveness of foreign markets for the countries of the former Soviet Union, the researcher should proceed to the next stage of the attractiveness analysis, which is conducting a correlation and regression study, in order to clarify which of the selected indicators have significant impact on the level of foreign direct investment. Based on these indicators, a modified table will be created, which will then be used in the comparative analysis of the attractiveness of the former USSR countries at the macro level. Data are collected for 30 indicators from 28 European Union countries for 2000–2018. The total number of observations, depending on the equation, fluctuates around 500. In addition, another statistical model was created for only 14 countries of Eastern Europe in order to check the results of the first model. In both models, the same indicators turned out to be statistically significant.

The dependent variable is log of stock of net inflow of FDI, because this indicator presents a change in the amount of foreign capital involvement in the economy. Fixed effects panel data estimation was used². It can be concluded that the increase in the level of FDI indicates that the country is more attractive. With the help of explanatory variables, an attempt was made to choose those indicators that have a significant impact on the level of FDI.

² The fixed effects panel data estimation was conducted because the fixed-effects model controls for all time-invariant differences between the individuals, so the estimated coefficients of the fixed-effects models cannot be biased because of omitted time-invariant characteristics (like culture, region, religion, gender, race, etc).

6) Creating a list of indicators having a significant impact on the attractiveness of the country – As a result of the statistical survey, a list of indicators is created that have a significant impact on the level of foreign direct investment – the country's attractiveness. The list of these indicators is shown in Appendix 2. The next step is the statistical interpretation of relevant indicators to explain the direction of their impact on the country's attractiveness (positive or negative). In order to be able to compare countries with each other on the basis of the model presented, indicators describing the USSR countries should be brought to one scale. In this case, the indicators will be adjusted to a scale of 0 to 10. The accumulated results of selected indicators will be standardized based on the following formula (1) (Cavusgil, Kiyak, & Yenyurt, 2004):

$$X'_{ji} = \left[\frac{X_{ji} - \min_i}{R_i} (9) \right] + 1 \quad (1)$$

where X_{ji} is the result of country j for indicator i ; X'_{ji} scaled result of country j for indicator i ; \min_i minimum value for indicator i ; R_i scale of indicator i .

Those indicators that have a negative impact on the country's attractiveness will be standardized on the basis of formula (2). This will help preserve their negative impact on the country's attractiveness and better compare with other standardized indicators (the higher the standardized indicator value, the more attractive the country is).

$$X'_{ji} = 11 - \left(\left[\frac{X_{ji} - \min_i}{R_i} (9) \right] + 1 \right) \quad (2)$$

7) Conducting surveys or interviews with experts in order to assign weights to statistically significant indicators – The last stage of creating a comparative model for assessing the attractiveness of foreign markets at the macro level on the example of the former Soviet Union is to assign weights to statistically significant indicators. This process is crucial because each of these indicators has a different power of influence on the attractiveness of the market and, as a result, the investment decision of a foreign entity. Expert surveys will be carried out for weight attribution to indicators. The selection of experts for the survey will be purposeful. The study will involve people with practical experience (people who at some point in their activity decided to internationalize and as part of their professional duties deal with such entities, including representatives of large banks) and people with scientific achievements (representatives of the scientific community who deal with similar topics – international business, foreign trade, banking and finance, international marketing, market analysis, management, etc). The sample consists of 50 experts. 44% of experts represent the scientific community, and 77% the business environment (such a percentage distribution results from the fact that some people simultaneously represent both environments). 74% percent of the respondents have experience in banking and finance (middle and senior managers), 22% in management and international business, and 20% in market analysis. The average experience of the respondents is over 19 years. The intended weights for individual indicators can be seen in Table 1. In Appendix 1, there is complete information about the surveyed experts.

8) Conducting a comparative analysis for a pre-selected group of countries at the macro level in order to eliminate less attractive countries – Finally, in order to obtain the final result for each of the former USSR countries, first the standardized indicators of each of these countries should be multiplied by the weights assigned. By summing up the results of this multiplication for each of the analyzed countries, the researcher can get a total result assessing the level of attractiveness of a given country at the macro level. Based on this result, the former USSR countries can be compared. The higher the score, the more attractive the country is. The analysis

carried out at the macro level is intended to eliminate from the initial group of potential directions of internationalization of the foreign unit those that are less attractive for investment.

4. RESULTS

Appendix 2 presents these data from twelve countries of the former Soviet Union (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan). These data were used to create the main comparison model. Most of these data come from the World Bank database for 2018. The indicator showing the percentage share of people in each of the countries that have access to the Internet presents the state for 2017. Data showing the level of inflation in 2018 in Moldova, Russia, Tajikistan, Turkmenistan and Ukraine come from the Statista reporting portal³.

Table 1 presents the results of a comparative analysis of the attractiveness of the countries of the former USSR (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan) on the basis of indicators that turned out to be statistically significant and the weights assigned to them.

This means that the following countries should qualify for the next stage of the study – assessing the attractiveness of the selected economic sector: Armenia, Belarus, Georgia, Moldova, Kazakhstan and Russia.

In addition, in order to check the reliability of the main comparative analysis based on the proposed procedure (Table 1), the results of comparative analyses based on other approaches will be presented. The final results of these analyses will be compared to check the reliability of the main model results (Table 2). Alternative analyses of the attractiveness of foreign markets at the macro level will be carried out on the basis of the following techniques:

1. Comparative analysis based on 10 indicators that were selected as a result of statistical analysis. Equal weights will be prescribed for these indicators (Appendix 3).
2. Comparative analysis based on the indicator which received the highest weight in the opinion of experts (Appendix 4).
3. Comparative analysis based on two indicators that received the highest weights in the opinion of experts (Appendix 5).
4. Comparative analysis based on indicators that, after assessing the quality of the pre-selected indicators, qualified for the statistical survey. In this case, the equal weight approach will be used (no basis for assigning different weights). This approach has many disadvantages. For example, some indicators are correlated, there are deficiencies in some data, the use of equal weights, the choice of the direction of the impact of indicators on the attractiveness (positive or negative) of the country is subjective, etc. It should be remembered that this analysis is of supporting nature and is aimed at checking the main comparative model, therefore its numerous weaknesses will not be taken into account (Appendix 7).

The above-mentioned 4 comparative analyses are done only to check the reliability of the basic comparative model. The final results of these analyses cannot be binding on the decision to internationalize. The decision on the choice of a foreign market at the macro level should be made on the basis of the main model.

³ www.statista.com – provider of market and consumer data.

Table 1
Comparative analysis of the attractiveness of the former Soviet Union at the macro level (main model)

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
GDP (2010 constant USD) % change	6.79	1.00	3.50	6.18	5.11	4.19	4.04	2.29	10.00	8.32	3.94	6.67	11.74
GDP per capita (PPP adjusted) (current international \$) % change	10.00	1.00	6.43	9.52	5.52	3.15	7.05	5.74	9.49	9.10	7.42	6.68	11.18
Gross capital formation (current USD) % change	8.35	1.97	4.55	5.53	2.85	5.80	10.00	2.90	1.00	5.04	5.12	6.51	9.34
Trade (% of GDP)	5.85	5.91	10.00	7.62	3.39	6.70	5.24	2.41	2.77	1.00	6.52	3.82	9.3
Unemployment, total (% of total labor force) (modeled ILO estimate) ⁴	1.00	8.93	8.67	3.23	8.91	7.67	10.00	9.48	5.27	9.92	6.41	8.86	7.76
Inflation, consumer prices (annual %) ⁵	9.45	9.78	8.12	9.39	7.47	10.00	9.15	9.25	8.70	5.57	4.69	1.00	11.86
Institutions ⁶	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	16.64
Total population % change	3.14	5.15	2.01	2.67	6.46	8.21	2.14	2.38	10.00	7.36	1.00	7.76	5.88
Human Development Index	6.57	6.25	9.63	7.96	9.63	1.96	3.95	10.00	1.00	3.89	6.04	3.89	8.84
Individuals using the Internet (% of population)	7.78	10.00	9.29	6.99	9.60	3.61	9.55	9.53	1.11	1.00	6.87	5.84	7.46
Total Country Result	697	514	666	743	634	548	673	573	506	501	526	503	

Source: own study

⁴ The statistical study and further analysis of the results of the study show that an increase in this indicator has a negative impact on the attractiveness of the country. Due to this, formula (2) was used to standardize the data for this indicator.

⁵ The statistical study and further analysis of the results of the study show that an increase in this indicator has a negative impact on the attractiveness of the country. Due to this, formula (2) was used to standardize the data for this indicator.

⁶ Institutions (global management indicators) – This is the sum of institutional variables Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of law and Control of corruption.

Table 2

Comparison of the results of supporting analyses of the attractiveness of the former USSR countries at the macro level with the results of the main comparative analysis

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan
Main model	697	514	666	743	634	548	673	573	506	501	526	503
1) Comparative analysis based on 10 indicators using equal weights	661	543	675	691	651	559	671	585	510	522	523	540
2) Comparative analysis based on the indicator that received the highest weight by experts	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96
3) Comparative analysis based on two indicators that received the highest weights by experts	231	188	184	278	191	195	208	185	130	83	128	61
4) Comparative analysis based on indicators which, after assessing the quality of pre-selected indicators, qualified for the statistical survey	1722	1503	1808	1810	1846	1372	1615	1686	1123	954	1427	1339

Source: own study.

