Summaries

Economic Factors in the Decline in Births and Fertility Rates - Why did the third baby boom not occur? -

Hiroshi Tsubouchi

This study quantitatively analyzes the economic factors that prevented the third baby boom. Japan's population structure peaked with the baby-boom generation (the first baby boom generation) and the baby-boom junior generation (the second baby boom generation). However, Japan did not experience a third baby boom. It is important to analyze the factors behind this phenomenon to consider the number of births, fertility rates, and measures to combat declining fertility rates in the future.

The fertility rate can be broken down into the marital fertility rate and the marriage rate. However, most probably, the decline in the marital fertility rate is not responsible for the decline in the number of births. The decline in the marriage rate (increase in the unmarried rate) is. In this study, we analyzed the factors contributing to the decline in marriage rate using cohort data for both men and women. The analysis focuses on economic factors since the baby-boom junior generation born in the early 1970s reached the age of 20-34 during the 1990s and 2000s, when the bubble economy burst and low growth continued.

The analysis revealed that unemployment among young people (aged 20-39 years) increased significantly from 1995 to 2010, which led to a low marriage rate among them. It was one of the factors preventing the third baby boom from occurring. It was also found that a 1% higher unemployment rate in the same age group for both men and women lowered the marriage rate 5 years later by 1.1-1.4 percentage points, and that the lifetime marriage rate declined by about 1.4-2.0 percentage points for each 5-year later birth year.

The youth unemployment rate remains high, which is believed to be the reason for low marriage rates among young people. Current countermeasures to the declining birthrate are mostly aimed at married couples, such as improving childcare services and providing financial support, and few measures are aimed at unmarried men and women. To prevent a decline in the fertility rate, it is effective to implement policies that not only increase the birthrate among married people but also stabilize employment for young people.

Board gender diversity and corporate social responsibility performance: A survey of extant literature

Kazumi Endo

Japan's performance in terms of women's career advancements remains unsatisfactory. According to the *Global Gender Gap Report 2024*, which tracks progress toward gender equality, Japan ranked 118th out of 146 countries, far below all of its Group of Seven peers. As asset managers strengthen their prodiversity voting policies, the business community struggles to comply with Western business norms. In June 2018, the Tokyo Stock Exchange revised Japan's corporate governance code and nudged top-listed companies, encouraging them to give women a more level-playing field. Specifically, the issue of gender appointments on boards was introduced. In June 2023, the Japanese government set a goal for women to occupy 30% of the executive positions at top-listed companies by 2030. Therefore, reviewing the instrumental value of female directors is important.

This study examines the relationship between board gender diversity (BGD) and corporate social responsibility (CSR) performance by proceeding in two stages. First, it presents the theoretical fragmentation in the BGD–CSR literature. Many researchers use Gilligan's theory to explain the positive effect of BGD on CSR performance, while others use the resource dependence theory and resource-based view to justify it. Gilligan noted that women, owing to their upbringing, have a care orientation characterized by empathy. Drawing on this theory, previous studies have postulated that gender-diverse boards are likely to demonstrate empathy-based responses to CSR issues. However, these researchers risk an undue emphasis on individuals, thereby missing forests for trees. In contrast, the group dynamics literature provides insights into the mechanism through which gender balance can mitigate organizational ossification. The density of women is too low to shift group dynamics, because a critical mass is rarely achieved. Several field experiments have found that the performance is better for groups with a balanced gender mix than for groups dominated by one gender. This implies that too many women (men) can be as bad as none at all, and can increase the risk of poor decisions.

Second, this study reviews empirical research and finds that BGD is a strong predictor of CSR performance in Western countries. This may be due to the rigid "glass ceiling" in non-Western countries. Despite extant literature on the BGD–CSR relationship, the research tends to attribute the differences in CSR performance to gender diversity rather than excellence. If female outside directors are more likely to hold advanced degrees and thus may bring in different professional

knowledge and experience, researchers cannot rule out the possibility that gender effects on CSR performance are masked by heterogeneity in board expertise. Furthermore, few studies distinguish between female inside and outside directors. Based on these findings, this article suggests that researchers should adopt a broader perspective to better understand the drivers of CSR performance.

