



CER 2020

5th Colloquium on European Research in Retailing

VNIVERSITAT
ED VALÈNCIA  Facultat d' **E**conomia



**GENERALITAT
VALENCIANA**

Conselleria d'Educació,
Investigació, Cultura i Esport

JKU
JOHANNES KEPLER
UNIVERSITY LINZ

skema
BUSINESS SCHOOL

 **Universität Bremen**

12:00-13:30. Parallel sessions (II)

Parallel sessions (II)_A: Digitalisation in Retailing

Chair: María Fuentes (Pablo Olavide University, Sevilla, Spain)

Providing digitally-transferred conditional access-permission: benefit vs. safety-concern in unattended home delivery service	Tobias Röding, Sascha Steinmann, Anne Fota, Hanna Schramm-Klein (University of Siegen)
Why do consumers use interactive technologies in stores? A uses and gratifications approach	Hafida Boudkouss, Souad Djelassi (University of Lille)
Product affinity segmentation of multichannel grocery shoppers applying community detection	Koen Vanhoof (Hasselt University), Marta Frasquet (Universitat de València), Ivett Fuentes (Central University Las Viñas)
Digitization tools at a territory level (DTTs) for inner-city retailers in France. Empirical review and analytical typology	Anne-Sophie Clément (ESCP)

Parallel sessions (II)_B: Shopper/Consumer Behaviour and Marketing

Chair: Enrique Universitat Bigné (de València)

Online behavioral advertising: benefits and risks of data-driven digital advertising	Simone Aiolfi, Silvia Bellini (University of Parma)
You'll never shop alone! – customer-to-customer interaction at the discount store.	Cordula Cerha, Fabian Nindl (WU Vienna)
From owning to renting through rental-commerce websites	Anne Fota, Katja Wagner, Hanna Schramm-Klein (University of Siegen)
Using NLP to investigate consumers' expectations regarding food retail	Yolande Piris (University Bretagne Sud – LEGO), Anne-Cécile Gay (University Bretagne Sud Foundation)

Parallel sessions (II)_C: Retail Strategy and Management

Chair: Christina Holweg (Vienna University of Economics and Business)

An ephemeral's store atmospheric characteristics	Ghalia Boustani, Jean-françois Lemoine (Paris 1, Panthéon Sorbonne)
Hurry up! Effect of pop-up stores' ephemerality on consumers' intention to visit	Laura Henkel, Waldemar Toporowski (University of Göttingen)
Franchisor-franchisee relationship and customer data management in the Data Era	Hanene OUESLATI (Université de Haute-Alsace), Martine DEPARIS (European Business School), Saloua BENNAGHMOUCH (Université de Haute-Alsace)
Value co-creation between consumers and distributors: the moderating effect of relationship characteristics	Natalia Rubio, Nieves Villaseñor, M ^a Jesús Yague (Universidad Autónoma Madrid)

ONLINE BEHAVIORAL ADVERTISING: BENEFITS AND RISKS OF DATA-DRIVEN DIGITAL ADVERTISING

Simone Aiolfi

Ph.D. Adjunct Professor

Department of Economics and Business Management, University of Parma, Via J.F. Kennedy
6 – Parma - 43125, Phone number: +390521902479
e-mail: simone.aiolfi@unipr.it (corresponding author)

Silvia Bellini

Associate Professor

Department of Economics and Business Management, University of Parma, Via J.F. Kennedy
6 – Parma - 43125, Phone number: +390521032416
e-mail: silvia.bellini@unipr.it

Introduction

Technology allows firms to target consumers based on their general interests thanks to the analysis of the editorial content of the web page on which the ad would be displayed (Goldfarb and Tucker, 2011). Furthermore, recent developments in online tracking and profiling technologies allows the targeting and personalization process in real time while a user browses the Internet (Moore et al., 2015; Sinclair, 2016).

Thus, to personalize and target advertisements firms can use data collected through the online behaviour of users. Researchers identify this phenomenon as the so called *Online Behavioral Advertising* (OBA). In literature, there are several definitions of OBA, but all of them identified two common characteristics: the monitoring and tracking of consumer online behavior and the use of data collected to target ads (Boerman et al., 2017; Varnali, 2019).

In a nutshell, this type of advertising is based on tracking users in order to make insights about their potential interests and convey relevant and personalized advertisements related both to the preferences of the users and their online behavior.

