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With or Without Super Platforms? Analyzing Online Publishers' Strategies in the Game of Traffic

Joni Salminen[1,2], Dmitry Maslennikov[3], Bernard J. Jansen[1], Rami Olkkonen[2]

[1]Qatar Computing Research Institute, Hamad Bin Khalifa University, Doha, Qatar
[2]Turku School of Economics, Turku, Finland
[3]Nizhny Novgorod Technical State University, Russia
jsalminen@hbku.edu.qa, dmitrymaslennikov@rambler.ru, bjansen@hbku.edu.qa, rami.olkkonen@utu.fi

Abstract. Given the dominance of online platforms in attracting consumers and advertisers, online publishers are squeezed between declining traffic and advertising revenues from their website content. In turn, super platforms, the dominant content dissemination platforms, such as Google and Facebook, are monetizing online content at the expense of publishers by selling ad impressions in advertising auctions. In this work, we analyze publishers' possibilities of forming a coalition and show that, under a set of assumptions, the optimal strategy for publishers is cooperation against a super platform rather than posting content on the super platform. Not choosing to publish on a super platform can yield the whole coalition more traffic, enabling some individual publishers to recoup the lost traffic. We further show that if the coalition does not forbid diversification, most publishers choose both coalition and super platform.

Keywords: Media Markets, Super Platforms, Online Content, Advertising.

Introduction

Given the dominance of online platforms, such as Facebook and Google, for attracting consumers and advertisers, content publishers are squeezed between declining number of website visitors (later referred to as *traffic*) and shrinking advertising revenues.

The dominant platforms are relying on user- and publisher-generated content but producing no content by themselves [1]. They, in a sense, are leeching the content of others [2], typically not generating almost any content themselves [3]. By aggregating the content created by publishers and users, platforms dominate over web traffic and continuously invent ways to discourage users from leaving their ecosystem [4]. Examples of this strategic behavior include e.g. Google incorporating rich snippets in search engine results, disincentivizing users to click away from the search engine results page, and Facebook introducing instant articles. Both actions enable users to satisfy their information needs on the platforms without clicking further to publishers' websites.

With these strategies in place, the platforms have locked in users to an impressive degree. In turn, publishers that incur the cost for content creation are, in the worst case, left without the benefits when the content is monetized by the super platforms [5].

This research analyzes the 'game of traffic' between publishers and super platforms. Our purpose is to examine strategies relating to cooperation between publishers and to analyze whether a coalition is a viable option to a super platform as a source of traffic. By coalition, we refer to a cooperative organization among publishers. In practice, the coalition can be a website hosting all the content of all publishers, or can it be an ensemble of separate websites sharing content and visitors. We focus on the following questions: (1) Why and what publishers gain value from online super platforms? (2) When will publishers be better off with and without super platforms?

Related Literature

This research analyzes a form of self-organization that the news and content creation industry could take, namely coalition. Coalitions have been studied extensively in economics, and their primary advantages include profit maximization, increased unit outputs, and sharing risks and rewards [6–8]. In strategic management, the benefits are seen to relate to the sharing of resources and information for more effective joint value extraction [9]. In addition, coalitions can involve network effects or externalities which incentivize new members to join as the member base grows [10, 11].

In the context of the media industry, the coalition can involve externalities between content dissemination and advertising [12], by creating more feasible audiences for advertisers. The revenue from advertising can grow disproportionally with the audience growth [13]. However, not all participants necessarily yield an equal share of returns from the coalition [14]. The stability of the coalition is partly influenced by the way in which the participants extract private benefits [15]. In addition, managing a coalition can involve substantial coordination costs [16], associated with ensuring interoperability [11]. Finally, the strategies undertaken by the coalition may not always be optimal for the individual agent [17]. The combination of advantages and disadvantages, therefore, makes it meaningful to analyze coalition arrangements in greater detail.

The popularity of social media has attracted publishers to distribute their content on social media platforms [18]. Previously, the newspaper industry reacted to the threat of other media, such as television, by raising prices [19]. However, in the environment where consumers' media consumption behavior is ever more fragmented, this is no longer an option [20]. At its core, finding a functional business model refers to the ability to capture the value of online content [21]. The readers' willingness to pay has been identified as a concern in the newspaper industry [22].

