

**Thesis title: "Medicines for the developing world; Innovation, Economics and Policy"**

**Abstract**

Over the last decade, the public sector has recognized the need to develop new health technologies to address the problems of the poor in developing countries. It acknowledged that the only way to bring products successfully to the marketplace is to work in conjunction with the private sector, that is, the multinational and local pharmaceutical and biotechnology firms. This dissertation argues that the traditional paradigm in which 'public crowd' and 'private crowd' confront each other represents incomplete and counterproductive views of the world. It offers instead a unifying innovation framework that fosters public private partnership. In today's market economies, firms usually seek to obtain a high return on their investment particularly those that take the risk of investing in complex products. However, there is little incentive in developing drugs, diagnostics or vaccines if patient-consumers cannot access them. Poverty stricken countries have the most vulnerable populations, but are least capable of accessing the health services and products needed. In many cases, these countries are simply unable to afford prices that would cover investment costs in research and development (R&D). It is imperative to find innovative solutions that resolve this conundrum. This study provides new insights into the relations between corporate investment, and technical, market, and financial risks, as well as economic incentives including patent rights. An integrated model that characterizes and evaluates novel funding mechanisms to support medicines R&D has been constructed, and the positive, as well as unintended negative consequences, of a number of 'push-pull' mechanisms are examined. We recommend that governments support only those systems that are likely to accelerate the development of medicines for neglected diseases, and thereby improve the welfare of the most deprived populations in the world.