The theoretical background of OBA research is highly fragmented. The most used theories, that focus on the antecedents and mediation variables of the OBA, refer to the *persuasion knowledge model* (Van Noort et al., 2013; Ham and Nelson, 2016), the *psychological reactance theory* (Tucker, 2014; Aguirre et al., 2015; Bleier and Eisenbeiss, 2015a and 2015b), the *privacy calculus theory* (Gironde and Korgaonkar, 2018); the *theory of uses and gratifications* (Sutanto et al., 2013; Ozcelik and Varnali, 2019) and the *information boundary theory* (Sutanto et al., 2013).

Many studies focus on the effects of the OBA and how to measures acceptance and resistance to the OBA (McDonald and Cranor, 2010; Ur et al., 2012; Smit et al., 2014; Boerman et al., 2017), but the perceptions about the OBA seem to be divergent. On the consumers' perspective, some researches seem to see benefits in online targeted ads (McDonald and

Cranor, 2010; Ur et al., 2012), while most seem to be skeptical, finding this technique invasive especially as far as individual's privacy (Ur et al., 2012; Smit et al., 2014).

Literature state that the OBA is characterized by a continuous contrast between benefits and risks. The OBA makes advertisements more relevant to consumers who, seeing a relevant and personalized ad for them, are less likely to avoid the advertising. Conversely, individuals consider the collection and use of personal data as an invasive tactic that leads to the rise of negative perceptions namely in terms of the loss of privacy (Moore et al., 2015; Phelan et al., 2016; Summers et al., 2016; Varnali, 2019). Specifically, the lack of control over personal data and the loss of privacy are considered the main concerns on the acceptance and effectiveness of the OBA (Turow et al., 2009; McDonald and Cranor, 2010; Baek and Morimoto, 2012; Ur et al., 2012; Lambrecht and Tucker, 2013; Van Doorn and Hoekstra, 2013; Yang, 2013; Smit et al., 2014; Lee et al., 2015; Moore et al., 2015).

According to ethical problems in marketing studied by the *acquisition-transaction theory* (Baek and Morimoto, 2012), the likelihood of a consumer purchasing a product or service depends on the comparison between perceived benefits and perceived risks and costs (Baek and Morimoto, 2012). Therefore, it becomes crucial to understand how and in which measure consumers value both the benefits of the OBA (relevance, credibility, perceived usefulness) and its costs (privacy concerns) in order to accept or avoid the OBA. Consequently the acceptance or the avoidance of the OBA will affect consumer's actual purchasing behavior.

Purpose

The research aims to investigate how individuals can be persuaded to purchase a product or service through repeated and personalized messages. Specifically, the study aims to identify the potential contents able to provide value for individuals, and therefore capable of influencing them. Thus, it may result in a behavioural intention to purchase the products communicated through the online behavioural advertising. In addition, the research focuses on the role of privacy concerns in terms of affecting avoidance or adoption of this new type of advertising.

Finally, the end purpose of our work is to come out with a structural equation model, which can help researchers and practitioners to better understand shopping behavior in the online retailing setting as far as the potential benefits and risks of the online behavioral and data-driven digital advertising.

Conceptual framework

Our conceptual framework bases on the following hypothesis (see Figure 1):

H1: The higher the level of relevance of the OBA, the higher the level of acceptance of the OBA.

H2: The higher the level of credibility of the OBA, the higher the level of acceptance of the OBA.

H3: The higher the level of perceived usefulness of the OBA, the higher the level of acceptance of the OBA.