In a related work, Salminen [2] analyzes the power dominance of online platforms; namely, the 'remora's curse', a condition in which startup companies can become victims of a platform's strategic decision making as they grow dependent on the incumbent platform's user base. Argentesi and Filistrucchi [12] define the newspaper industry as a two-sided market and estimate the players' market power. Despite the notable benefits of coalition arrangements, coalitions have not been widely considered by prior literature. Most points of view focus on competition between the publishers [23], instead of collaboration. Thus, we believe our analysis will be a useful addition to the body of knowledge of the strategies in the media industry.

Game of Monetization and Online Advertising Revenue

General Intuition

First, for dominant online content aggregators (later referred to as 'super platforms'), such as Google and Facebook, the more content created by the publishers, the better. They incur no cost for its creation and only minimal cost in retrieving it with their algorithms. Second, platforms and publishers are competing over the same total traffic, which depends on the number of consumers. This idea originates from the fact that consumers have limited time available for consumption of content that is shared among different channels [24]. Traffic is valuable because it provides revenue for publishers and super platforms that both follow the media business model, in which content is provided for free to consumers whose attention is monetized by showing advertisements. This configuration constitutes a two-sided market of advertisers and content consumers [23, 25] in which traffic is a proxy for revenue. Fourth, publishers provide traffic to super platforms and *vice versa*. The share of traffic received by each publisher may differ so that some publishers receive more traffic from a super platform than others. That is, if a publisher is publishing content on a super platform, it will get traffic from its participation, and that traffic is shown advertisements. This is referred to as 'monetization', or the media business model [26].

Assumptions and Parameters of the Model

First, there are media publishers with some content classified under some topics (e.g., news, sports, entertainment). Second, there are *N* channels where publishers can post their content. Every channel is characterized by consumer's efficiency in finding content there and efficiency of finding similar content in that channel. When there is much content on the channel, the increased efficiency of finding similar content helps to attract more consumers. These parameters depend on how the channel is designed. Consumers are more attracted to content published on an effective channel (with higher TT_i). Publishers are interested in sharing content to channels where their content gets more attention and their traffic share is higher. The traffic share depends on the type of content, so some content attracts higher traffic shares from social media.

Table 1 shows the parameters used for model development. Traffic share varies by channel choice and publisher. Some channel choices are more generous than others. Moreover, we assume that publishers with the best values of traffic share (TS) participate in the coalition. Another assumption is that every platform attracts attention independently without distraction effects, so the frequency of times content is seen or the order of exposure. Our analysis is based on assumption that *i*th channel is chosen by C_i share of publishers and then analyzing when it can be beneficial for them to switch strategy. We assume that the actions of the publisher are fully determined by their benefits of changing strategy, after which C_i shares changes.

Moreover, we assume that traffic share that a new publisher achieves in a channel choice is a linear function of C_i which is defined uniquely by $TS_{min,i}$ and $TS_{max,i}$. If the channel choice is super platform, this platform takes some of the traffic for themselves. If the channel choice is a coalition, then the share of traffic is equivalent to the coalition operating cost. In practice, the operating cost consists of development and maintenance of online traffic sharing systems. These efforts are required to ensure common traits of platform design, including compatibility, interconnection and interoperability, and coordination of technical standards [11]. Finally, in our model, the super platform moves first and then the publishers respond.

Table 1. Parameter definitions.

Parameter	Definition
$E_{c,i}$	Consumers' efficiency of finding content in a channel choice (i.e., choose super platform, coalition, or both)
$E_{s,i}$	Consumers' efficiency of finding similar content (i.e., how likely a consumer will look for similar content in this channel choice)
C_i	Number of content is published on this channel choice
$TS_{min,i}$	Minimum traffic share this channel choice gives to publishers
$TS_{max,i}$	Maximum traffic share this channel choice gives to publishers
T_i	Share of traffic to content published in this channel choice. All traffic can be distributed along channels (super platform and coalition)
$TSC_{min,i}$	Minimum traffic share for the channel. It is different from TS, because TSC is calculated for publishers taking part in this channel
$TSC_{max,i}$	Maximum traffic share for channel choice
$TSC_{av,i}$	Average traffic share for channel choice
TSC_i	Traffic share for channel that has no heterogeneity among publishers
TC_i	Total traffic attracted by content published in this channel
$P_{i,min}$	The amount of traffic a publisher gets from one unit of content in this channel, including min, max and average values for heterogeneity
P_{max}	Maximum traffic for publisher
P_{av}	Average traffic for publisher
TT_i	Traffic per content on the i*th* channel