Table 2 compares the results obtained with the help of supporting/checking models with the results of the main model. The results of supporting/checking analyses are very similar to the final results of the main analysis. Countries that received low results in the main model also proved to be unattractive in supporting analyses. On the other hand, countries which received high results in the main analysis retained their positions in supporting/checking analyses. This indicates that the results of the main study are reliable.

To sum up, after analyzing the attractiveness of foreign markets at the macro level based on the proposed procedure, the following countries should be eliminated from the further stage of the study due to the low level of investment attractiveness – Ukraine, Azerbaijan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan. In contrast, Armenia, Georgia, Russia, Kazakhstan, Belarus and Moldova proved to be sufficiently attractive. This means that if foreign investors choose the countries of the former USSR as a preliminary group of countries, due to their subjective preferences, business environment, personality and investment skills, then in the six countries presented above they will be more likely to achieve a competitive advantage. These countries qualify as attractive at the economic sector level. The remaining countries of the former Soviet Union should be eliminated from further stages of the analysis in order to reduce the costs, labor and time consuming of the study.

A positive correlation can be observed between the final result for the countries and an indicator showing the quality of the institution. This in turn indicates that if political stability in the country is high, the level of corruption is low, the public can freely express their opinions (voting rights), there is no violence, the activity of the government is effective, the regulations are clear and legible, the government and other market participants operate legally and in accordance with the constitution, the country is attractive to foreign investors. It is also worth emphasizing that the indicator showing the quality of institutions received the highest importance in the opinion of the surveyed experts. This may be due to the fact that foreign entities highly value institutional guarantees for their invested capital and want to be sure that all disputed situations in the country of internationalization are resolved in accordance with the law. This inference confirms Arbatli's statement. The author concluded that a more favorable political and institutional environment causes a larger inflow of foreign direct investment (Arbatli, 2011). In addition, it is worth emphasizing that the given conclusion confirms that low corruption leads to high attractiveness (Mateev, 2008; Barassi & Zhou, 2012; Tocar, 2018). The importance of institutional stability has also been emphasized by many other authors (Holmes, Miller, Hitt, & Paz Salmador, 2013; Newman, 2000).

The results of the comparative analysis also highlight the crucial role of economic factors. Different authors also pay attention to economic factors by using different assessment criteria in their analysis (Du, Lu, & Tao, 2012; Kok & Ersoy, 2009; Iazzi, Trio, & Pandurino, 2015; Mateev, 2008).

5. SUMMARY

In order to compare the attractiveness at the macro level of a group of countries that were characterized by low quality of statistical data – countries of the former USSR – like in other studies in a given field, indicators were used that have a significant impact on various aspects of life of the country (factors). In addition, the proposed procedure tried to combine the most popular approaches to assess the attractiveness of potential directions for internationalization (country clustering and country ranking). As a result, the process of building a ranking for a specific cluster of countries which can be created on the basis of the investor's subjective preferences was presented. The proposed comparative procedure shows the process of building a comparative analysis of investment attractiveness for a selected group of countries – in this study, countries of

the former USSR. The procedure was based on expert interviews (targeted selection of experts), quantitative research (based on secondary data) and case study. The flexibility of the model would allow assessing the attractiveness and comparing countries which form a specific cluster (both those with high quality of secondary data and those with low quality).

This study includes the following restrictions: dependence on secondary data and their quality, use of data from another group of countries to build a statistical analysis (if necessary), subjectivity in the process of assessing the quality of indicators, uselessness in cases of naïve internationalization, rewriting weights to indicators based on interviews/surveys from experts.

Further research will attempt to assess the attractiveness at the meso level (sector) by modifying the proposed procedure.

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APPENDIX

APPENDIX 1. EXPERIENCES, DOMAINS AND AREAS OF EXPERTS' ACTIVITIES

	Years of experience	Scientific environment	Business	International business	Banking and finance	Market analysis	Foreign trade	International marketing	Management	other
Expert 1	60	1	0	1	0	0	0	1	0	0
Expert 2	45	1	0	1	0	0	0	1	0	0
Expert 3	40	1	0	1	0	0	1	1	0	0
Expert 4	40	1	0	1	1	1	0	0	1	0
Expert 5	30	0	1	0	1	1	0	0	1	0
Expert 6	30	1	1	0	0	0	0	0	1	0
Expert 7	30	0	1	1	1	1	0	0	1	0
Expert 8	30	0	1	0	1	0	0	0	0	0
Expert 9	29	1	0	0	1	0	0	0	0	0
Expert 10	25	0	1	0	1	0	0	0	0	0
Expert 11	25	0	1	0	1	0	0	0	0	0
Expert 12	25	0	1	0	1	0	0	0	0	0
Expert 13	25	0	1	0	1	0	0	0	0	0
Expert 14	25	1	0	1	0	0	0	1	0	0
Expert 15	22	0	1	0	1	0	0	0	0	0
Expert 16	20	0	1	0	1	0	0	0	0	0
Expert 17	20	0	1	1	1	0	0	0	1	1
Expert 18	20	0	1	0	1	0	0	0	0	0
Expert 19	20	0	1	0	1	0	0	0	0	0
Expert 20	20	1	1	0	1	1	0	0	0	0
Expert 21	20	0	1	1	1	0	0	0	0	0
Expert 22	20	0	1	0	1	0	0	0	0	0
Expert 23	20	1	1	0	1	0	0	0	0	0
Expert 24	20	0	1	0	1	0	0	0	0	0
Expert 25	20	1	0	0	0	1	0	0	1	0
Expert 26	17	1	0	0	0	0	0	0	1	0
Expert 27	17	0	1	0	0	0	1	0	1	0
Expert 28	16	0	1	0	1	0	0	0	1	0
Expert 29	15	0	1	0	1	0	0	0	0	0
Expert 30	15	0	1	0	1	0	0	0	0	0
Expert 31	15	1	0	1	1	1	1	0	0	0
Expert 32	13	1	1	0	1	0	0	0	1	0

	Years of experience	Scientific environment	Business	International business	Banking and finance	Market analysis	Foreign trade	International marketing	Management	other
Expert 33	12	0	1	0	1	0	0	0	0	0
Expert 34	12	1	1	0	1	0	0	0	0	0
Expert 35	12	0	1	0	1	1	0	0	0	0
Expert 36	12	0	1	0	1	0	0	0	0	0
Expert 37	11.5	0	1	0	1	0	0	0	0	0
Expert 38	10	0	1	0	1	0	0	0	0	0
Expert 39	10	1	0	0	1	0	0	0	0	0
Expert 40	10	1	0	0	0	0	0	1	0	0
Expert 41	10	0	1	0	1	0	0	0	0	0
Expert 42	8	1	1	0	1	1	0	0	0	0
Expert 43	7	1	1	0	1	1	0	0	0	0
Expert 44	7	1	0	0	0	0	0	0	0	1
Expert 45	5	1	0	0	1	0	0	0	0	0
Expert 46	5	0	1	0	1	0	0	0	0	0
Expert 47	5	0	1	1	0	0	0	0	0	0
Expert 48	4	1	0	0	1	1	0	0	0	1
Expert 49	3	1	0	0	0	0	0	0	0	1
Expert 50	3	0	1	1	0	0	0	0	1	0
Average	19									
Sum		22	35	11	37	10	3	5	11	4
Percentage share		44%	70%	22%	74%	20%	6%	10%	22%	8%

APPENDIX 2. DATA OF THE FORMER USSR COUNTRIES FOR SELECTED INDICATORS OF THE ATTRACTIVENESS ASSESSMENT AT THE MACRO LEVEL

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan
GDP (2010 constant USD) % change	5.2%	1.4%	3.0%	4.8%	4.1%	3.5%	3.4%	2.3%	7.3%	6.2%	3.3%	5.1%
GDP per capita (PPP adjusted) (current international \$) % change	7.5%	3.0%	5.7%	7.3%	5.2%	4.0%	6.0%	5.4%	7.2%	7.1%	6.2%	5.8%
Gross capital formation (current USD) % change	25.2%	-5.4%	7.0%	11.7%	-1.2%	13.0%	33.1%	-0.9%	-10.1%	9.3%	9.7%	16.4%
Trade (% of GDP)	91.3%	92.0%	139.3%	111.8%	62.8%	101.1%	84.3%	51.5%	55.7%	35.2%	99.0%	67.8%
Unemployment, total (% of total labor force) (modeled ILO estimate) ⁷	17.7%	5.4%	5.8%	14.2%	5.4%	7.4%	3.7%	4.5%	11.1%	3.9%	9.3%	5.5%
Inflation, consumer prices (annual %) ⁸	2.5%	1.9%	4.9%	2.6%	6.0%	1.5%	3.0%	2.9%	3.8%	9.4%	11.0%	17.5%
Institutions ⁹	-0.79	-4.10	-2.98	2.59	-1.94	-3.78	-2.11	-3.82	-7.26	-8.00	-4.07	-5.69
Total population % change	0.24%	0.90%	-0.14%	0.08%	1.32%	1.90%	-0.09%	-0.01%	2.48%	1.62%	-0.47%	1.75%
Human Development Index	0.76	0.754	0.817	0.786	0.817	0.674	0.711	0.824	0.656	0.71	0.75	0.71
Individuals using the Internet (% of population)	64.7%	79.0%	74.4%	59.7%	76.4%	38.0%	76.1%	76.0%	22.0%	21.3%	58.9%	52.3%

Source: own study.