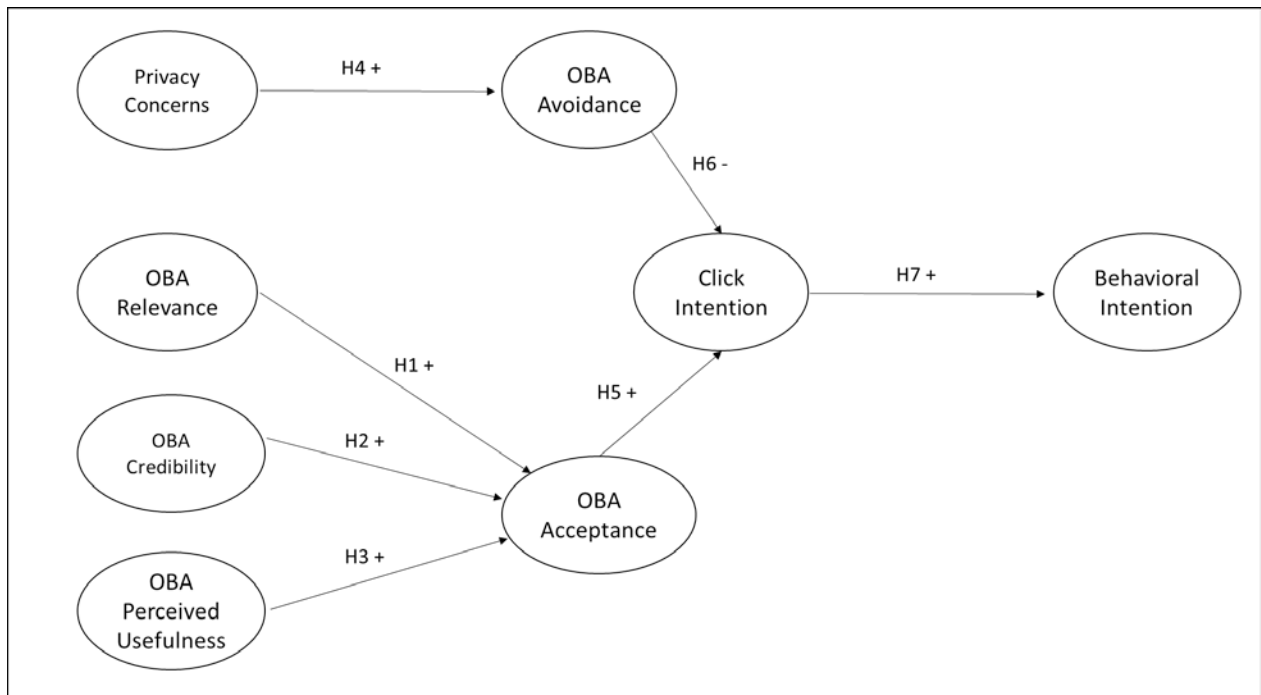
H4: The higher the level of privacy concerns about the OBA, the higher the level of avoidance of the OBA.

H5: The higher the level of acceptance of the OBA, the higher the level of click intention on the OBA.

H6: The higher the level of avoidance of the OBA, the lower the level of click intention on the OBA.

H7: The higher the level of click intention on the OBA, the higher the level of behavioral intention to purchase the product offering promoted by the OBA.

Figure 1 Conceptual framework



Methodology

Sample

To test all the hypotheses, we used a cross-sectional data analysis based on data collection using an online questionnaire with the belief that consumers who surf the Web represent the most suitable target for the research objectives. In fact, those who are used to surfing online are most likely more familiar to new modes of digital communication. We requested them to answer to a structured questionnaire after being subjected to a visual stimulus, which represented an example of online behavioral advertising. A total of 128 subjects were interviewed.

Procedure

First, we subjected each respondent to a visual stimulus (see Appendix – Figure 3) representing an example of online behavioral advertising associated with the decision-making process of searching for a product on a website of a dealer of clothes, apparel, shoes and accessories.

After the stimulus, shoppers answered to questions regarding their attitude toward the online behavioral advertising such as relevance, perceived usefulness and credibility of this type of advertising.

Furthermore, considering the goals of our research, it was necessary to measure both the consumers' level of privacy concerns and their intention to accept or avoid the OBA. Finally, we requested respondents to answer to questions regarding their intention to click to the ads and their actual intention to purchase the product sponsored by the OBA.

Measure

We measured all the variables considered with multiple-item scales, with the exception of the Click Intention, with Likert measurement scale. Specifically, all the scales used in the online survey come from previous research about shoppers and advertising theories and, once translated into Italian language, were adapted for our model and measured from 1 (disagree) to 7 (agree).