Strategies for Publishers

We consider three strategies: (1) *Publish on super platform only*, (2) *Publish on coalition only,* and (3) *Publish on both super platform and coalition*. If a publisher chooses super platform, it gets more views per content unit because the platform is a popular and comfortable platform for information, but the platform takes a part of the traffic. If a publisher chooses coalition, it gets all traffic from the content unit, but many publishers should participate in the coalition to get more views using cross-references. Moreover, the coalition cannot use as much development as the super platform can, therefore, it is less efficient in attracting traffic. If a publisher puts content both on the super platform and coalition, it can take some additional expenses to conduct multiple posts, however, it can be easy if all information is just reposted to different platforms. If the publisher is not very small, such expenses are negligible. If neither channel choice imposes penalties for posting content to other platforms, then the total number of views attracted by this content will only increase. Since the coalition gives 100% of traffic and the super platform always gives less, then the average share of traffic per publisher will increase, too. Therefore, going to the coalition will always produce a higher volume of traffic than the traffic from the super platform. Then, there are only two strategies: (1) *Publish on both super platform and coalition*, and (2) *Publish on coalition only*. If the coalition forbids publishing content on Facebook, then there are two strategies: (1) *Publish on Facebook only*, (2) *Publish on coalition only.*

We assume that every unit of content posted in channel *i* will have 'share per content' attraction that depends on how much content on this topic is posted in the channel and how well the platform is designed for such content, as expressed in Equation 1.

$$SPC_i = E_{c,i} + C_i E_{s,i} \tag{1}$$

Every channel gets traffic proportional to attention attracted to all content posted on it. Since the total traffic obtained by all channels is constant, then traffic obtained by every platform can be written as Equation 2.

$$T_i = \frac{C_i \cdot SPC_i}{\sum_{i=1...n} C_i \cdot SPC_i} \tag{2}$$

We assume that publishers who are getting more traffic share from the super platform will go to this channel early. Then, the minimum traffic share for super platform publishers can be obtained according to Equation 3.

$$TSC_{\min,1} = TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1 \tag{3}$$

The maximum share of traffic along publishers always equals to the potential maximum expressed in Equation 4.

$$TSC_{\max,1} = TS_{\max,1} \tag{4}$$

Coalition mechanics are different. First, publishers get a minimum share of traffic. Then, as the number of publishers in coalition grows, the traffic share of all publishers grows accordingly, as shown in Equations 5 and 6.

$$TSC_2 = TS_{\min,2} + \left(TS_{\max,2} - TS_{\min,2}\right)C_2 \tag{5}$$

$$TSC_2 = TSC_{\max,2} = TSC_{\min,2} = TSC_{av,2} \tag{6}$$

This is compatible with the concept of network effects, so that the more publishers there are, the more it makes sense for new publishers to join. The traffic obtained by every unit of content on *i*th platform can be calculated as per Equation 7.

$$TT_i = \frac{T_i}{C_i} \tag{7}$$

The maximum and minimum traffic obtained by publishers per content consumers is denoted in Equations 8 and 9.

$$TC_{\max,i} = TSC_{\max,i} \cdot TT_i \tag{8}$$

$$TC_{\min,i} = TSC_{\min,i} \cdot TT_i \tag{9}$$

After a simple algebraic transformation, we obtain Equations 10 and 11.

$$TC_{\max,1} = TSC_{\max,1} \cdot TT_1 = TS_{\max,1} \cdot \frac{T_i}{C_i} = TS_{\max,1} \cdot \frac{E_{c,1} + C_1 E_{s,1}}{\sum_{i=1...n} C_i \cdot \left(E_{c,i} + C_i E_{s,i}\right)} \tag{10}$$

$$TC_{\min,1} = TSC_{\min,1} \cdot TT_1 = \left[TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1\right] \cdot \frac{E_{c,1} + C_1 E_{s,1}}{\sum\limits_{i=1\ldots n} C_i \cdot \left(E_{c,i} + C_i E_{s,i}\right)} \tag{11}$$

From which we get Equations 12 and 13.

