

Chapter 21

Market Pitfalls and Economics of New Health Technologies in Developing Economies

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ABSTRACT

The objective of this chapter is to provide evidence on “how” market processes are not fully helping developing economies benefit from new health technologies. This is achieved based on publications related to economics of health and impacts of new technologies. Patenting, anti-commons tragedy, neglected health hazards, risks, and limited research constitute the major sources of market pitfalls discussed in this chapter. A special emphasis is placed on developing countries where a series of pitfalls lead to market failures that affect access to new technologies and thus to better health systems. The related risks at both levels of developed and developing economies are discussed even though emergent and developed countries have generated new instruments to limit the negative effects of these constraints. Examples and cases are used to illustrate the pitfalls and the on-going continuing emergence of old diseases, among others. Finally, the expansion of access to new health technologies is suggested to be achieved within the world global health system framework with a more active involvement of countries.

INTRODUCTION

This chapter is a response to a growing need for knowledge about market limitations in relation to the advancement of health technologies. This exercise requires the gathering of information from

series of disciplines. This approach constitutes the corner stone of this study as information is usually scattered in different subject areas. Students, scholars and practitioners may need these types of knowledge to learn and participate to the overall development process. This contribution gathers information about health technologies while

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considering the roles of markets in covering the growing needs of different world population. As the world is experiencing a demographic boom that is accompanied by the expansion of population needs (UN, 2010), more efforts are necessary to sustain the induced growing demands (Bloom et al., 2001).

In this process, health is among the major needs to be satisfied. Advanced technologies are means that are increasingly accompanying new offers for on-going and future health requirements. In this context, health systems include all the processes from health diagnosis to treatment and monitoring. They also account for medical equipments and pharmaceuticals as supported by advancements in technologies. Nutrition and environment are among the elements included in the enlarged integrated health systems as they can prevent health degradation and health problems. But, it is also known that old or new technologies not directly related to the health systems may also affect health and living conditions. These effects can be negative on the health system.

This chapter recognizes that advanced technologies either outside or inside the health system, have promising impacts on the populations of developed, emerging and developing economies¹ but accompanying uncertainties and risks can induce important side effects. But, in developing countries, health technologies are subject to different constraints that limit their impacts and reduce their accessibility. These constraints lead to failures due to risks and uncertainty, anti-commons and to the state of the on-going research and development (R&D) gaps. In addition, the need for highly qualified medical human resources that is often pressured by emigration constitutes another constraint.

Anti-commons refer to the effects of fragmentation in both research and valuation of patents and provision of new health outputs (Heller, 1998). The R&D gaps are related to the high level of

resources placed in research and development (Gutam et al., 2010). This is referred to as the “10/90 paradox” as 10% of world population health needs benefit from 90% of the financial resources allocated to health (WHO, 2000). Local health addresses the issues of local specific health problems (neglected diseases) and diseases that are not generally addressed by the global health system (Ghadar and Hardy, 2006). Qualified human resources are increasingly becoming crucial given these constraints, the advancement of technologies and their potential positive impacts on health. This is aggravated by the emigration of medical staff from developing to developed economies (Driouchi and Kadiri, 2010; Rutten, 2007). The latter limitation is related to the risks and uncertainties faced by the overall chain of applying new technologies and new discoveries to human health. These are different types of risks and uncertainties faced by the populations with limitations in the area of safety and anticipation of sources of new hazards. In this area, developed economies can engage quicker than developing countries in identifying new sources of risks and safety nets with the required means to engage in further compensatory and corrective mechanisms. The recent cases of some pharmaceuticals with negative side effects provide examples about the level of responses in both types of economies.

The first part of this chapter looks at the benefits that are occurring and that are expected from advanced technologies. The second part introduces the pitfalls and constraints facing developing countries with regard to access and use of health technologies. The last section suggests technological and institutional means devoted to the reduction of the negative effects of the market pitfalls and the traps identified. The chapter addresses new likely means and arrangements to create new conditions for larger access to the benefits induced by new technologies in the health system of developing economies.

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