Specifically, *OBA Perceived Usefulness* considered four items adapted from Tam and Ho (2006), *OBA Relevance* was measured through eight items adapted from Laczniak and Muehling (1993) and *OBA Credibility* considered three items adapted from Tsang et al. (2004). Furthermore, the level of *Privacy Concern* was measured through five items adapted from Bleier and Eisenbeiss (2015a) and Dinev and Hart (2006), the *OBA Acceptance* considered a two-items scale adapted from McDonald and Cranor (2010) and Turow et al. (2009) while the six-items scale of the *OBA Avoidance* was drawn from Cho and Cheon (2004) and Speck and Elliott (1997). Finally, the *Behavioral Intention* to purchase the product communicated by a personalized advertising was measured by three items adapted from Taylor et al. (2011) while the *Click Intention* considered only a single item derived and adapted from Yoo (2007).

Findings

We used a structural equation modelling approach (SEM) with Partial Least Squares (PLS) regression method and software SmartPLS 3.2.9 to test the research hypotheses.

For each construct, except for Click Intention¹, the adequacy of the individual items and the composites were assessed by measures of reliability (Santos, 1999), convergent validity (Anderson and Gerbing, 1988) and discriminant validity (Fornell and Larcker, 1981; Beatty and Ferrell, 1998).

First, we tested reliability using Cronbach's Alpha (Santos, 1999) and eliminated the items that would cause the worsening of the scale (all values are higher than the minimum acceptable value of 0.70, see Appendix - Table 1). Secondly, to test the convergent validity of our measures, we examined the significance of factor loadings (Anderson and Gerbing, 1988) and the composite reliability. Furthermore, the discriminant validity was evaluated by comparing the extracted variance (AVE) with the square of the correlation between the two latent variables considered (Fornell and Larcker, 1981). All the result indicates that the measurement model has adequate reliability, convergent validity and discriminant validity (see Appendix - Table 2).

As suggested by Hair et al. (2011) and Ramayah et al. (2016) we measured R squares (R^2) for all the latent variables in order to determine the goodness of the structural model. The overall fit of the structural model is good with all the fit indexes in line with the recommended values (see Appendix - Table 3).

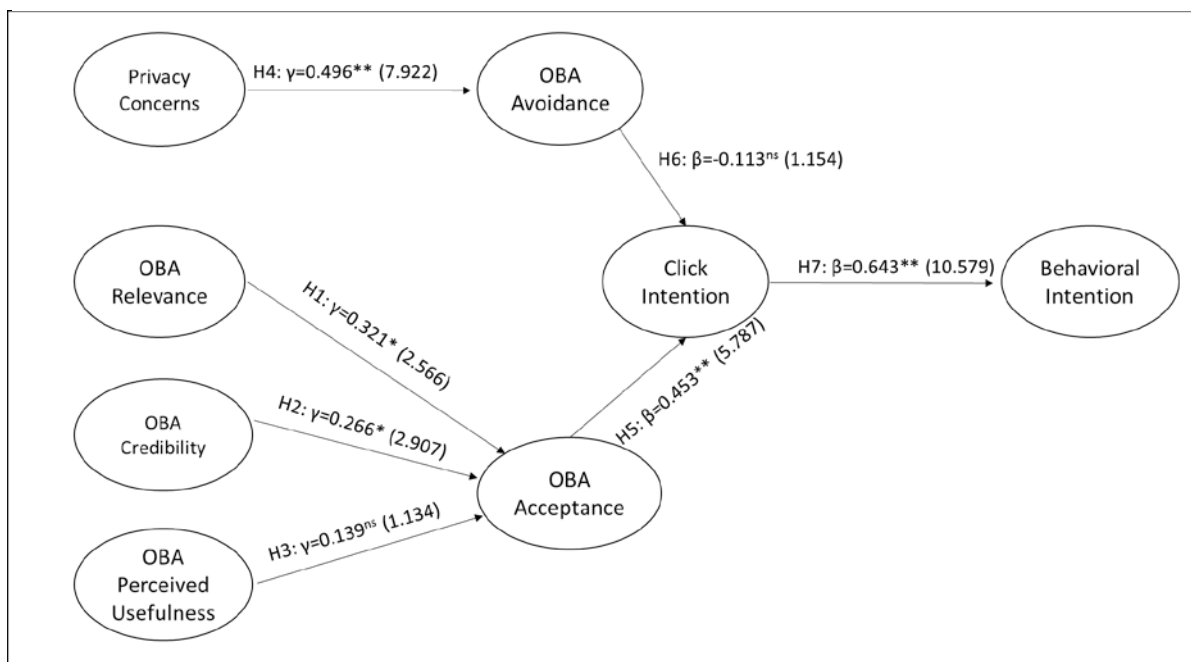
¹ The value of single-item constructs has been debated in literature, however a single-item constructs were found as good at capturing the nature of the phenomenon in question (Gardner and Cummings, 1998).

