

Department of Pharmaceutical Policy and Health Economics

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Research Projects:

The Department of Pharmaceutical Policy and Health Economics was established in April 2012 by the endowment of the Japan Pharmaceutical Manufacturers Associations (JPMA).

Medicines provide a fundamental tool for ensuring that a population remains both healthy and productive. Considering how Japanese health-care system manages use of medicines as well as how public policies could play a role in the development of new drugs and technology will be critical for Japanese social and economic prosperity, particularly in an aging population. Our research is focused on the relationship between pharmaceutical industry and an economy and its implication to public policy. The key areas of research include short-run and long-run efficient usage of generic drugs and research and development in the pharmaceutical industry and economic growth.

More specifically our research projects include the following topics:

1. Efficient usage of generic drugs and brand name drugs

Drugs are an essential part of medical practice and share the large part of economic expenditure. Generic drugs, which contain the same therapeutic substance as the original formulation, are expected to lead to greater market competition and therefore lower prices. Although generic drugs are shown to provide the same level of efficacy, their market share and sales accounts in Japan are still lower than those in the United States and European countries. Our research focuses on revealing the mechanism of decision making on prescribing generic and brand name drugs by physicians, pharmacists and patients based on economic discipline.

2. Pharmaceutical industry and its effects on economy

2-1. Impact of the investment on research and development (R&D) in the pharmaceutical industry on output of new drugs

The pharmaceutical industry is one of the most R&D-intensive industries in the economy, and spending on drug R&D has even grown recently. One of the key questions to understand the role of the pharmaceutical industry in the economy is how spending on R&D turns into the number of innovative new drugs approved for use.

2-2. Effects of development of new drugs on health, specifically on life expectancy and quality of life

The health benefits from new drugs include longer life and reducing limitations on daily activities. The ultimate and most important goal of pharmaceutical industry is to produce new products bringing longer and better life to all the population. Our research thus aims to study the impact of the approval and use of new drugs on the health of the Japanese population.

2-3. Effects of development of new drugs on the economy

New products are a key driver of economic growth. The pharmaceutical industry produces greater number of new products on average than many other industries. Our research tries to qualitatively evaluate the impact of development of new drugs on the economy.

2-4. Evaluation of the role of the pharmaceutical industry in the macro economy

One of our research goals is to identify the impact of pharmaceutical industry on the macroeconomy through employment and production. We conduct decomposition analyses to examine the effect of pharmaceutical industry on the labor market and GDP per capita.

3. Vaccination and public policies

3-1. Determinants of vaccination behavior

Vaccination prevents individuals from contracting a disease and it has been a helpful public-health tool to control infectious disease outbreaks. Individuals' vaccination decision making influences other members of the society due to indirect effect for non-vaccinees. Our research aims to explore individuals' decision making on vaccination. The demand for vaccine could be studied in the frame of a standard economic theory unlike many other clinical services where a large part of the decisions depends on other agents such as physicians.

3-2. Effective and efficient vaccination policies

It is important to build effective public health policies on vaccination as they determine the population health. Our research aims to explore better policy options regarding vaccination policies in terms of both effectiveness and efficiency.

The group is led by Prof. Hiroaki Kakihara and the members include Senior Lecturer. Xin xin Ma, Assistant Prof. Masaaki Tamura, Naohiko Wakutsu.