Introduction to the Special Issue: lab and field experiments

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Published online: 4 October 2021

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Laboratory and field experiments were considered impossible in economics. However, they are considered the main research methods in economics now. These changes are reflected in the list of recent Nobel Prize laureates in Economics: Vernon Smith (laureate in 2002) and Al Roth (laureate in 2012) have deep connections with experimental studies in the laboratory; Elenor Ostrom (laureate in 2009), Abhijit Banerjee, Esther Duflo, and Michael Kremer (laureates in 2019) have connections with field experiments.

While laboratory experiments mainly test theoretical implications or the functioning of various economic mechanisms in highly controlled settings, field experiments are conducted in more natural settings. Furthermore, field experiments, especially randomized controlled trials (RCTs), evaluate the effectiveness of various economic policies.

Despite this global development in economics, researchers employing experimental methods are still a small minority among Japanese economists. Therefore, to boost experimental economics in Japan by providing an international forum for researchers to exchange their ideas and problems, we organized a 2-day international online workshop on March 17 and 18, 2021.¹

In this special issue, we gathered seven out of thirty papers presented at the workshop. Additionally, two keynote lectures at the workshop, one by John Duffy entitled “Why Macroeconomics needs experimental evidence” and another by Lata

¹ The workshop was co-organized by Japanese Economic Association, Research Center for Behavioral Economics at Institute of Social and Economic Research, Osaka University, and the Research Institute of Socionetwork Strategy, Kansai University, and was organized partly to celebrate the 90th anniversary of Osaka University and 100th anniversary of Osaka University of Foreign Studies. We thank Kumiko Fukada, Yuki Hamada, Emi Kurimune, and Hiroko Shibata for their support in organizing the workshop.

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Gangadharan entitled “Lab-in-the-Field Experiments: Perspectives from Research on Gender,” are included.

Duffy’s article discusses how macroeconomics, the field least impacted by the behavioral revolution (Thaler, 2015), has begun to employ experimental methods to investigate the assumptions and predictions of macroeconomic models and evaluate the effects of macroeconomic policy interventions. We believe that this survey will be a key reference for research in experimental macroeconomics.

In their survey article, Gangadharan and her co-authors present a curated sample of lab-in-the-field experiments. They discuss how lab-in-the-field experiments can provide new insights into various behaviors, by themselves or in combination with conventional lab experiments, natural experiments, RCTs, or surveys. Mainly, the authors demonstrate how lab-in-the-field experiments provide new insights into the relationship between gender and leadership regarding decision-making in communities. The authors also provide an example of how ethical and implementational challenges that arise when conducting these experiments can be addressed. Such a discussion would be a great guide for new entrants to the field.

The remaining seven papers constitute a showcase of experimental studies: laboratory experiments, a combination of lab and lab-in-the-field experiments, a field experiment in a real workplace, an online RCT based on a nationwide sample in Japan, an RCT in India using a specially developed smartphone application, and a randomized online advertising experiment supplemented by mobility information gathered via smartphone. We believe readers would find it useful to compare these methods considering the specific research objectives of each paper.

We summarized each study, starting with two that employ a laboratory experiment. Yageta’s article entitled “Watching, being watched, and human interactions: Evidence from trust games” studied the effects online “face-to-face” interaction on human trust by separately measuring the effect of watching another person’s face and being watched by another person. It shows that (a) the majority of participants act according to the optimal behavior derived from a model based on inequality aversion, (b) watching and being watched increase human trust and reciprocity, but (c) there is no significant synergy in face-to-face interaction.

In the article entitled “Sustainability of renewable energy investment motivations during a feed-in-tariff schemes transition: Evidence from a laboratory experiment,” Maekawa and his co-authors studied the effect of a decline in the purchasing price of the feed-in-tariff (FIT) scheme on renewable energy investment by employing a repeated public good game. They find that while a high purchasing price under FIT can encourage investment, such an external incentive crowds out the internal motivation to invest. Therefore, when the purchasing price is removed, the investment is lower than in the counterfactual situation where the FIT scheme is never introduced.

Mitani combined laboratory and field experiments in his article entitled, “Is a PD game still a dilemma for Japanese rural villagers? A field and laboratory comparison of the impact of social group membership on cooperation.” This article reports the results of a door-to-door field experiment in Japan in which 120 villages were recruited from 23 communities in a rural mountainous village and a laboratory experiment based on 72 university students. Notably, full cooperation was observed among villagers playing the prisoners’ dilemma game with anonymous community members. Furthermore,

while cooperation is lower when villagers play the same game against others outside their community, it is still significantly higher than university students.

Ishikawa and her co-authors examined the causal effects of job stress on workers' mental health by conducting a field experiment at Japan's public employment support institution. In the experiment reported in their paper entitled "Job stress and mental health among social workers: Evidence from a field experiment at a public employment support institution in Japan," the authors randomly assign counselors to jobseekers visiting the institution for the first time. The varying difficulty faced by these jobseekers result in variations in job stress for counselors. Based on the daily records of counselors' objective and subjective mental health conditions over 4 weeks, the authors found that while increased job stress deteriorates counselors' objective mental health, those related to subjective mental health are not affected. The authors discuss the possibility that workers can accumulate the negative effects of job stress on mental health without being aware.

Sasaki and his co-authors employed online RCTs and experimentally compared the effectiveness of rebate and matching in increasing charity donations using a Japanese nationwide sample (2300 participants!). Their article entitled "An Experimental Comparison of Rebate and Matching in Charitable Giving: The Case of Japan" reports that despite the theoretical prediction of the equal impact, while matching increases donation, rebate decreases it compared to the control. Based on this finding, the authors discuss the benefits of implementing a matching scheme to encourage donation behavior in Japan instead of rebate.

In the paper entitled "Distance to news: How social media information affects bribe-giving in India," Goto and his co-authors investigated the influence of social media information on the supply of bribes in a developing country. The authors developed a smartphone app and distributed it in India. Through this app, the authors randomly circulated live news about corruption and elicited users' bribery behavior every week over 3 months. The results show that news about politicians' corruption within close geographical proximity increases bribes, while news about citizens and officials being accused decreases it.

In the study entitled "Online-to-Offline advertisements as field experiments," Matsui and Moriwaki employed a machine-learning technique to analyze data on mobility information of about 3,000 people with 23.5 million location records with 31 random assignments of online advertisements about offline stores. This study shows that advertisements have a long-term impact; after a few months, some who received the ad revisit the shops.

We hope that this special issue encourages Japanese economists to start employing experimental methods in their research.

Reference

Thaler, R. H. (2015). *Misbehaving: The Making of Behavioral Economics*. W.W. Norton & Co., Inc.

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