The results of the path analysis are shown in Figure 2 with all the path coefficients (intensity and direction of relations) and the significance (t-value) for each of them.

Discussion of the results

Results allow us to support the majority of our hypothesis, except for H3 and H6 (see Appendix - Table 4). Specifically, the final SEM allows us to confirm the evidence of a positive and direct effect of the relevance (H1) and the credibility (H2) of the contents promoted by the OBA on the acceptance of the personalized advertising. This results in a more click intention rate (H5) and consequently in a positive behavioral intention in terms of actual purchase behavior (H7). In addition, the model confirms how the consumers' privacy concerns about data-driven advertising positively affect the intention to avoid the adoption of OBA (H4) resulting in a lower level of click intention rate (H6). Despite the negative effect of OBA Avoidance on Click Intention, this ultimate relationship is not statistical significant. One possible justification might come from the *Privacy Paradox*: although people say they care about their privacy and are not willing to share their information, actually they give their data in exchange for small benefits or for convenience (Norberg et al., 2007). Therefore, although people say they are opposed to the OBA because of privacy risks, people express the opposite and click on the advertising.

Figure 2 Structural Model



Note: **: p-value<0.001; *: p-value<0.01; ns: p-value>0.05

Contributions and Implications

Our research may contribute to advance the state of knowledge about personalized and data-driven digital advertising and its application in the new online retail environment. Prior research came up with theoretical frameworks that explain antecedents of OBA focusing only on ethical issues in marketing (Boerman et al., 2017) or only on the effectiveness of a single OBA campaign or how to create a successful advertising campaign (Varnali, 2019).

Literature identifies factors controlled by advertisers and factors controlled by consumers in order to create comprehensive theoretical frameworks of the effectiveness of the OBA. However, besides being complex models, no study focuses on the intended or actual behaviour of shoppers. Specifically, any research apply a structural equation modeling approach in order to identify the antecedents of the actual behaviour of individuals in terms of actual purchases of products or services promoted by OBA.

Filling the gap in the existing literature, the research, through a SEM approach, seeks to build up a simplified model that considers both the benefits (relevance, credibility and perceived usefulness of personalized online behavioural advertising) and the risks (privacy and ethical concerns) of the OBA.

According to prior studies, our research demonstrates how OBA is a controversial type of advertising. In fact, it activates opposing reactions on consumers' perspective: relevance and credibility on the one hand and concerns and intrusiveness on the other. Acceptance of the OBA is positively related to the relevance and the credibility of the personalized advertisements, intended as the reliability and capability of the OBA of being a significant guide into the purchasing process while the intention to avoid personalized ads is strictly related to the concerns for privacy. Consequently, acceptance and avoidance of OBA affected (positively and negatively respectively) the intention of clicks and the behavioral intention that are decisive in the success of the personalized advertising.

As far as the negative effect of the OBA, concern for privacy is one of the central problems for the digital advertising industry. Due to its privacy implications, the OBA will soon enter the political agenda of several states. Despite these negative effects, personalized advertising seems to be the future of advertising.

The Internet and new media have changed individuals' habits and the way they use advertising messages, revolutionizing the way companies invest, promote and define measurement metrics.

The research should help advertisers consider the level of ad personalization since ads perceived as too personal could be seen as too intrusive and, consequently, lead to lower click and purchase rates. Consumers, indeed, will tend to accept OBA only if the benefits outweigh the costs in terms of loss of privacy. In addition, retailers should be more transparent, benefiting from open communication in the collection and use of data in order to personalize the advertising.

Research limitations and outlook

Some limitations are associated with the online survey and respondents may have been influenced by the presence of the visual stimulus and then distorted the answers in order to accomplish the research. Another concern is about the generalizability. Our sample, interviewed online, is probably neither truly random nor necessarily representative of any larger population.

For future research, we intend to enlarge the sample and investigate the phenomenon through experimental approach in order to understand the actual shopping behaviour in a simulated laboratory.