⁷ The statistical study and the further analysis of the results of the study show that an increase in this indicator has a negative impact on the country's attractiveness.

⁸ The statistical study and the further analysis of the results of the study show that an increase in this indicator has a negative impact on the country's attractiveness.

⁹ Institutions (global management indicators) – This is the sum of institutional variables Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of law and Control of corruption.

APPENDIX 3. COMPARATIVE ANALYSIS OF THE ATTRACTIVENESS OF THE FORMER USSR COUNTRIES AT THE MACRO LEVEL BASED ON 10 INDICATORS USING EQUAL WEIGHTS

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
GDP (2010 constant USD) % change	6.79	1.00	3.50	6.18	5.11	4.19	4.04	2.29	10.00	8.32	3.94	6.67	10
GDP per capita (PPP adjusted) (current international \$) % change	10.00	1.00	6.43	9.52	5.52	3.15	7.05	5.74	9.49	9.10	7.42	6.68	10
Gross capital formation (current USD) % change	8.35	1.97	4.55	5.53	2.85	5.80	10.00	2.90	1.00	5.04	5.12	6.51	10
Trade (% of GDP)	5.85	5.91	10.00	7.62	3.39	6.70	5.24	2.41	2.77	1.00	6.52	3.82	10
Unemployment, total (% of total labor force) (modeled ILO estimate) ¹⁰	1.00	8.93	8.67	3.23	8.91	7.67	10.00	9.48	5.27	9.92	6.41	8.86	10
Inflation, consumer prices (annual %) ¹¹	9.45	9.78	8.12	9.39	7.47	10.00	9.15	9.25	8.70	5.57	4.69	1.00	10
Institutions	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	10
Total population % change	3.14	5.15	2.01	2.67	6.46	8.21	2.14	2.38	10.00	7.36	1.00	7.76	10
Human Development Index	6.57	6.25	9.63	7.96	9.63	1.96	3.95	10.00	1.00	3.89	6.04	3.89	10
Individuals using the Internet (% of population)	7.78	10.00	9.29	6.99	9.60	3.61	9.55	9.53	1.11	1.00	6.87	5.84	10
Total Country Result	661	543	675	691	651	559	671	585	510	522	523	540	

Source: own study.

¹⁰ The statistical study and further analysis of the results of the study show that an increase in this indicator has a negative impact on the attractiveness of the country. Due to this, formula (2) was used to standardize the data for this indicator.

¹¹ The statistical study and further analysis of the results of the study show that an increase in this indicator has a negative impact on the attractiveness of the country. Due to this, formula (2) was used to standardize the data for this indicator.

APPENDIX 4. COMPARATIVE ANALYSIS OF THE ATTRACTIVENESS OF THE FORMER USSR COUNTRIES AT THE MACRO LEVEL BASED ON THE INDICATOR THAT RECEIVED THE HIGHEST WEIGHT IN THE OPINION OF EXPERTS

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
Institutions	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	16.05
Total Country Result	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	

Source: own study.

APPENDIX 5. COMPARATIVE ANALYSIS OF THE ATTRACTIVENESS OF THE FORMER USSR COUNTRIES AT THE MACRO LEVEL BASED ON TWO INDICATORS THAT RECEIVED THE HIGHEST WEIGHTS IN THE OPINION OF EXPERTS

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
Inflation, consumer prices (annual %) ¹²	9.45	9.78	8.12	9.39	7.47	10.00	9.15	9.25	8.70	5.57	4.69	1.00	11.86
Institutions	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	16.64
Total Country Result	231	188	184	278	191	195	208	185	130	83	128	61	

Source: own study.

¹² The statistical study and further analysis of the results of the study show that an increase in this indicator has a negative impact on the attractiveness of the country. Due to this, formula (2) was used to standardize the data for this indicator.

APPENDIX 6. INDICATORS DESCRIBING THE COUNTRIES OF THE FORMER USSR AT THE MACRO LEVEL WHICH, AFTER ASSESSING THE QUALITY OF PRE-SELECTED INDICATORS, QUALIFIED FOR THE STATISTICAL SURVEY

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan
Unemployment, total (% of total labor force) (modeled ILO estimate)	17.7%	5.4%	5.8%	14.2%	5.4%	7.4%	3.7%	4.5%	11.1%	3.9%	9.3%	5.5%
Inflation, consumer prices (annual %)	-0.79%	-4.10%	-2.98%	2.59%	-1.94%	-3.78%	-2.11%	-3.82%	-7.26%	-8.00%	-4.07%	-5.69%
Gross capital formation (current USD) % change	25.2%	-5.4%	7.0%	11.7%	-1.2%	13.0%	33.1%	-0.9%	-10.1%	9.3%	9.7%	16.4%
Starting a business Score	96.1	96.2	93.5	99.6	94.4	93.0	95.7	93.1	93.2	-	91.1	96.2
Profit tax (% of commercial profits)	21.8%	12.7%	11.1%	7.8%	16.4%	6.7%	8.7%	7.3%	17.7%	-	10.2%	11.8%
Trade (% of GDP)	91.3%	92.0%	139.3%	111.8%	62.8%	101.1%	84.3%	51.5%	55.7%	35.2%	99.0%	67.8%
GDP per capita (current USD)	4212.07	4721.18	6289.94	4717.14	9812.60	1281.36	3227.31	11288.87	826.62	6966.64	3095.17	1532.37
GDP per capita (PPP adjusted) (current international \$) % change	7.5%	3.0%	5.7%	7.3%	5.2%	4.0%	6.0%	5.4%	7.2%	7.1%	6.2%	5.8%
GDP (2010 constant USD) % change	5.2%	1.4%	3.0%	4.8%	4.1%	3.5%	3.4%	2.3%	7.3%	6.2%	3.3%	5.1%
Institutions	-0.79	-4.10	-2.98	2.59	-1.94	-3.78	-2.11	-3.82	-7.26	-8.00	-4.07	-5.69
Control of Corruption	-0.35	-0.83	-0.19	0.71	-0.50	-0.95	-0.73	-0.85	-1.42	-1.36	-0.87	-1.07
Economic freedom Index	70.6	69.3	61.7	77.1	69.6	62.9	62.0	61.0	52.2	46.5	54.9	57.2
Business Freedom Index	81.0	80.8	76.4	85.3	74.6	73.6	68.1	80.2	65.9	30.0	61.3	72.6
Trade Freedom Index	80.6	74.6	82.0	88.6	80.2	79.2	78.0	77.8	75.0	74.2	81.2	67.6

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan
Investment Freedom Index	75.0	70.0	30.0	80.0	50.0	60.0	55.0	30.0	25.0	10.0	35.0	20.0
Rule of law	-0.15	-0.60	-0.83	0.33	-0.43	-0.91	-0.41	-0.82	-1.28	-1.45	-0.72	-1.07
Political Stability and Absence of Violence/Terrorism	-0.42	-0.70	0.35	-0.43	0.00	-0.58	-0.35	-0.50	-0.72	-0.01	-1.83	-0.28
The Fragile States Index (FSI)	66.70	73.20	68.20	72.00	61.60	76.20	67.10	47.80	77.70	71.40	71.00	75.70
Total population % change	0.24%	0.90%	-0.14%	0.08%	1.32%	1.90%	-0.09%	-0.01%	2.48%	1.62%	-0.47%	1.75%
Total population	3.00	9.90	9.50	4.00	18.30	6.30	4.10	145.70	9.10	5.90	44.20	32.50
Life expectancy at birth (years)	74.9	72.9	74.6	73.6	73.2	71.3	71.8	72.4	70.9	68.1	72.0	71.6
GINI index (World Bank estimate)	34.4	26.6	25.2	36.4	27.5	27.7	25.7	37.5	34.0	40.8	26.1	35.3
Gender Inequality Index (GII)	0.26	0.32	0.12	0.35	0.20	0.38	0.23	0.26	0.38	-	0.28	0.30
Human Development Index	0.76	0.754	0.817	0.786	0.817	0.674	0.711	0.824	0.656	0.71	0.75	0.71
Education index	0.759	0.694	0.837	0.856	0.817	0.734	0.708	0.832	0.673	0.628	0.797	0.718
Individuals using the Internet (% of population)	64.7%	79.0%	74.4%	59.7%	76.4%	38.0%	76.1%	76.0%	22.0%	21.3%	58.9%	52.3%
PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)	32.53	19.93	18.77	22.20	13.82	22.74	16.25	16.16	46.15	21.77	20.31	28.46

Source: own study.