$$TC_{\max,1} = TS_{\max,1} \cdot \frac{E_{c,1} + C_1 E_{s,1}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + C_2 \cdot \left(E_{c,2} + C_2 E_{s,2}\right)} \tag{12}$$

$$TC_{\min,1} = \left[TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1\right] \cdot \frac{E_{c,1} + C_1 E_{s,1}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + C_2 \cdot \left(E_{c,2} + C_2 E_{s,2}\right)} \tag{13}$$

The traffic obtained by coalition users per content unit is calculated in Equation 14.

$$TC_2 = \left[TS_{\min,2} + \left(TS_{\max,2} - TS_{\min,2}\right)C_2\right] \cdot \frac{E_{c,2} + C_2 E_{s,2}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + C_2 \cdot \left(E_{c,2} + C_2 E_{s,2}\right)} \tag{14}$$

For this case, we assume that every piece of content can be posted on the super platform or on coalition but not on both channels at the same time, as per Equation 15.

$$C_2 = 1 - C_1 \tag{15}$$

We assume $E_{c,2} = 1$ because the efficiency of the coalition is a norming value.

We assume that if a publisher changes strategy, then it will be one of following two cases: (1) publishers who get the least benefit from the super platform switching to the coalition; or (2) publishers who could get the most benefit from the super platform switches to it from the coalition. Then, we compare traffic per content obtained by publisher in short term, which they can get by (1) choosing the super platform and (2) choosing the coalition. This situation is analyzed in Equations 16 and 17.

$$TC_{\min,1} = \frac{\left[TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1\right]\left(E_{c,1} + C_1 E_{s,1}\right)}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + \left(1 - C_1\right) \cdot \left(1 + C_2 E_{s,2}\right)} \tag{16}$$

$$TC_2 = \frac{\left[TS_{\min,2} + \left(TS_{\max,2} - TS_{\min,2}\right)\left(1 - C_1\right)\right]\left(1 + \left(1 - C_1\right)E_{s,2}\right)}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + C_2 \cdot \left(E_{c,2} + C_2 E_{s,2}\right)} \tag{17}$$

Scenarios When Content Can Be Posted to More than One Channel

Assume that posting content to both channels causes a negligible distraction factor, so that share per content attraction on every channel does not depend on content posting on other channels. For such scenarios, all publishers are in coalition $C_2 = 1$, and some can choose the super platform. We express this through Equations 18–20.

$$TC_{\min,1} = \left[TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1\right] \cdot \frac{E_{c,1} + C_1 E_{s,1}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + \left(E_{c,2} + E_{s,2}\right)} \tag{18}$$

$$TC_{\max,1} = TS_{\max,1} \cdot \frac{E_{c,1} + C_1 E_{s,1}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + \left(E_{c,2} + E_{s,2}\right)} \tag{19}$$

$$TC_2 = \left[TS_{\min,2} + \left(TS_{\max,2} - TS_{\min,2}\right)\right] \cdot \frac{E_{c,2} + E_{s,2}}{C_1 \cdot \left(E_{c,1} + C_1 E_{s,1}\right) + \left(E_{c,2} + C_2 E_{s,2}\right)} \tag{20}$$

A publisher who does not post on the super platform gets TC_2. Publishers who post on both platforms get not less than $TC_2 + TC_{\min,1}$ but not more than $TC_2 + TC_{\max,1}$. If the publisher is small, it will not be able to change the situation. Then, excluding the super platform will not be a beneficial move. However, if a group of publishers who can act together decide not to engage on the super platform, they can increase value TC_2 so that it will exceed losing of TC_1. This will change the situation for other publishers, too, and can cause a chain reaction of exiting the super platform.

Scenarios When Content Can Be Posted to Only One Channel

We consider two scenarios and five sub-cases, where the amount of coalition traffic differs. *Scenario 1*. If the traffic difference meets Equation 21,

$$TC_2 - TC_{\min,1} > 0 \qquad (21),$$

then publishers would choose coalition rather than publish on the super platform.