References

- Abdi, H. (2007), "Partial least square regression" In: Neil Salkind (Ed.), *Encyclopedia of Measurement and Statistics*, Thousand Oaks (CA): Sage.
- Aguirre E., Mahr D., Grewal D., De Ruyter K. and Wetzels M. (2015), "Unraveling the personalization paradox: the effect of information collection and trust-building strategies on online advertisement effectiveness", *Journal of Retailing*, Vol. 91 No. 1, pp. 34–49.
- Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.
- Baek, T. H. and Morimoto, M. (2012), "Stay away from me: examining the determinants of consumer avoidance of personalized advertising", *Journal of Advertising*, Vol. 41 No. 1, pp. 59–76.
- Barclay, D., Higgins, C. and Thompson R. (1995), "The partial least squares (PLS) approach to causal modeling: Personal computer adoption and use as an illustration", *Technology Studies*, Vol. 2 No. 2, pp. 285–309.
- Beatty, S. and Ferrell, E. (1998), "Impulse buying: modeling its precursors", *Journal of Retailing*, Vol. 74 No. 2, pp. 169-191. [http://dx.doi.org/10.1016/s0022-4359\(99\)80092-x](http://dx.doi.org/10.1016/s0022-4359(99)80092-x).
- Bleier, A. and Eisenbeiss, M. (2015a), "The importance of trust for personalized online advertising", *Journal of Retailing*, Vol. 91 No. 3, pp. 390–409.
- Bleier, A. and Eisenbeiss, M. (2015b), "Personalized online advertising effectiveness: the interplay of what, when, and where", *Marketing Science*, Vol. 34, pp. 669–688.
- Boerman, S. C., Kruikemeier, S. and Zuiderveen Borgesius, F.J. (2017), "Online behavioral advertising: a literature review and research agenda", *Journal of Advertising*, Vol. 46 No. 3, pp. 363-376.
- Cho, C. H. and Cheon, H. J. (2004), "Why do people avoid advertising on the internet?", *Journal of Advertising*, Vol. 33 No. 4, pp. 89-97.
- Dinev, T. and Hart, P. (2006), "Internet privacy concerns and social awareness as determinants of intention to transact", *International Journal of Electronic Commerce*, Vol. 10 No. 2, pp. 7–29.
- eMarketer, Digital Ad Spending 2019 Global (2019), <https://www.emarketer.com/content/global-digital-ad-spending-2019>
- Esposito Vinzi, V., Chin, W.W., Henseler, J. and Wang, H. (2010), *Handbook of Partial Least Squares Concepts, Methods and Applications*, Series: Springer Handbooks of Computational Statistics, Springer.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 2, pp. 39-50.

- Fornell, C., and Bookstein, F. L. (1982), "Two structural equation models: LISREL and PLS applied to consumer exit-voice theory", *Journal of Marketing Research*, Vol. 19, pp. 440–452.
- Gardner, D.G. and Cummings, L.L. (1998), "Single-item versus multiple-item measurement scales: an empirical comparison", *Educational and Psychological Measurement*, Vol. 58 No. 6, pp. 898-915.
- Gefen, D., Straub, D. and Boudreau, M. C. (2000), "Structural equation modeling techniques and regression: guidelines for research practice", *Communications of the AIS*, Vol. 1 No. 7, pp. 1-78.
- Gironda, J. T. and Korgaonkar, P. K. (2018), "iSpy? tailored versus invasive ads and consumers' perceptions of personalized advertising", *Electronic Commerce Research & Applications*, Vol. 29, pp. 64–77.
- Goldfarb, A. and Tucker, C. E. (2011), "Online display advertising: targeting and obtrusiveness", *Marketing Science*, Vol. 30, pp. 389–404.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory Practice*, Vol. 19 No. 2, pp. 139-152.
- Ham, C. D. and Nelson, M.R. (2016), "The role of persuasion knowledge, assessment of benefit and harm, and third-person perception in coping with online behavioral advertising", *Computers in Human Behavior*, Vol. 62, pp. 689–702.
- Laczniak, R. N. and Muehling, D. D. (1993), "The relationship between experimental manipulations and tests of theory in an advertising message involvement context", *Journal of Advertising*, Vol. 22 No. 3, pp. 59–74.
- Lambrecht, A. and Tucker, C. (2013), "When does retargeting work? Information specificity in online advertising", *Journal of Marketing Research*, Vol. 50 No. 5, pp. 561–76.
- Lee, S., Lee, Y., Lee, J. and Park, J. (2015), "Personalized e-services: consumer privacy concern and information sharing", *Social Behavior and Personality: An International Journal*, Vol. 43 No. 5, pp. 729–40.
- Mardegan, P., Riva, G. and Scatena, S. F. (2016), *Digital advertising 3.0. Il futuro della pubblicità digitale*, Maggioli Editore, Milano
- McDonald, A. M. and Cranor, L. F. (2010), "Beliefs and behaviors: internet users' understanding of behavioral advertising," *TPRC 2010*, <http://aleecia.com/authors-drafts/tprc-behav-AV.pdf>.
- Moore, R. S., Moore, M. L., Shanahan, K. J. and Mack, B. (2015), "Creepy marketing: three dimensions of perceived excessive online privacy violation", *Marketing Management* Vol. 25, pp. 42–53.
- Osservatori.net, (2019), Il mercato dei media digitali: quanto vale e come evolve, https://blog.osservatori.net/it_it/mercato-media-digitali