APPENDIX 7. COMPARATIVE ANALYSIS OF THE ATTRACTIVENESS OF THE FORMER USSR COUNTRIES AT THE MACRO LEVEL ON THE BASIS OF INDICATORS WHICH, AFTER ASSESSING THE QUALITY OF PRE-SELECTED INDICATORS, QUALIFIED FOR THE STATISTICAL SURVEY

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
Unemployment, total (% of total labor force) (modeled ILO estimate) ¹³	1.00	8.93	8.67	3.23	8.91	7.67	10.00	9.48	5.27	9.92	6.41	8.86	10
Inflation, consumer prices (annual %) ¹⁴	3.87	6.69	5.74	1.00	4.85	6.41	5.00	6.45	9.37	10.00	6.66	8.04	10
Gross capital formation (current USD) % change	8.35	1.97	4.55	5.53	2.85	5.80	10.00	2.90	1.00	5.04	5.12	6.51	10
Starting a business Score	9.68	9.69	9.45	10.00	9.53	9.40	9.65	9.41	9.42	—	9.23	9.69	10
Profit tax (% of commercial profits)	10.00	6.24	5.58	4.22	7.77	3.77	4.59	4.01	8.31	—	5.21	5.87	10
Trade (% of GDP)	5.85	5.91	10.00	7.62	3.39	6.70	5.24	2.41	2.77	1.00	6.52	3.82	10
GDP per capita (current USD)	3.91	4.35	5.70	4.35	8.73	1.39	3.07	10.00	1.00	6.28	2.95	1.61	10
GDP per capita (PPP adjusted) (current international \$) % change	10.00	1.00	6.43	9.52	5.52	3.15	7.05	5.74	9.49	9.10	7.42	6.68	10
GDP (2010 constant USD) % change	6.79	1.00	3.50	6.18	5.11	4.19	4.04	2.29	10.00	8.32	3.94	6.67	10
Institutions	7.13	4.31	5.26	10.00	6.15	4.59	6.00	4.55	1.63	1.00	4.34	2.96	10
Control of Corruption	5.52	3.49	6.18	10.00	4.87	2.95	3.92	3.42	1.00	1.24	3.30	2.47	10
Economic freedom Index	8.09	7.71	5.47	10.00	7.79	5.82	5.56	5.26	2.68	1.00	3.47	4.15	10
Business Freedom Index	9.30	9.27	8.55	10.00	8.26	8.10	7.20	9.17	6.84	1.00	6.09	7.93	10
Trade Freedom Index	6.57	4.00	7.17	10.00	6.40	5.97	5.46	5.37	4.17	3.83	6.83	1.00	10
Investment Freedom Index	9.36	8.71	3.57	10.00	6.14	7.43	6.79	3.57	2.93	1.00	4.21	2.29	10

¹³ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

¹⁴ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

Indicator / Country	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Ukraine	Uzbekistan	Weight
Rule of law	7.58	5.31	4.13	10.00	6.16	3.75	6.25	4.22	1.86	1.00	4.71	2.91	10
Political Stability and Absence of Violence/ Terrorism	6.81	5.66	10.00	6.78	8.54	6.14	7.10	6.46	5.55	8.51	1.00	7.37	10
The Fragile States Index (FSI) ¹⁵	4.31	2.35	3.86	2.72	5.85	1.45	4.19	10.00	1.00	2.90	3.02	1.60	10
Total population % change	3.14	5.15	2.01	2.67	6.46	8.21	2.14	2.38	10.00	7.36	1.00	7.76	10
Total population	1.00	1.44	1.41	1.06	1.96	1.21	1.07	10.00	1.38	1.18	3.60	2.86	10
Life expectancy at birth (years)	10.00	7.35	9.60	8.28	7.75	5.24	5.90	6.69	4.71	1.00	6.16	5.63	10
GINI index (World Bank estimate) ¹⁶	4.69	9.19	10.00	3.54	8.67	8.56	9.71	2.90	4.92	1.00	9.48	4.17	10
Gender Inequality Index (GII) ¹⁷	3.88	2.42	7.19	1.71	5.20	1.00	4.61	3.98	1.09	—	3.29	2.84	10
Human Development Index	6.57	6.25	9.63	7.96	9.63	1.96	3.95	10.00	1.00	3.89	6.04	3.89	10
Education index	6.17	3.61	9.25	10.00	8.46	5.18	4.16	9.05	2.78	1.00	7.67	4.55	10
Individuals using the Internet (% of population)	7.78	10.00	9.29	6.99	9.60	3.61	9.55	9.53	1.11	1.00	6.87	5.84	10
PM2.5 air pollution, mean annual exposure (micrograms per cubic meter) ¹⁸	4.79	8.30	8.62	7.67	10.00	7.52	9.32	9.35	1.00	7.79	8.19	5.93	10
Total Country Result	1722	1503	1808	1810	1846	1372	1615	1686	1123	954 ¹⁹	1427	1339	

Source: own study.

¹⁵ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

¹⁶ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

¹⁷ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

¹⁸ After subjective assessment of a given indicator, it was assumed that an increase in the indicator has a negative impact on the country's attractiveness. Due to this, formula (2) was used to standardize the data for this indicator.

¹⁹ The absence of data for the three indicators describing Turkmenistan has no significant impact on the country's total score in a given analysis.

Social Media Content Headlines and Their Impact on Attracting Attention

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ABSTRACT

Social media is an important source of product information for many users. Marketing in social media is based not only on building a community around the brand, but social media is used as a way to reach a defined group of users with a marketing message. These users are shown content, including promoted posts, which is to draw their attention, interest and get them to action, i.e. click on the link and read the article promoting an event or product. In this article, we investigated how the different headline wordings (question, traditional, forward referring) affect the desire to read the article. An experiment was conducted on 75 participants, which confirmed that the header has a large effect size. The ANOVA analysis was carried out in two stages, additionally taking into account the importance and general interest in the subject of the article by users. Finally, the possible business implications, limitations, and directions for future research were identified.

JEL classification: D71, A14, D91, L82

Keywords: social media promotion, headlines, forward referencing, urge to read, content marketing

1. INTRODUCTION

With the global digital population hitting the 4.5 billion mark in 2020, with 3.81 of it being social media users (Clement, 2020), the internet is undoubtedly the most powerful medium of advertising today, with traditional marketing mediums such as newspapers and radio being on a rapid decline, as cited by Horbal, Naychuk-Khrushch, and Orlykova (2017) and Confos and Davis (2016). The reason for this shift is given by Talafuse and Brizek (2014), who present demassification, interactivity, and synchronicity as the hallmarks of new media. Adding to the same are Arvidsson and Caliandro (2015) and Hennig-Thurau et al. (2010), who claim that digital communication allows brands to replace mass communication with micro targeted ads that are

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more personal and have been discovered to be able to alter customer relationships, behaviors and interactions. This microtargeting, when combined with technologies that allow retargeting, where brands use an individual's search history to display suitable ads (Douglas & Pracejus, 2020), can be a powerful tool for digital marketers who are able to use the data generated to optimize their ads further. This constant barrage of advertisements, however, has decreased the public attention to digital ads, causing the development of a phenomenon known as content blindness (Severson, 2016) which is similar to banner blindness where users habitually ignore any advertising banners they see while surfing the internet (Müller et al., 2009). Text ads are not immune to the same as per Owens, Chaparro, and Palmer (2011), who present text blindness as a similar issue where recipients ignore ads written as text. To worsen matters, over 47% of the internet users worldwide appear to have installed ad blockers to prevent the display of any ads (Ahmad, 2019). With this mounting distaste for ads, marketers are now faced with a challenge to pull customers towards their brands instead of pushing the brands to them.

One solution to the aforementioned issue is producing content that is less oriented towards overt selling and more towards helping satisfy user needs and wants. This is where content marketing whose sole purpose is to connect and build relationships with customers can prove useful (Vinerean, 2017). Such content marketing efforts distributed across the internet, however, must cause an urge to read and it is where headlines can be profoundly useful (Yimin, Niall, & Victoria, 2015). Content writers know this and have been using headlines of various stylistic features in order to create the urge to read the full story (Kuiken, Schuth, Spitters, & Marx, 2017). Literature on headlines of content marketing material and their impact on the urge to read, however, appears to be scarce as most of the research has been conducted in a newspaper context with a focus on metrics such as clicks, attention and popularity. The research question that we will endeavor to answer in this work, therefore, is whether the type of content marketing headline can have an impact on the urge to read the content itself.

To achieve the above, this paper will first review secondary research on content marketing and how it can be a boon to a company's integrated marketing strategy and indicate the importance of headlines in drawing customers to content. The secondary literature review will then end with a discussion of three stylistic manners in which headlines can be produced and their impact on metrics related to the urge to read such as clicks, attention and popularity. The above will be followed by an introduction to the methods this research will adhere to and a review of the findings. The authors will then discuss the findings together with their theoretical and practical implications for marketers. The paper will end with an analysis of its limitations and aims for further research.

2. LITERATURE REVIEW

2.1. Pulling Customer With Content Marketing

Holliman and Rowley (2014) define content marketing as “creating, distributing and sharing relevant, compelling and timely content to engage customers at the appropriate point in their buying consideration processes, such that it encourages them to convert to a business building outcome”. Adding to this are Halligan and Shah (2010), who cite content marketing as an inbound marketing strategy for customers who have already done their research on a product and can benefit from valuable content to add to their decision making. On a different line of thinking are Rose and Pulizzi (2011), who argue that content marketing is one where the customers are provided with a valuable experience. Doing so appears to be of growing importance as customers of the modern age are now expecting more investment from brands into the relationship with them before there can be a scenario in which a purchasing decision is made (Odden, 2012). Such marketing is the

only viable option as one attempts to pull customers to the product and not push the product to the customer (Jefferson & Tanton, 2013), helping companies to position their products and even reinforce them (Gagnon, 2014). Affirming this is Zahay (2014), who states that content marketing is the way forward in a digital environment where ads are considered disruptive by consumers. Such content marketing is aimed at building long-term relationships with clients (Holliman & Rowley, 2014) and helps a brand to communicate with potential customers without selling products directly through advertising whose efforts are aimed at increasing sales in the short run. This communication created with the customers in turn boosts the brand perception in the minds of its consumers, creating more engagement and trust, driving sales for the long run (Hollebeek & Macky, 2019). Reaffirming the same are Vinerean (2017) and Liu and Huang (2015), who present content marketing as an excellent means of connecting and building relationships with customers due to its unobtrusive nature. Produced below in Table 1 is a list of the most common content marketing formats through which organizations strive to create value to their customers.

