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# **Experimental Methods in Media Economics Research: Understanding the Human Factor in Decision-Making**

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## **Abstract**

In media economics, experimental research provides a method to explore and gain a deeper understanding of the rational and irrational human behaviors that affect the dynamics of media businesses. Digital technologies and value creation logics have opened new business opportunities but, at the same time, created a need for more accurate information on markets and consumer behavior. Interest in behavioral and experimental research in media economics has gradually increased and diversified, covering new and different research topics to better understand and cope with the highly competitive media business. We believe that the role of experimental methods will continue to strengthen, providing a micro-level behavioral approach to the macro-level economic perspective of media businesses.

## **Two sets of keywords**

3-5 keywords: experimental research, media economics, behavioral economics, human factors, decision-making

10-15 keywords: experimental research, media economics, behavioral economics, human factors, decision-making, native advertising, media brands, business models, digitalization, social media, social influence, laboratory experiments, field experiments

## **Introduction**

The field of media economics is undergoing remarkable transformations as a result of technological advancements and societal changes. Digital technologies together with increasing competitive pressures and changing customer needs challenge media companies' ability to address these changes at individual, firm and industry level. As for research, this calls for new approaches and methods. Indeed, the field of media economics has evolved and become multidimensional, embracing a wide range of theories and techniques necessary to investigate changes and challenges in the media industry (Picard, 2018).

Experimental research represents a new avenue of investigation, providing a powerful tool to understand the rational and irrational aspects of economic behavior. It is based on the idea of behavioral economics, which presents an alternative to the traditional view of neoclassical economic theory that assumes actors to be rational and capable of optimizing the best solution. According to the behavioral economic perspective, human economic behavior is influenced by emotions, personal characteristics, and surrounding environments. Through experimental methods, researchers can study these human factors to better understand why people behave the way they do. This novel experimental approach has gradually been adopted in various disciplines and contexts, including the field of media economics. Digital technologies and new value creation logics have created new business opportunities, but they have also created the need for more accurate information on markets and consumer behavior.

## **Experimental method**

The core idea of experimental research is to test hypotheses derived from theory or models. Laboratory experiments make it possible to collect data that validate or refute the hypotheses. Adopting laboratory experiments as a research method has several benefits. One of the main advantages is the high degree of control that the researcher has over the experiment. This means that researchers can isolate the specific variables that they are interested in studying and hold all other variables constant (Guala 2005). In fact, in a laboratory experiment, by manipulating one or more independent variables (the causes), the researcher can precisely determine how changes in such independent variables affect the dependent variable by keeping under control other external actors (known as confounds) that might influence the results. This allows for more precise and reliable results (Friedman et al. 1994; Charness et al. 2012).

Specifically, the establishment of cause-effect relationship is possible by assigning participants to different experimental treatments (or experimental conditions). At least two experimental conditions are required: a "baseline" treatment in which the factor being investigated by the researchers is absent, and a "control" treatment in which the factor is present. This approach is often used e.g., in medical research to test the efficacy of a new drug. The patients assigned to the "baseline" treatment are given a placebo, while those assigned to the control treatment are given the new drug. Similarly, in economic experiments, several treatments may be needed to separate the effects of different explanatory variables.

Laboratory experiments rely on double randomization. First, subjects are recruited with a random extraction from the experimental pool and second, they are randomly assigned to the experimental treatments. This ensures that idiosyncratic traits of subjects are evenly distributed across treatments. For example, if idiosyncratic risk attitudes can play a role in influencing the participants' behaviors, extracting the subjects at random guarantees that the internal distribution of risk attitudes is the same across the samples assigned to different treatments. In other words, if any differences between subjects' behavior in different treatments are observed, this is due to the treatment effect rather than pre-existing differences between the groups. Consequently, randomization allows testing hypotheses in a very controlled environment.

Since the experiment is carefully controlled and standardized procedures are typically used, another advantage of laboratory experiments is that they can be easily replicated to ensure reliability and validity of the findings (Camerer, 2015). Moreover, the experimental method allows for investigation of phenomena that either cannot be explained by existing theories or validated using traditional methods (e.g., relying on archival data) (Guala and Mittone, 2015).