A Conjoint Analysis of Japanese Voters' Policy Option Preferences Revisited: Another Case Study of the July 2022 Election

Masaaki Kawagoe¹⁾

This study applies conjoint analysis, a widely used tool in marketing, to policy study for deriving Japanese voters' preferences for policy options. A questionnaire survey was conducted during the campaign period for the 26th House of Councilors election in July 2022. The results allow us to estimate discrete choice models, thereby making the following three contributions. First, it exemplifies voters' preference for policy options as their willingness to pay (WTP) to implement a specific policy. The WTP clarifies their priorities regarding the policies. Second, voters' evaluations differ significantly depending on whether the policies are financed by tax increases or fiscal deficits, that is, future tax increase. This finding is consistent with the fiscal illusion advocated by James M. Buchanan and his collaborators. Third, WTP estimates are heavily dependent on personal characteristics, such as voting behavior. This evaluation heterogeneity may imply difficulties in building consensus in the policy-making process. These results are broadly consistent with those obtained from studying the survey conducted at the time of the October 2021 election.

Nihon University College of Economics. I would like to thank the Institute of Economic Sciences, Nihon University College of Economics, for funding the questionnaire survey used here, following the survey used in Kawagoe (2023).

The Resurgence of Industrial Policies in 21st Century

Kwon, Hyeog Ug

Currently, industrial policies are being revived. The USA, the UK, Japan, France, Singapore, China, Taiwan, and Korea engage in various industrial policies, irrespective of their economic systems and development stages. The background to the resurgence of industrial policy can be attributed to China's economic development, pandemics, global financial crisis, and technological changes, such as DX. This study shows that the resurgence of industrial policies is primarily driven by developed countries. I also discuss the definitions and rationale of industrial policy. I define our industrial policy as follows: Industrial policy is a government-initiated strategy aimed at addressing market failures in specific industries at particular points in time, to enhance overall economic efficiency and achieve desired outcomes. I also present the current status of industrial policy and provide a brief review of China, the USA, and Japan's industrial policies, focusing on the semiconductor sector. Finally, I explore the desirable industrial policies for the 21st century.

Comparison of the Quality of Learning Inside and Outside the Classroom in On-Demand and Face-to-Face Instruction

Keita Shinogaya

Owing to the spread of COVID-19, many universities have implemented remote online classes. While the benefits of on-demand classes, which allow students to watch video lectures repeatedly, have been recognized, how the educational effectiveness of on-demand and face-to-face instruction differs has not been examined sufficiently. In this study, we examined how the quality of learning inside and outside the classroom differs between on-demand and face-to-face classes by conducting both types of instruction for university students enrolled in a psychology course.

Psychology classes were held once a week for 15 weeks and covered topics in social and clinical psychology. Although the classes were primarily conducted in a face-to-face format, the 4th, 6th, 10th, and 12th weeks were delivered as on-demand lessons. The PPT slides used in the classes were converted into PDF files and uploaded to the Learning Management System (LMS) for students to use as study material before and during each lesson. Face-to-face lessons, each lasting 90 minutes, involved lecturing on psychology theories and terminology related to concrete examples in daily life using PPT slides. To avoid one-way transmission of knowledge, a slide prompting "Let's think about this" was presented every 20 minutes, followed by discussion where students could exchange ideas. After each class, students submitted a reflection on "what they understood," "what they did not understand," and "what they searched after the lesson." The tasks were submitted within one week of class.

For weeks with on-demand lessons, similar to the face-to-face sessions, a video was created by combining narrated explanations with PPT slides. The on-demand videos were structured to mirror the face-to-face classes, inserting a "Let's think about this" slide every 20 minutes and pausing to allow students to think their own ideas related to the presented questions. However, unlike face-to-face classes, there was no need for peer exchange during these slides in the on-demand sessions, so the videos were approximately 60 minutes long. Students were also instructed to tackle the same postclass tasks as in face-to-face lessons, detailing "what they understood," "what they did not understand," and "what they searched after the lesson." The videos were available for one week from the class date, with a one-week deadline for task submission.

At the end of the 15th week, a questionnaire survey was conducted to assess the semester's learning. It measured deep-processing strategies, metacognitive strategies, collaborative learning strategies, preparatory learning before each lesson, and comprehension levels for each session.

Analysis of data from 473 students revealed that face-to-face classes promoted the use of deepprocessing strategies, such as processing that connects knowledge, more than on-demand classes. Furthermore, face-to-face classes, which provided time for the exchange of opinions with others, promoted the use of collaborative learning strategies that deepened one's thoughts based on others' opinions, resulting in higher comprehension levels for each session. In addition, this study showed that more preparatory learning was conducted in face-to-face classes than in on-demand classes. The results of this study have important implications for educational approaches in the post-COVID era.