Table 1

Common content marketing formats

Format	Description
Blog posts	Posted on a regular basis on a blog and shared widely on social media to attract new and recurring visits.
eBooks	Lead generation tools, acting as a resource of information on a certain subject for potential consumers. This provides credibility to the organization and creates trust in the eyes of the customer.
Infographics	Used for its ability to bring meaning to complex data in an easy way to understand visual format.
Videos	A very engaging medium of communication used to touch on products, services and topics of interest to consumers.
Podcasts	Pre-recorded interviews or audio materials that are shared with an audience to build trust in an expert on certain matters.

Note. Reprinted from Target Your Customers With These Top 10 High-Performing Types of Content Marketing, by Sherman, retrieved from <https://www.lyfemarketing.com/blog/types-of-content-marketing/> Copyright 2019 by <https://www.lyfemarketing.com>

Content created for the purpose of content marketing, when shared on the internet, joins the multitude of content that is displayed to the intended recipients. Content marketers must therefore do more than produce the content and discover means of increasing the urge to read by users so that they will end up perusing the main content. One of the key means by which this can be accomplished is via the use of good headlines.

2.2. The State of Headlines Today

The role of headlines is one that has been studied extensively across both print and online news media. Early research on the functions of headlines tasked them with giving the readers who might be scanning a newspaper a clear idea of what the article was about (Van Dijk, 1988). Bell (1991) on the other hand believes that headlines are tasked with drawing the attention of readers and provoking them into reading the full article. Adding to the same are Mahmood, Javed, and Mahmood (2011), who mention that headlines act as a precursor to the main article. Dor (2003) offers a different opinion as headlines are not only tasked with summarizing, but also building a sense of affinity and relevance to the reader. Such headlines, according to him, must find the balance between being short and clear, whilst providing the reader with a rich summary of the content that one can expect in the article the headline is referring to. Adding to this are Iarovici and Amel (1989), who discuss headlines that can in fact help the reader understand the

meaning of the content that is being referred to. Offering a more holistic input into the functions of headlines is Conboy (2013), who divides them into 3. The first two, he argues, are to offer those who might be reading a short summary of the news and grab their attention. The third is to offer an initial indicator of the style and news values of the newspaper in question so that the reader can make a decision.

The increase of online content consumption, however, has shifted the role of a headline into one that is more focused on getting the reader's attention. Reiterating this are Jiang, Guo, Xu, Zhao, and Fu (2019), who state that the online media yearning for the highest website visits has changed the function of the headline to one that is more attention grabbing than informing. This is all the more important as there is an increasing number of news consumers who do so via social media networks (Mitchell & Page, 2015), which in turn show the popular content to more users via their algorithms. This increasing demand for user clicks has given rise to a significant amount of competition for attention, prompting news producers to keep vying for the urge to read from their audience. All the more so since good headlines can be linked to the popularity of content (Piotrkowicz, Dimitrova, Otterbacher, & Markert, 2017). Affirming the same are Blom and Hansen (2015), who claim that those involved in the formulation of headlines are occupied with one question, namely 'what makes readers click?', a question which García-Orosa, Santorum, and García (2018) put forward to prompt those who create headlines to take into careful consideration their word choices as they play a decisive role in the content ranking.

This competition, as argued by Kuiken et al. (2017), has given rise to an increasing amount of clickbait, a phenomenon in which content producers write vague headlines in order to induce curiosity and draw readers to clicking on the headline. Such clickbait headlines have been investigated by many such as Blom and Hansen (2015) and Pengnate (2016) for their provoking content and their ability to revolve around the notion of the unknown, tapping into a lack of knowledge with a promise of gratification upon acting on the desired action (Potthast, Köpsel, Stein, & Hagen, 2016). This arousal of curiosity and the inherent need to satisfy it can be best explained by Loewenstein (1994), who cites the phenomenon known as a knowledge gap. The knowledge gap, he asserts, is realized when one's attention is drawn to a gap in knowledge, driving the said individual to obtain the missing information or eliminate the feeling of deprivation. Such headlines, as argued by Mormol (2019), who conducted recent research on the dominant role clickbait plays in contemporary online headlines, utilize certain idiosyncratic mannerisms or techniques that are immediately associated with them, and forward references are one of the most prominent. The main reason behind the success of forward referencing headlines can be alluded to their ability to arouse the curiosity of those who come across them (Potthast, Köpsel, Stein, & Hagen, 2016). Another stylistic feature that is often used in clickbait, according to Mormol (2019), is the use interrogative forms (questions) as observed in the research of Kuiken et al. (2017), Scacco and Muddiman (2016) and Lai and Farbrot (2013).

2.2.1. Forward referencing headlines

Forward referencing, Blom and Hansen (2015) believe, is 'the act of alluding to aspects that will occur further on in a story at an earlier point, often leaving things unexplained, vague or avoiding directly referring to a key feature of the story'. Such forward referencing headlines, as claimed by Kuiken et al. (2017), contain signal words such as why, this, what or pronouns such as he or she in order to arouse the curiosity of readers. Adding to this is Hess (2016), who cites the use of pronouns, adverbs, imperatives, interrogatives, or general nouns that coerce an individual to read the article as identifiers of headlines that are forward referencing. Adding to the identifiable features of such headlines are Blom and Hansen (2015), who assert that forward referencing headlines occur in two forms – discourse deixis and cataphora. Discourse deixis, they claim, is "reference to forthcoming (parts of the) discourse relative to the current location in the discourse, e.g. This is the best news story you will ever read". Cataphora is rather similar and

refers to a word or a phrase that is found later in the text, e.g. when he arrived at the crime scene, the journalist interviews the victim's wife.

The effectiveness of forward referencing headlines in content marketing, however, cannot be shrugged off as an A/B test that tested the clicks on a call to action (CTA) button discovered a 927% increase on the content that aroused one's curiosity (Wiebe, 2014). The same was found to be true in the research of Kelly (2016), who discovered that forward referencing headlines that alluded to content at later points in the article had increased click through rates. These findings match those of Kuiken et al. (2017), who conducted research on the textual and stylistic features of new headlines and on their performance and discovered those with personal or possessive pronouns to have a significant positive impact. Adding to this are the findings of Biyani, Tsioutsoulouklis, and Blackmer (2016), who discovered content that was more informal and had forward referencing features to perform better than the content that was non-clickbait (traditional). Offering a completely new direction of thinking are the findings of Ifantidou (2009), who discovered norms such as length, clarity, and information to be of no importance to the selection of headlines as the readers were found to attach more value to headlines that were underinformative, creative, yet autonomous texts. In lieu of these findings one can consider the primary task of headlines to grab attention as Bell (1991) posited and not a summary as Van Dijk (1988) cites. Adding to this are the findings of Blom and Hansen (2015), who in their analysis of 2013–2014 online Danish publications discovered that forward referencing was used 17% of times. This popularity of forward referencing headlines, however, appears to have diminished later on as Kilgo and Sinta (2016) discovered forward referencing to be present in only 7.3% of viral media.

2.2.2. Headlines posed as questions

Headlines posed as questions are not a new phenomenon as they have been used in print marketing (Howard, 1988) to arouse curiosity in all those who come across them. Such headlines with interrogatory elements have made their way into computer-mediated communication such as online advertising and online news media and come in many forms such as hypothetical questions, rhetorical questions, leading questions, tag questions and are usually accompanied by self-referencing cues that are interned to make the reader relate to the message more (Lai & Farbroth, 2013). Such self-referencing cues increase the persuasive effects advertising has on individuals (Debevec & Iyer, 2006) and garner the attention of readers (Howard, 1988) by creating a sense of uncertainty that can only be resolved via a click to see the content (Scacco & Muddiman, 2019). Such headlines, as argued by Blom and Hansen (2015), are akin to cliff-hangers, taunting all those who come across them in order to get them to read the content in question. This tapping into the curiosity that is inherent in humans is what drives the clicks on headlines posed as questions (Lockwood, 2016) and can prove to be a useful strategy if the content at the end of the click is in fact useful and answers the question.

There is a dearth of research on how question-type headlines impact readership, as claimed by Lai and Farbroth (2013). Research prior to the internet era, however, discovered that such headlines can be used to rouse interest (Soley & Reid, 1983). Such headlines, according to Myers and Haug (1967), can generate more attention when the majority of headlines are in the question form, despite having no effect on recall when compared with those that were declarative (traditional headlines). This, however, appears to have changed in recent times as the findings of Scacco and Muddiman (2016) discovered question-based headlines to be considered in a negative outlook and had lower engagement rates against those considered traditional. In a similar line of thinking are Kuiken et al. (2017), who state that it is not the presence but the absence of questions in headlines that increases performance. This debate on the performance of headlines framed as questions is not one that appears to be helpful as we discovered in the findings of Lai and Farbroth (2013), who proved such headlines to be better for clicks than the traditional headlines.