However, laboratory studies may potentially have certain disadvantages. One limitation is the fact that they might not always correctly represent real-life settings. Since, traditionally, laboratory experiments are carried out in a controlled setting mainly with students, one of the critiques to the experimental method is related to external validity, that is, the possibility of generalizing results from laboratory conditions to the real world. However, usually, the aim of the experiment is *“to test the robustness of a phenomenon rather than its applicability to a particular real-world situation”* (Guala, 2005, p. 203). On the other hand, if the purpose of the experiment is to reach a higher level of realism, a possibility is to run field experiments that are conducted in real-world settings rather than laboratory settings. They tend to have higher external validity than laboratory experiments but are characterized by lower internal validity.

## **Experiments in Media Economics**

In media economics, experimental research is a relatively new trend but there is a growing interest in using experiments to examine the micro-foundations of growing digital business. The possibility to run online experiments has made the method more convenient to apply than before. So far, the experiments have been mainly focused on consumer or audience behavior. Many of the experimental studies have been conducted in topics related to advertising and marketing power of digital media. One of the popular topics is native advertising, which has

become a relevant source of revenues in the digital domain (Hardy, 2021). For example, recent studies have analyzed how native advertising affects the audience perceptions and evaluations of publishers (Amazeen and Wojdyski, 2020; Amazeen and Muddiman, 2018). In addition to native advertising, experimental methods have been used to study other digital phenomena such as social media and social influence on audience choices and behavior. As an example of this is Muchnik, Aral and Taylor's (2013) study on herding behavior asking to what extent prior ratings of online news influence future ratings of individual users.

Furthermore, topics that have earlier been studied with more traditional research methods have gained insights also from experimental studies. For example, Thrane (2018) conducted an experiment on the influence of expert reviews on movie goers' choices and movies' post office success, the study of Stanca, Gui and Gallucci's (2013) explored the effects of sensational content on television consumption behavior and Krebs (2017) analyzed the effect of brand on the quality perception of news.

As for the research on branding, in recent years, there has been a growing interest in studying the role of media brands, particularly in the context of social media and digital platforms which have become an important source of competitive advantage. For example, Klaß (2023) analyzes how creation of journalistic stars (brands) and content exclusiveness affects users' willingness to pay for online news. This study goes to the core of business models by testing the sustainability of the revenue streams. Similarly, Goyanes, Artero and Zapata (2021) investigate how authorship (prestigious journalist), content exclusiveness, and media type affect users' willingness to pay for online news. Media brands are also in the focus of Kouki-Block and Wellbrock's (2022) study, which explores how media brands affect media planners' decisions on ad placement on websites. By analyzing both consumer and business perspectives, these studies shed light on the critical role of media brands in the digital landscape.

The examples provided above demonstrate the increasing and diverse interest in experimental studies. The topics have evolved from research on digital advertising and social influence to more direct analyses and testing of new business models and users' willingness to pay. There is a clear trend towards exploring different elements and qualities of digital business models. This promising research area has mainly focused on consumer and media user behavior, but there is great potential for applying experimental methods to analyze human economic behavior within media organizations as well. For example, these methods could be used to

investigate human factors (e.g., cognitive biases, emotions, idiosyncratic characteristics) that impact the abilities of top and middle managers to take risks and make strategic decisions when searching for and creating new sustainable business models. There are some promising examples of experimental methods involving real managers in the field of management studies (e.g., Laureiro-Martínez et al., 2019).

Conducting laboratory experiments with media managers can provide valuable insights into the decision-making processes and behaviors of managers in a controlled and repeatable environment, thereby allowing a higher degree of external validity. One problem that might arise is the availability of managers to get engaged in an experiment. In addition, involving a larger sample of managers increases the costs and resources required for the experiment. Sample size is of crucial importance when conducting experiments with managers, as it affects the generalizability of the results. Therefore, researchers must balance the need for a larger sample size with the available resources. Here the possibility to run online experiment may help to make the data collection process more efficient, flexible, and less costly. A sample size of around 40 to 50 participants is considered a good starting point for many experiments (see for instance, Laureiro-Martínez et al. 2015; Laureiro-Martínez et al. 2019).

As shown in this chapter, in media economics the interest in experimental research is gradually growing and diversifying covering many new and different research topics to better understand and cope with the highly competitive media business. We believe this promising path will lead forward and engage new unexplored research avenues to provide micro-level behavioral approach and insights to the macro-economic perspective of media business.

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