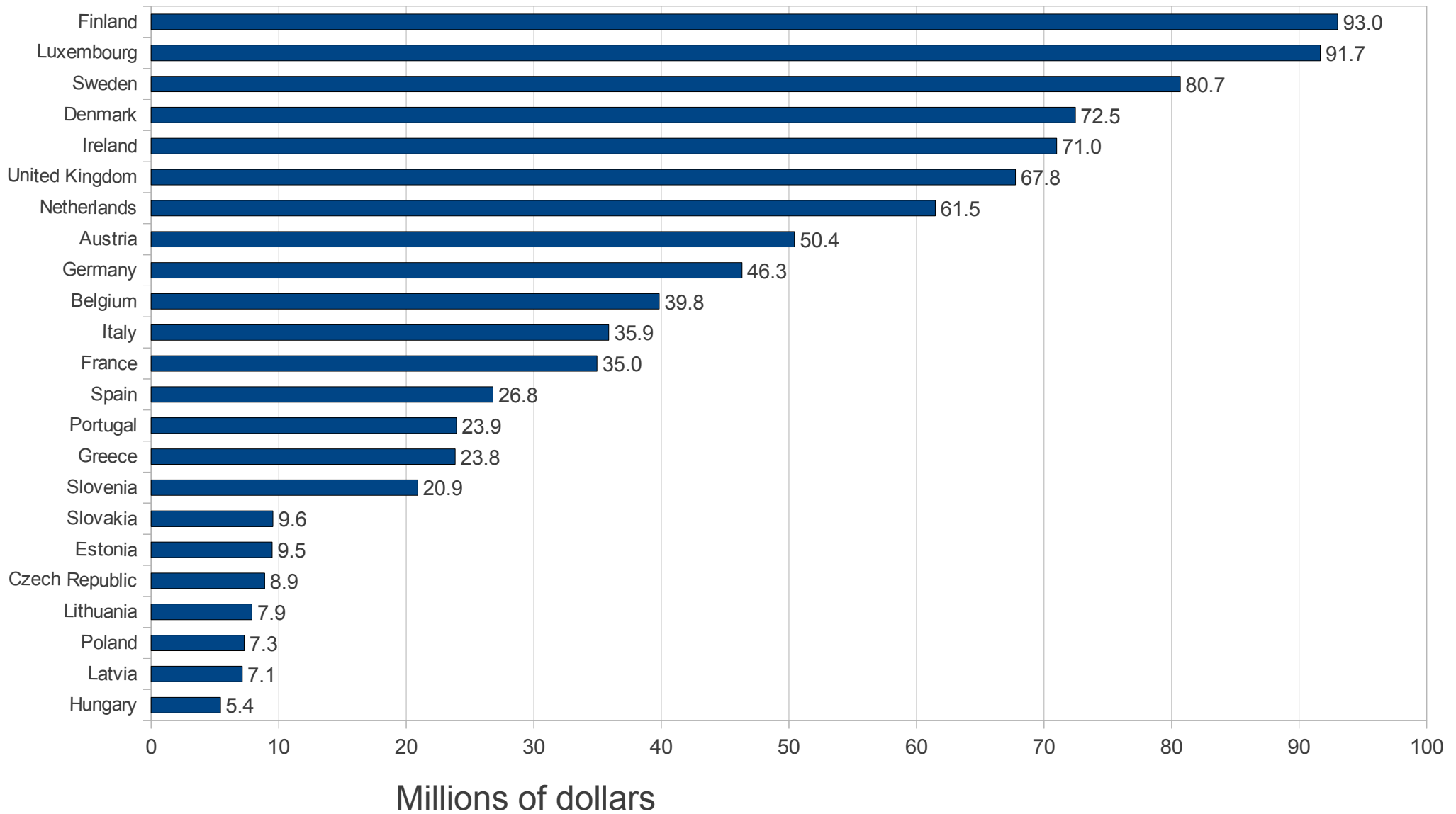


Innovation Inducement Prizes to Reduce Costs, Enhance Productivity, and Expand Access

European Parliament workshop: Can we Afford
Current Model of Medical Innovation

James Love
18 November 2010

Income per cancer death, male lung and throat cancer, age 45-64



Motivation for prize fund approach

- Exclusive rights approach leads to excessive investments in marketing and medically unimportant drugs, and barriers to access
 - Only 9 percent of global turnover reinvested in R&D, and most of that is for medically unimportant products
- De-linkage of incentives from drug prices provides opportunities to:
 - Expand sharing of and access to knowledge, technology and materials
 - More efficiently design incentives
 - Share R&D costs between countries and individuals with different incomes, and to dramatically expand access
 - Reward improvements in health outcomes, have reduce incentives for wasteful forms of marketing
 - Use inexpensive generic copies of new products, making it possible to eliminate price driven formularies

Historical debates over prizes

- Use of prizes pre-dates modern patents systems
- In 18th and 19th Century, competition between prize and grant approaches
- Sui Generis prizes
 - Extensive experience with government and privately sponsored prizes, for a wide variety of purposes
- Prizes as systematic systems of innovation
 - 18th Century experience in Lyon France
 - In 19th Century, serious consideration over whether or not prizes should replace patents
 - Experiences in USSR, China, etc.
 - In 1940-60s, consideration in United States as alternative rewards for innovations in area of nuclear energy, space technologies.

Recent interest in prizes

- To stimulate innovation in areas that are “pre-competitive” such as new technologies in the areas of transportation or energy.
 - Proliferation of clean energy prizes
- Interest in “crowd sourcing” of innovation
 - InnoCentive, software, mining, social innovation prizes, etc
- Prizes to address global health needs
 - Most neglected diseases, TB diagnostic prize, removal of arsenic in wells,
 - Prizes to reform inefficiencies in R&D incentives, and to expand access to medicines
 - Open source dividend

Types of Innovation Inducement Prizes

- High threshold to qualify for prize
 - Winner take all
 - First to achieve a result
 - “Best” qualified entrant
 - Shared prizes
- Low threshold to qualify
 - Shared proportional reward prize funds
 - Other criteria, to balance several prize fund objectives

Treatment of intellectual property rights

- Policies regarding intellectual property rights vary.
 - Some prizes are fully complementary to patents and other IPR, and only create an additional reward for innovation.
 - Prizes can also be provide as an alternative to exclusive rights for innovators,
 - Voluntary approaches
 - Non-voluntary approaches

Possible tests of prize funds

- Donor prize fund
 - Alternative reward system that would be designed to induce voluntary license to patent pool
- Cancer prize fund
 - De-monopolize cancer drugs
 - Innovation prize fund based upon share of GDP, or fraction of cancer treatment budget
 - Could be implemented for AIDS drugs, antibiotics or other areas