2.2.3. *Traditional news headlines*

Known as summary headlines, the core function of a headline that follows traditional publishing standards is to provide a summary of an inverted pyramid-structure news story (Andrew, 2016) in a concise, clear and relatively certain tone. Such headlines provide the readers with summary points of the main story and informational clarity unlike those that are of forward referencing or questioning forms. They also allow those who seek information to find it, unlike those that arouse curiosity and lead to doubt the quality of the information readers may find upon selection (Kilgo & Sinta, 2016). According to those authors, traditional headlines typically identify the “who” or “what” that is central to the news story. Adding to this, Chakraborty, Paranjape, Kakarla, and Ganguly (2016) argue that traditional headlines typically contain mostly content words referring to specific persons and locations, while the function words are left out for readers to interpret from context. Adding to this list of identifiers of traditional news headlines, the same authors claim that they contain very few instances of word shortenings when compared to headlines that were more of a clickbait nature.

As for how traditional headlines perform, Gessler (2017) states that they are twice as effective for click-through rates when compared with those that are more obscure. Adding to this are the findings of Scacco and Muddiman (2016), who found respondents to react more positively towards traditional headlines when compared with those that were framed as questions. The very same study also found engagement with traditional headlines to be more pronounced than that with headlines framed as questions. Similar are the findings of Breaux (2015), who found clear headlines to score higher click-through rates than those that were short (as observed in the forward referencing and question headlines). The findings of Biyani et al. (2016), who created a model for detecting clickbait, however, suggest that headlines that were informal and of a forward referencing nature performed better than those that were traditional. Adding to this research on traditional headlines and their impact on performance is Ifantidou (2009), who discovered that norms such as length, clarity, and informativeness (as expected of traditional headlines) played no part in reader selection as the respondents opted for texts that were underinformative, creative, yet autonomous. Research from Lai and Farbroth (2013), who investigated the effect question headlines have on clicks, discovered that integrative questions were much better for readership than those that were declarative (traditional).

Having reviewed the secondary literature on how the three stylistic manners in which headlines can be produced can impact the urge to read related metrics such as clicks, attention and popularity, we hypothesize that the style of an individual headline does in fact have a corresponding effect on its ability to cause an urge to read.

3. METHODS

The sample for this research was recruited via social media using the convenient sampling method, covering persons from the authors’ social media contact network. Before the actual test held at the university premises, a trial test was conducted on 3 individuals to identify potential ambiguities in the instructions, any typos or smoothness of the survey. After pre-testing, there were a total of 75 respondents out of whom 44 (58%) were female and 31 (42%) were male of an average age of 25.8 (SD = 4.78). The majority of participants were bachelor (61%) and master’s degree (28%) holders. These respondents were then divided into three equal groups (25 each), and exposed to the versions of one title: traditional – Commons leader quits government; forward referencing – Here’s why the Commons leader just quit the government; question – Did the Commons leader just quit the government? After reading the title, participants were exposed to

questions, at which point they were relying on their recall of the headlines instead of a conscious analysis of stimulants. The dependent variable ‘urge to read’ was assigned a marker and measured in line with the research of Scacco and Muddiman (2019), who conducted similar research on news headlines and anticipated news engagement (Very Unlikely (1) to Very Likely (5) that individuals would read the article). To validate our findings to a greater degree, the participants were tested on their urge to read via three questions (Seeing such a title, I would have an inclination to read the article; Seeing such a title, I would have the desire to read the article; Seeing such a title, I would feel an urge to read the article). Cronbach’s alpha for the variable was .93 and average variance extracted was 0.82, which exceeds the required values (MacKenzie, Podsakoff, & Podsakoff, 2011). In addition, participants were asked about their general interest in the subject (The subject of this article is important to me) on a scale of 1-definitely not to 7-definitely yes ($M = 3.47$, $SD = 1.96$)

4. RESULTS

A statistical analysis was performed based on the collected empirical material. An analysis of variance (ANOVA) was conducted to determine whether there were significant differences in the urge to read an article by type of headline. Prior to the analysis, ANOVA assumptions were examined – the assumptions of univariate normality of residuals and homogeneity of variance. Normality was evaluated using a Q-Q scatterplot. Levene’s test indicated equal variances ($F = 1.023$, $p = .365$). The results of the ANOVA were significant, $F(2, 72) = 5.381$, $p = .007$, $\eta^2 = 0.130$, indicating that there were significant differences in the urge to read among the types of headline (Table 1). The means and standard deviations are presented in Table 2.

Table 1

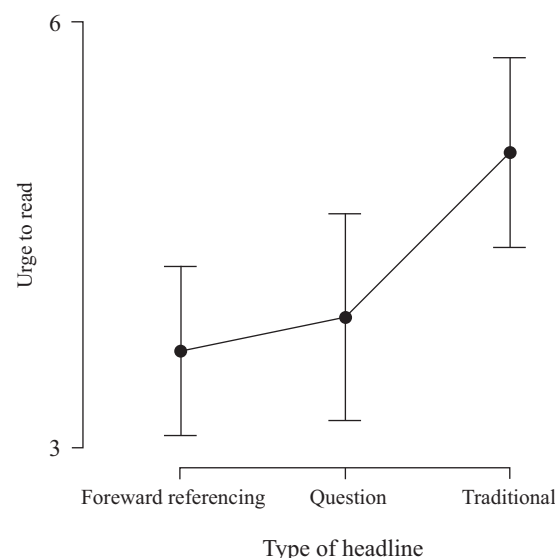
Analysis of Variance Table for Anxiety by Weight and Depressed

Cases	Sum of Squares	df	Mean Square	F	p	η^2
Type of headline	28.011	2.000	14.005	5.381	0.007	0.130
Residual	187.403	72.000	2.603			

Note. Type III Sum of Squares.

Figure 1

Means of urge to read by types of headline



Note. Error bar – Confidence interval (95%).

Paired *t*-tests were calculated between each type of measurements to further examine the differences of headlines. Tukey pairwise comparisons were conducted for all significant effects. The mean of forward referencing ($M = 3.681$, $SD = 1.445$) was significantly smaller than for traditional ($M = 5.080$, $SD = 1.614$), $p = .008$. The mean of traditional type was significantly higher than for question ($M = 3.920$, $SD = 1.765$), $p = .035$. No other significant effects were found (Table 2).

Table 2

Post-hoc comparisons – Type of headline

		Mean Difference	SE	<i>t</i>	Cohen's <i>d</i>	P_{tukey}
Forward referencing	Question	−0.239	0.456	−0.523	−0.148	0.860
	Traditional	−1.399	0.456	−3.066	−0.914	0.008
Question	Traditional	−1.160	0.456	−2.543	−0.686	0.035

Conducting weighted least squares using Category Interest as a weight, previous results were confirmed $F(2.72) = 6.873$, $p = 0.002$, and the effect size improved ($\eta^2 = .160$). Considering this factor, the post-hoc analysis stage did not reveal new effects.

5. DISCUSSION

Our findings confirm that the manner in which a headline is formulated has an impact on the urge to read the corresponding article. This is an affirmation of the findings by Piotrkowicz et al. (2017), who found a link between good headlines and their popularity. The most important finding to us was that it was headlines written in the traditional sense (concise, clear and in a relatively certain tone) that caused the highest urge to read among the respondents. This mirrors the findings of Scacco and Muddiman (2019), who found their respondents to react more positively and engage with traditional headlines when compared with those with questions. The findings of Gessler (2017) were also replicated in this research as the traditional headlines were favored over more obscure forward referencing and question-based headlines.

Having analyzed the findings, it is clear that headlines that do not provide a summary of the content in a clear and concise manner can reduce the urge to read. This matches the findings of Breaux (2015), who discovered that headlines that were shorter (as with forward referencing and question headlines) see reduced click-through rates when compared to the traditional ones. What was interesting, however, was that there was no difference between the question and forward referencing, despite very different stylistic features embedded within them. This contrasts with the findings of Lai and Farbroth (2013), who discovered headlines with questions to outperform the traditional ones, and those of Wiebe (2014) and Kelly (2016), who discovered forward referencing to be a great tactic for increasing click-through rates. The reason for this respondent behavior, we feel, is the frustration associated with encountering headlines that are obscure in nature. Such headlines are associated with clickbait and are now looked down by internet-savvy individuals who are very well aware of the low-quality content presented by articles with such headlines. This indicates that content writers must now ensure that they provide precise information, without resorting to taunts and concealing information.

The discoveries we made within this article have some significant practical implications for organizations that engage in content marketing. It is clear that the internet users of today have a short attention span, access to many online channels which inundate them with information, requiring organizations to be upfront about the content they are publishing in attempts to pull the customer towards them. Such content marketing efforts should focus on value provision without

resorting to trickery and do it concisely to carve a trusted voice for the article content as such in the very crowded internet marketplace we see today.

6. CONCLUSION

This research set out to observe whether the type of headlines impacted the urge to read content and discovered that traditional headlines with clear, concise language outperformed those that were forward referencing and of a question form. An interesting fact that we must highlight is that the respondents did not display any special preference as to either forward referencing headlines or those framed as questions. These findings provide us with a clear idea on how internet-savvy users are now more partial towards headlines that are clear and can be trusted to provide them with value and not those that are obscure. Those engaged in content marketing efforts should therefore take note of such consumer insights and update their marketing strategies accordingly.