Scenario 2. If the traffic difference meets Equation 22,

$$TC_2 - TC_{\min,1} < 0 \qquad (22),$$

then publishers would more likely choose the super platform than the coalition. To further analyze, we introduce function in Equation 23.

$$\begin{aligned} PS(C_1) = &\left[TS_{\min,2} + \left(TS_{\max,2} - TS_{\min,2}\right)\left(1 - C_1\right)\right]\left(1 + \left(1 - C_1\right)E_{s,2}\right) - \\ &- \left[TS_{\max,1} - \left(TS_{\max,1} - TS_{\min,1}\right)C_1\right]\left(E_{c,1} + C_1 E_{s,1}\right) \end{aligned} \qquad (23)$$

After collecting coefficients by the degree of C_1, we get the Equation 24.

$$\begin{aligned} PS(C_1) = &-E_{c,1}TS_{\max,1} + TS_{\max,2}\left(1 + E_{s2}\right) + \\ &+ C_1\left(E_{c,1}\left(TS_{\max,1} - TS_{\min,1}\right) - E_{s,1}TS_{\max,1} - E_{s,2}\left(2 \cdot TS_{\max,2} - TS_{\min,2}\right) - \left(TS_{\max,2} - TS_{\min,2}\right)\right) + \\ &+ C_1^2\left(E_{s,1}\left(TS_{\max,1} - TS_{\min,1}\right) + E_{s,2}\left(TS_{\max,2} - TS_{\min,2}\right)\right) \end{aligned} \qquad (24)$$

Scenario 2a. There is no heterogeneity and there is a flat coalition operating cost factor, resulting in Equations 25 and 26:

$$E_{s,1}\left(TS_{\max,1} - TS_{\min,1}\right) + E_{s,2}\left(TS_{\max,2} - TS_{\min,2}\right) = 0 \qquad (25)$$

$$TS_{\max,1} - TS_{\min,1} = 0\ ,\ TS_{\max,2} = TS_{\min,2} = 1 \qquad (26)$$

Thus, the function $PS(C_1)$ is linear, and the critical value of a publisher's share is:

$$C_1 = \frac{\left(TS_2\left(1 + E_{s,2}\right) - E_{c,1}TS_{\max,1}\right)}{\left(E_{s,2}TS_{\max,2} + E_{s,1}TS_{\max,1}\right)} \qquad (27)$$

If there are more publishers in the coalition, others choose the coalition; otherwise, publishers exit the coalition.

Scenario 2d. As shown above, if $TS_{\max,1} - TS_{\min,1} > 0$, inequality $PS(C_1) > 0$ can either have a solution containing a single point, segment, or none. Assume solution of $PS(C_1) > 0$ is segment $[s_1, s_2]$. Then, we have the following situations.

Case 4.1. If $C_1 \in [s_1, s_2]$, then the publisher will to go to the coalition and C_1 will reduce to $\max(s_1, 0)$. If $s_1 > 0$, there are some publishers who would get much from the super platform and they are not going to the coalition.

Case 4.2. If $C_1 < s_1$, then publishers will go out of coalition until $C_1 = \min(s_1, 1)$.

Case 4.3. If $C_1 > s_2$, then publishers will go out of coalition until $C_1 = 1$.

Case 5. It is also possible to have coordinated actions of publishers. In the above cases, we showed how publishers act without coordination. However, there can be some share of publishers who can agree and go to coalition together, despite it not being beneficial in the short term. The main incentive for doing so is to create favorable conditions for other publishers to join the coalition in the future.

Discussion

Our analysis shows that all publishers would be better off without the super platform, since the total traffic could be shared among publishers. We also show that if the coalition does not forbid publishers to post content, all publishers choose both the super platform and coalition, except the large publishers who would lose too much traffic. The more publishers there are that only choose coalition, the more traffic the coalition can generate to recoup losses from not participating in the super platform. In this case, the total traffic for the publishers is higher than when they would cooperate with the super platform because the excess traffic can be shared.

Theoretically, an interesting notion is the relationship between content and traffic, namely, content as an antecedent to having users in the first place. If the content aggregator platform indeed depends on user-generated content, then the creators of the content yield the ultimate power, as opposed to the platforms. While publishers cannot own super platforms, they could own the coalition. This means traffic resulting from the content creation could stay among the publishers, at least to a greater degree, and not be snatched away by the content aggregators. Content could be distributed by a jointly developed system from some automatic feed. It could also be placed behind a paywall, in which case full articles are not indexable by super platforms, and the users could be encouraged to share the content within the coalition. Given that super platforms tend to cater for all content, focusing and dominating on specific topics could enable publisher coalitions to build loyal follower bases that choose to spend their online time on high-quality coalition websites rather than on mixed-content super platforms.