Network externalities in a quantity-setting vertically differentiated luxury goods market

Yasuhiko Nakamura

This study reconsiders how the strength of network externalities and the gap in product quality influence equilibrium market outcomes in a luxury goods market with vertical product differentiation under quantity competition. We show the following three results. First, the demand, price, and profit of a low-quality firm can be positively associated with the strength of network externalities. Second, the profit-enhancing quality of a low-quality firm is higher under quantity competition than under price competition. Third, the profit-maximizing quality of a low-quality firm is higher than its socially optimal quality.

Keywords: Vertical product differentiation; Quality gap; Network externalities; Snob effect; Quantity competition

JEL classification: D43; L13

Financial networks and systemic risk

Kenta Toyofuku

This paper reviews the financial network and systemic risk literature. The global financial crisis of the late 2000s provoked interest in the financial networks formed through indirect connections among banks. When banks diversify their asset portfolios, their asset portfolios are overlapped or they come to hold the same risky assets. Recent studies reveal that this portfolio overlap and asset commonality among banks is the main channel spreading systemic risk in the financial sector. To review the financial networks and systemic risk literature, I first review the mechanisms underpinning individual bank runs. I then review the role of contagion in the interbank market. Finally, I review the mechanisms underlying overlapping portfolios and asset commonality in banks and reveal that these indirect connections between banks are the main factor generating systemic risk in recent financial crises.

Effective tools for analyzing the periodic motion of the generalized Liénard system

Makoto Hayashi

A classical Liénard equation and the generalized Liénard equation arise in various "natural phenomena" (technology, biology, neurophysiology, bifurcation theory, keynesian theory) and play a significant role in understanding the qualitative behavior. Many results concerning the qualitative properties of limit cycles of these equations have been demonstrated in the book of Z. Zhang, among others and have been widely provided by mathematicians, physicists, economists and other researchers. The topics, as seen in the famous Hilbert 23rd problem, continue to be an area of active research.

In this paper, we provide new tools for establishing criteria for the unique existence or the nonexistence of periodic motions in the models described by Liénard systems of three types. In the light of this, we believe that these results will contribute to understanding "economic phenomena" in the furture.

T. Yasui and T. Maruyama have explained the important roles of the Liénard equation as derived from business cycle models. T. Owase has historically introduced the mathematical methods for this equation. Recently, M. Galeotti–F. Gori and H. Murakami have addressed the uniqueness and existence of limit cycles for the equation using the classical tools provided by Levinson–Smith (1942) and Xiao–Zhang (2003). Our methods differ from theirs, offering a new direction, and we expect these approaches to influence furture research.

Overview of Morrey spaces

Yoichi Miyazaki

The function spaces based on the Lebesgue space are indispensable in mathematical science, especially the theory of partial differential equations. These spaces include the Sobolev space, the Triebel-Lizorkin space and the Besov space. In recent years, the function spaces have been considered by replacing the Lebesgue space L_p with $1 by the Morrey space <math>M_{p,q}$ with $1 < q \le p < \infty$ as the base space, and applied successfully to mathematical science. The Morrey space is regarded as a generalization of the Lebesgue space. The above-mentioned spaces are extended to the Sobolev-Morrey, Triebel-Lizorkin-Morrey, and Besov-Morrey spaces, respectively, by adopting the Morrey spaces as the base space.

In this study, we collect the fundamental properties and theorems in the Morrey space. Most results for the L_p space can be carried over to the Morrey space. The Hardy-Littlewood maximal operator is bounded in $M_{p,q}$ for $1 < q \le p < \infty$. This theorem can be extended to the case of vector-valued functions. The Littlewood-Paley theory also holds for the Morrey space. This theory asserts that the $M_{p,q}$ norm of a function f is equivalent to the $M_{p,q}$ norm of the l_2 sequence associated with f. As there are embeddings between the Triebel-Lizorkin and Besov spaces, similar embeddings are valid for the Triebel-Lizorkin-Morrey and Besov-Morrey spaces. These spaces also satisfy the lifting properties.

This study aims to state these theorems precisely and present their proofs from a unified viewpoint. The key idea for the proofs originates in Peetre's (1966) method, which demonstrated the boundedness of convolution operators for Morrey spaces. It is to express a function f in the form $f = f_0 + f_1$, where f_0 is supported in the ball of radius R centered at a point a, and f_1 vanishes in this ball, and apply the L_p results to f_0 and evaluate f_1 by using the definition of $M_{p,q}$. Since some theorems have been given only outlines of proofs in the existing references, we fill in the gaps.