We must mention that the headline base used for this research is of socio-political nature and might have influenced the responses obtained from the respondents. We aimed to expand this to other thematic content in order to test the validity of our current findings. Another limitation we would like to highlight is the sample size used for this research, despite it being characteristic of experimental studies during which the variable number is limited and under controlled conditions. The decision to embark on the research with 75 respondents was justified as the statistically significant results obtained correspond to the variable size effect, making any increments to the sample economically unjustified with no significant impact on the cognitive value of the study results. An interesting topic of research to build on the current research with a bigger sample number is to investigate how the type of headline can impact the credibility and perceived usefulness of content. The findings gained therein could then be used as a foundation for investigating how the perceived familiarity and credibility of a publisher could impact the urge to read.

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Gamifying Questions by Adding Context in the Creative Development Marketing Research

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ABSTRACT

Gamification is defined as using game design elements in non-gaming contexts: education, management, marketing and also market research. Gamified research tools help to increase respondents' engagement and obtain more in-depth results. Up till now the effects of gamifications were tested in the domains of brand strategy and consumer experience. The article shows the results of the experiment proving the effectiveness of a gamified approach to the qualitative advertisement testing. The experimental group with a narrative context added to a question regarding the first impression performed better than the control group with a standard task. Also gender differences were observed: the effect was valid only for men – there were no significant differences in the performance of women in both groups. Due to an uneven split of men and women and a small sample in general, this effect needs further examination.

JEL classification: M310; M370; M300

Keywords: gamification; market research; creative development

1. INTRODUCTION

The results of the experiments exploring the effectiveness of gamification in the marketing research (Puleston & Sleep, 2011; Puleston & Rintoul, 2012, Ścibor-Rylski, 2018; Ścibor-Rylski, 2019) prove that gamified methods adding context to the research questions increase the participants' performance. However, previous studies did not involve the real market research tasks. The researchers simply verified their hypotheses based on regular tasks focused on listing different items. This paper presents the results of the initial study designed to recreate a natural market research situation of the advertisement evaluation in the domain of creative development. The main goal of the research was to compare the participants' performance in two conditions: regular question and gamified one.

One of the most important market research indicators when it comes to the advertisement testing is the first impression. It is even more weighty in the qualitative approach, where the respondents fill out the individual questionnaire first and then they discuss the ad in the group. The first impressions written down on a sheet of paper make people hold to their opinions, avoiding yielding to group pressures. Classic psychological experiments (Sherif, 1935; Ash, 1951; Crutchfield, 1955) prove that people conform to group norms when they are put in an ambiguous

situation – sitting among strangers and discussion marketing material fall under this category. The more thorough the individual opinion is, the better the effect on the further discussion. Hence the importance to motivate the participants to put an effort in writing the first impressions.

2. LITERATURE REVIEW

2.1. The Importance of Games

A huge variety of different forms, platforms and genres of games makes it very difficult to find common features that constitute a definition of game. McGonigal (2011) proposes four defining traits that are shared by all games. The role of all the other features is to reinforce and enhance these core elements:

- **The goal**, which is defined as a specific outcome we try to achieve. It gives the players a sense of purpose.
- **The rules** limit the participants on how they achieve the goal. Removing some obvious or typical behaviour from a game increases the creativity and triggers strategic thinking.
- **The feedback**, which tells the payers how far they are from achieving a goal. It provides motivation to carry on.
- **Voluntary participation** makes a game a safe and pleasurable activity.

Adding other, common game features like interactivity, narrative, rewards, competition or nice graphics results in the fact that playing games is fun. A game creates new quality in the ordinary and sometimes boring existence. Unlike real-life experience, a game gives an opportunity to test different solutions without any risk and also the gratification is immediate. Playing relaxes and amuses at the same time: people have fun, turn more spontaneous and unconstrained. The major advantage of a game is one's involvement and sincerity of reactions and behaviour (Caillois, 1961).

Huizinga in *Homo Ludens* (1949) claims that playing is accompanied by a feeling of tension and joy. The involvement in a game evokes emotions that help people forget about dailiness. There are many interesting examples supporting this thesis in pop culture.

A great science-fiction visionary Philip K. Dick in his novel *The Three Stigmata of Palmer Eldritch* developed a concept of a game which was used by the unwilling colonists living in the horrible conditions on Mars. To make their life easier and prevent mutinies, the government invents a highly immersive game, which was based on playing a life of a Barbie alike doll named Perky Pat. The key to enjoy an alternative world was a strong, psychedelic drug called Can-D. This game become much more important for the colonists than their real, miserable life. A similar concept was used by Ernest Cline in his novel *Ready Player One* – a dystopian society on future, overcrowded and destroyed Earth is living mainly in an alternative, virtual world accessible by players using visors and haptic technology. Almost everything is possible in a game and people can fulfil their dreams impossible to realise in real life.

Pop culture reflects the needs and motivations of the society and such visions emphasise the importance of gaming for the human kind. According to the archetypal typology created by Mark and Pearson (2001), gaming experience fits the archetype of The Magician, whose main goal is to make dreams come true. The authors of “The Hero and the Outlaw. Building Extraordinary Brands Through the Power of Archetype” present different levels of the Magician archetype – there are magical moments and experiences of transformation on one level and the experience of flow on another. It fits perfectly Huizinga's (1949) observations regarding playing games. Also the idea of flow can be applied to games with reference to Csikszentmihalyi's definition (1990). The Hungarian psychologist describes the flow as a status between satisfaction and euphoria. It is activated by total devotion to a performed activity for the mere fun of doing it.

Playing games impacts human cognitive and emotional performance. Playing a good game activates human key systems – motivation, attention, reward centre, emotion and memory. It also evokes a feeling of happiness which can be hardly achieved in such a compact way during the activities different from games. This is the reason for the enormous popularity of all types of games. In 2019 more than 100 million people watched the stream of “League of Legends” World Championship – one of the most popular online video games. During the final, the audience peaked at 44 million concurrent viewers (Webb, 2019). Also the popularity of board games is rising every year – the attendance of Spiel fair in Essen reflects this phenomenon. The worldwide biggest fair for board games attracted 147 000 visitors in 2011 (Schymiczek, 2011) and the number was constantly growing each year reaching 209 000 attendees in 2019 (Volkman, 2019).

McGonigal (2011) cites sources showing that in the US 69% of all heads of household play computer and video games and one out of four gamers is over the age of fifty. Another source shows that games are very popular among white collars – 61% of surveyed CEOs, CFOs and senior executives take their daily gaming breaks at work. The watchers of the Netflix series House of Cards certainly remember US president Frank Underwood played by Kevin Spacey, who regularly relaxes during a first-person-perspective video shooter.

2.2. Gamification

The positive effects of playing games commonly used in many non-gamified environments is called *gamification* and it is defined as using game design elements in non-gaming contexts (Deterding, Sicart, Nacke, O’Hara, & Dixon, 2011).

Paharia (2013) indicates gamification as a crucial element of Loyalty 3.0 – the most advanced programme repairing the drawbacks of the loyalty actions based on simple transactional mechanisms known as Loyalty 1.0 and partially effective personalised marketing named Loyalty 2.0. Paharia argues that global trends make Loyalty 3.0 sine qua non in the modern business:

- Customers overwhelmed by the amount of information suffer from attention deficits and use heuristics when taking purchase decisions.
- Employees lack engagement, which leads to demotivation, frustration and the dissatisfaction of customers.
- We all live in times of overload – the number of used applications, the choice of products and services and the variety of their features make it impossible to focus on a brand without a true, carefully built engagement.

Beside motivation and big data, gamification is defined as a efficient tool to build engagement, activity and true loyalty of customers. The latter can be built if a client has an important reason to engage with a brand. A growing demand for experience is observed on the Polish market – already one in three Poles (34%) claims that they would rather spend money on experiences than on material things (The Experience Advantage. 2019 Report Retail Banking, Kantar, 2019). Emotions and motivation play an important role in building experiences and gamification can help enhance both of these aspects of a truly customer-centric brand.

2.3. Gamification in Marketing Research

Gamified marketing makes customers more involved in brands and builds their loyalty. The concept of gamification used in marketing research serves different purposes. It improves involvement of participants and lets us obtain information which is not available in traditional approaches. Experiments show that tasks based on gaming mechanics provide wider, more elaborated results than the traditional ones, and also the research participants consider the process more enjoyable (e.g. Harrison, 2011; Puleston & Sleep, 2011; Puleston & Rintoul, 2012; Ścibor-Rylski, 2018; Ścibor-Rylski, 2019).

Harrison (2011) reports positive effects of using a gamified approach in the research process – the respondents are more involved and open for sharing their thoughts. Games mechanisms induce a ‘hot’ behavioural condition when it is easier to reach true motivation and to reconstruct actual human behaviour – which is crucial especially while conducting qualitative marketing research. Involved in a pleasant activity, people are more sincere, engaged, creative and it is easier to discover their hidden beliefs and motivations. Moreover, the group process is smoother and the interaction more natural and efficient.

An example of fully gamified market research tools is „Our City” – a board game designed in Kantar Polska to examine customer experience adding a more in-depth component to the standard qualitative research processes using cognitive interviews (Geiselman et al., 1984). On the one hand – similarly to cognitive interviews – “Our City” allows for in-depth understanding of individual customer journeys: identification of its key stages and touch points. At the same time, it stimulates respondents’ interaction and group dynamics, which boost creativity, indicating how customer experience can be improved in order to better suit the current and future market needs. Ścibor-Rylski (2020) presents the positive effects of the qualitative validation of “Our City” game’s effectiveness as well as the results of the experiment proving the accuracy of the psychological premises of this tool.