References

1. Goh, K.-Y., Heng, C.-S., Lin, Z.: Social Media Brand Community and Consumer Behavior: Quantifying the Relative Impact of User- and Marketer-Generated Content. Information Systems Research. 24, 88–107 (2013).
2. Salminen, J.: Startup dilemmas - Strategic problems of early-stage platforms on the internet, http://www.doria.fi/handle/10024/99349, (2014).
3. Albuquerque, P., Pavlidis, P., Chatow, U., Chen, K.-Y., Jamal, Z.: Evaluating promotional activities in an online two-sided market of user-generated content. Marketing Science. 31, 406–432 (2012).
4. Boudreau, K.: Open platform strategies and innovation: Granting access vs. devolving control. Management Science. 56, 1849–1872 (2010).

5. Jansen, B.J., Schuster, S.: Bidding on the buying funnel for sponsored search and keyword advertising. Journal of Electronic Commerce Research. 12, 1–18 (2011).
6. Arrow, K.J.: The organization of economic activity: issues pertinent to the choice of market versus nonmarket allocation. The analysis and evaluation of public expenditure: the PPB system. 1, 59–73 (1969).
7. Mayes, B.T., Allen, R.W.: Toward a definition of organizational politics. Academy of management review. 2, 672–678 (1977).
8. Stevenson, W.B., Pearce, J.L., Porter, L.W.: The concept of "coalition" in organization theory and research. Academy of Management Review. 10, 256–268 (1985).
9. Grant, R.M., Baden-Fuller, C.: A Knowledge Accessing Theory of Strategic Alliances. Journal of Management Studies. 41, 61–84 (2004).
10. Katz, M.L., Shapiro, C.: Network Externalities, Competition, and Compatibility. The American Economic Review. 75, 424–440 (1985).
11. Economides, N.: The economics of networks. International Journal of Industrial Organization. 14, 673–699 (1996).
12. Argentesi, E., Filistrucchi, L.: Estimating market power in a two-sided market: The case of newspapers. Journal of Applied Econometrics. 22, 1247–1266 (2007).
13. Manduchi, A., Picard, R.: Circulations, Revenues, and Profits in a Newspaper Market with Fixed Advertising Costs. Journal of Media Economics. 22, 211–238 (2009).
14. Deneckere, R., Davidson, C.: Incentives to form coalitions with Bertrand competition. The RAND Journal of economics. 473–486 (1985).
15. Arslan, B.: The Interplay of Competitive and Cooperative Behavior and Differential Benefits in Alliances. Strategic Management Journal. (2017).
16. Bakos, J.Y., Brynjolfsson, E.: From vendors to partners: Information technology and incomplete contracts in buyer-supplier relationships. Journal of Organizational Computing and Electronic Commerce. 3, 301–328 (1993).
17. Coleman, J.S.: The Benefits of Coalition. Public Choice. 8, 45–61 (1970).
18. Ju, A., Jeong, S.H., Chyi, H.I.: Will Social Media Save Newspapers? Journalism Practice. 8, 1–17 (2014).
19. Abbring, J.H., Ours, J.C.V.: Selling news and advertising space: The economics of Dutch newspapers. De Economist. 142, 151–170 (1994).
20. Couldry, N.: Does 'the media'have a future? European journal of communication. 24, 437–449 (2009).
21. Teece, D.J.: Business Models, Business Strategy and Innovation. Long Range Planning. 43, 172–194 (2010).
22. Umanets, E.: Effects of obtained benefits on willingness to pay and word-of-mouth behavior in newspaper industry. (2014).
23. Gabszewicz, J.J., Laussel, D., Sonnac, N.: Attitudes toward advertising and price competition in the press industry. In: Economics of Art and Culture Invited Papers at the 12th International Conference of the Association of Cultural Economics International. pp. 61–74. Emerald Group Publishing Limited (2003).
24. Voorveld, H.A.: Media multitasking and the effectiveness of combining online and radio advertising. Computers in Human Behavior. 27, 2200–2206 (2011).
25. Kaiser, U., Wright, J.: Price structure in two-sided markets: Evidence from the magazine industry. International Journal of Industrial Organization. 24, 1–28 (2006).
26. McPhillips, S., Merlo, O.: Media convergence and the evolving media business model: an overview and strategic opportunities. The Marketing Review. 8, 237–253 (2008).