- Ozcelik, A. B. and Varnali, K. (2019), “Effectiveness of online behavioral targeting: a psychological perspective”, *Electronic Commerce Research & Applications*, Vol. 33, pp. 1–11.
- Phelan, C., Lampe, C. and Resnick, P. (2016), “It’s Creepy, but it doesn’t bother me,” Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, New York: Association for Computing Machinery, 5240–51.
- Ramayah, T., Ling, N.S., Taghizadeh, S.K. and Rahman, S.A. (2016), “Factors influencing SMEs website continuance intention in Malaysia”, *Telematics and Informatics*, Vol. 33 No. 1, pp. 150-164.
- Santos, J.R.A. (1999), “Cronbach's alpha: a tool for assessing the reliability of scales”, *Journal of Extension*, Vol. 37, No. 2, pp. 1-5.
- Sinclair, J. (2016), “Advertising and media in the age of the algorithm”, *International Journal of Communication*, Vol. 10, pp. 3522–3535.
- Smit, E. G., Van Noort, G. and Voorveld, H.A. (2014), “Understanding online behavioural advertising: user knowledge, privacy concerns, and online coping behaviour in Europe”, *Computers in Human Behavior*, Vol. 32, pp. 15–22.
- Speck, P. S. and Elliott, M. T. (1997), “Predictors of advertising avoidance in print and broadcast media”, *Journal of Advertising*, Vol. 26 No. 3, pp. 61-76.
- Summers, C. A., Smith, R. W. and Reczek, R. W. (2016), “An audience of one: behaviorally targeted ads as implied social labels”, *Journal of Consumer Research*, Vol. 43 No. 1, pp. 156-78.
- Sutanto, J., Palme, E., Tan, C. and Phang, C. W. (2013), “Addressing the personalization–privacy paradox: an empirical assessment from a field experiment on smartphone users”, *MIS Quarterly*, Vol. 37 No. 4, pp. 1141–64.
- Taviani, G. (2017), *Retargeting: strategie di digital marketing per l'e-commerce*, HOEPLI Editore.
- Taylor, D.G., Lewin, J.E. and Strutton, D. (2011) “Friends, Fans, and followers: do ads work on social networks?”, *Journal of Advertising Research*, Vol. 51 No.1, pp. 258–275.
- Tsang, M.M., Ho, S. C. and Liang, T. P. (2004), “Consumer attitudes toward mobile advertising: an empirical study”, *International Journal of Electronic Commerce*, Vol. 8 No. 3, pp. 65–78.
- Tucker, C. E. (2014), “Social Networks, personalized advertising, and privacy controls”, *Journal of Marketing Research*, Vol. 51 No. 5, pp. 546–62
- Turow, J., King, J., Hoofnagle, C.J, Bleakley, A. and Hennessy, M. (2009), “Americans reject tailored advertising and three activities that enable it”, Available at SSRN 1478214, http://papers.ssrn.com/sol3/papers.cfm?abstract_idD1478214.