Aside from “hard gamification”, which makes the entire market research process a game, gamification can be applied in this field to make the questions more involving. It results in more elaborated responses and an increased level of completion. Puleston and Sleep (2011) emphasise the importance of design and ergonomic flow of research in the dropout reduction and making a survey more engaging experience for the consumer. They observed that applying fun or game-based mechanic resulted in very positive reactions from the respondents. People claimed that participating in the research was just more fun. Moreover, such a gamified approach stimulates respondents to be more effective.

Puleston (Puleston & Sleep, 2011; Puleston & Rintoul, 2012) provides a thorough overview of different game-based elements successfully used in market research surveys to increase the respondents’ effectiveness and involvement by extending the respondent’s concentration spans. Numerous experiment results were replicated by Ścibor-Rylski (2018, 2019). In one of them, the participants of the control group were naming their favourite Olympic disciplines. The gamified group was asked to imagine that they were responsible for TV broadcasting of the Olympic Games and their job was to plan the broadcast based on the disciplines they would like to watch. The results of this study proved that adding context significantly increased the average number of listed disciplines when compared to the regular approach.

The gamified approach provides invaluable help in the process of designing a quantitative survey questionnaire or some simple qualitative tasks for the respondents. The next chapter presents the results of the experiment designed to prove the influence of gamified tasks on participants’ performance using the context change in the natural market research setup.

As a result of the literature review presented above, a hypothesis was formulated:

Hypothesis: employing a gamification technique based on adding a context to a question improves performance of research participants.

3. RESEARCH METHODS

I conducted the experimental study on 59 students of Management Faculty of the University of Warsaw (38 women and 21 men) split into two groups:

- control (no gamified techniques were used),
- experimental (with a gamified question – context added).

The participants were asked to watch a commercial – a TV advertisement of Castorama – DiY market (Castorama Polska, 2018). The ad lasted 45 seconds and its plot focused of the romantic relationship of two young people living next door. The role of the brand was to inspire the male character to accomplish a project – create a roof garden that helped him charm his female neighbour. The story was emotional and there were many humouristic scenes.

After watching the commercial, the participants were asked to fill out the form with only one question. Its content was different in the respective groups.

The control group was simply asked about their first impressions. They received the following instruction:

“Watch the commercial and write down what do you think of it.”

In the experimental group, a context was introduced to the question. They received the following instruction:

“Imagine you work for an advertisement agency and you are working on a new campaign. Your biggest rival working for a competitor’s brand has just created a new ad – somehow you managed to watch it before the official premiere. You need to react as soon as possible to design a relevant commercial as a response and not to fall behind. You want to share your thoughts with the creative team and your management. Watch the commercial and write down what do you think of it.”

No time limit was imposed. The next subchapter presents the results of the comparison between two groups. The indicator used to measure the performance was the word count in each answer.

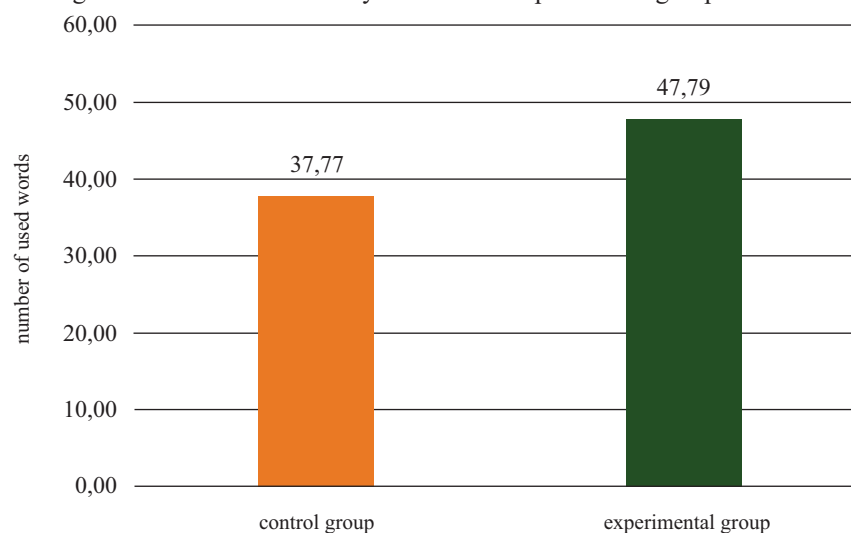
4. RESULTS

The average word count of the answers was calculated in each group. The experimental group used more words ($M = 47.79$; $SD = 19.46$) compared to the control group ($M = 37.77$; $SD = 18.01$).

T-test was used to analyse the significance of the difference. It revealed a statistically significant difference and the average effect size: $t(57) = 2.05$; $p < 0.05$; $d = 0.53$. The results are presented in Chart 1.

Chart 1

Differences in the average number of words used by control and experimental groups



The group with the narrative gamification technique using context generated significantly longer answers than the control group. The hypothesis has been confirmed.

Additionally, the effect of the gender was calculated. Due to the uneven number of men and women in the research and a small sample in general, the results of this analysis are just illustrative and the observed effect needs further examination and verification. The gender split in each group is presented in the table below:

Table 1

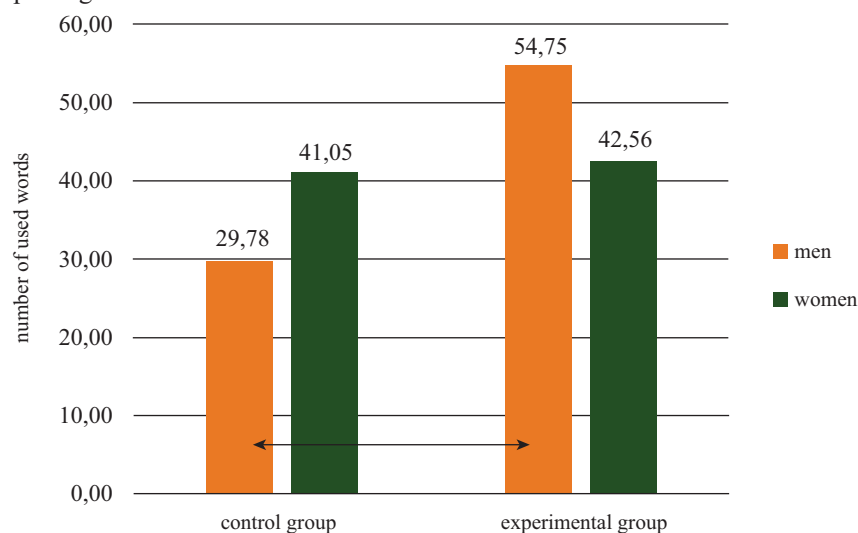
Gender split in control and experimental groups

	Control group	Experimental group
Men	N = 9	N = 12
Women	N = 22	N = 16

A two-way analysis of variance was used to test the interaction of group and gender. The interaction effect turned out to be significant with the average effect size: $F(1.55) = 5.52$; $p < 0.05$; $\eta^2 = 0.09$. The outcome is presented in Chart 2.

Chart 2

Interaction of group and gender.



The only significant simple effect is the difference between men in the control and experimental groups as:

$F(1.55) = 9.73$; $p < 0.01$; $\eta^2 = 0.15$. There was no difference between groups in the case of women.

5. RESULTS DISCUSSION

The analysis described in this chapter has confirmed the hypothesis. Gamified tasks stimulate respondents and provide more elaborated answers. People use more words to describe their first impressions after watching a TV commercial if the question has added context – a narrative introduction allowing the participants to get into the given character. Such a result has great implications both for qualitative and quantitative marketing research. In the focus group, when filling out an individual response form after watching a commercial, participants can be more

effective and then they have more data to use during discussion. Also deeper, more elaborated statements help the analysis – first impressions are crucial when it comes to understanding the power of a commercial: they influence the responses and behaviour that follow (Hallward, 2005).

An additional analysis showed that the positive effect of a gamified question is valid only for men. This phenomenon needs further testing – the research sample was rather small and also the gender split was not even. Certainly, a replication of the experiment is required with a gender variable added as a controlled factor. If the effect persists, it might open new research areas in the field of the role of gamification in advertisement testing. There are numerous studies showing the female superiority in verbal skills (e.g. Hyde & Linn, 1988). It might be a cause of the observed effect – maybe gamification in the form of adding context helps men to achieve the verbal level of women when it comes to writing down their first impressions after seeing a very emotive commercial? The gender difference in the experimental group was not significant, but it seems that it might be the effect of a small sample. The layout of the results suggests that men might be even more effective than women when confronted with the gamified question. Certainly, a further examination of this phenomenon is required.

6. CONCLUSIONS

The described experiment successfully replicates the previous results proving the effectiveness of gamified techniques. Numerous experiments have proven that adding game elements enhances the results of the research in the fields of brand strategy and consumer experience (Ścibor-Rylski 2018, 2019, 2020). Now the effect was observed in the domain of creative development – the natural market research situation of advertisement testing. The implications of the described experiment are vast. Changing the context of the first impression questions might be a way to achieve better material for analysis as well as to avoid participants falling under group pressures in further discussion. Currently, further research is planned to replicate the effect. Also an online version of the experiment is being developed. Nowadays, market research companies move a significant part of their qualitative research to the internet platforms. Focus groups using MS Teams or Zoom platforms supported by Miro or Mural applications are becoming a natural research environment. Testing the previously observed effects online seems essential to fully understand how gamification works in the marketing research.

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