- Ur, B., Leon, P. G., Cranor, L. F., Shay, R. and Wang, Y. (2012), "Smart, useful, scary, creepy: perceptions of online behavioral advertising", in Proceedings of the Eighth Symposium on Usable Privacy and Security, art. 4.
- Van Doorn, J. and Hoekstra, J.C. (2013), "Customization of Online advertising: the role of intrusiveness", *Marketing Letters*, Vol. 24 No. 4, pp. 339-5.
- Van Noort, G., Smit, E.G. and Voorveld, H.A. (2013), The online behavioural advertising icon: two user studies, in *Advances in Advertising Research*. In *Advances in Advertising Research*, Vol. 4, pp. 365-378, Springer Gabler.
- Varnali, K. (2019), "Online behavioral advertising: An integrative review", *Journal of Marketing Communications*, pp.1-22.
- Yang, H. (2013), "Young American consumers' online privacy concerns, trust, risk, social media use, and regulatory support", *Journal of New Communications Research*, Vol. 5 No. 1, pp. 1-30.
- Yoo, C. Y. (2007), "Implicit memory measures for web advertising effectiveness", *Journalism & Mass Communication Quarterly*, Vol. 84 No. 1, pp. 7-23.

Appendix

Table 1 Measurement Model and Test Results

Scales	N° items	Cronbach's Alpha	CR	AVE
OBA Acceptance	2	0.724	0.879	0.784
OBA Avoidance	6	0.826	0.867	0.528
Behavioral Intention	3	0.940	0.961	0.893
OBA Credibility	3	0.828	0.897	0.744
Privacy Concerns	5	0.956	0.966	0.850
OBA Relevance	8	0.932	0.946	0.693
OBA Perceived Usefulness	4	0.965	0.975	0.906

Table 2 Convergent Validity Analysis Results and Correlations

	1	2	3	4	5	6	7	8
1. OBA Acceptance	0.885							
2. OBA Avoidance	-0.141	0.726						
3. Behavioral Intention	0.526	-0.258	0.945					
4. Click Intention	0.469	-0.177	0.643	1.000				
5. OBA Credibility	0.554	-0.332	0.732	0.55	0.862			
6. Privacy Concerns	-0.066	0.496	-0.174	-0.009	-0.307	0.922		
7. OBA Relevance	0.606	-0.394	0.681	0.504	0.690	-0.113	0.833	
8. OBA Perceived Usefulness	0.498	-0.260	0.542	0.331	0.474	0.008	0.726	0.952

Note: On the diagonal. AVE values. Below the diagonal: correlations. The square root of AVEs (in italic) are larger than offdiagonal elements in their corresponding row and column for all cases.

Table 3 Fit of the model - R^2

Latent Variable	R^2
OBA Acceptance	0.411
OBA Avoidance	0.246
Behavioral Intention	0.414
Click Intention	0.232

Note: All latent variables have their R squares greater than 15%, suggesting good predictability of our model as confirmed by Chin (1998).

Table 4 Summary Structural Model

Hypothesis	Coeff.	St. Dev.	T-value	P-value	Hypothesis
H1 : OBA Relevance → OBA Acceptance	0.321	0.125	2.566	0.011	Accepted
H2 : OBA Credibility → OBA Acceptance	0.266	0.092	2.907	0.004	Accepted
H3 : OBA Perceived Usefulness → OBA Acceptance	0.139	0.122	1.134	0.257	Rejected
H4 : Privacy Concerns → OBA Avoidance	0.496	0.063	7.922	0.000	Accepted
H5 : OBA Acceptance → Click Intention	0.453	0.078	5.787	0.000	Accepted
H6 : OBA Avoidance → Click Intention	-0.113	0.098	1.154	0.249	Rejected
H7 : Click Intention → Behavioral Intention	0.643	0.061	10.579	0.000	Accepted

Figure 3 Visual Stimulus

“Imagine that you want to buy a pair of sports shoes. In order to achieve this goal, you connect to the website "Zalando". Looking for "Running Sport Shoes", the site shows you different products. Browsing among the options, you choose to click on some products to observe with greater attention.

I ask you to see this short video (25 seconds), in order to put yourself in the action just described, pretending to be you to operate the navigation.

Imagine then to leave the site without finalize the purchase. Imagine that the day after, browsing the web, you open the website of 3BMETEO.COM, finding yourself in front of an announcement advertising that shows the exact products that you have displayed during the navigation of the day previous.”



Keywords

Online behavioral advertising, digital advertising, privacy concern, behavioral intention