Original Article

Journal of Medical Marketing
0(0) 1–15

DOI: 10.1177/1745790414537057
mmj.sagepub.com
SAGE

Cost efficiency of pharmaceutical firms manufacturing drugs for specific diseases prevalent in India: A data envelopment analysis approach

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Abstract

There exists a lot of diversity in Indian pharmaceutical environment in various aspects. The drugs manufactured by pharmaceutical companies including multinational corporations are costly drugs and these are ordinarily beyond reach of average Indian consumer. In 2010, the Planning Commission (a central government body) instituted a high level expert group to propose an overall framework for establishing universal health coverage in India. The universal health coverage will primarily grow generics market, with low prices moderating financial impact of increased volume, thereby eroding the margin for generic players of multinational corporations competing with low-cost locals. This will lead to a tough competitive market. Keeping larger public good in mind, it will be in the best interest of even these companies to tailor down their costs to meet needs of consumer, without any compromise on quality. Through this study, we get to understand clear picture of comparative assessment of the market place economics of drugs and of different firms at large to help consumers and also the Pharmaceutical companies including multinational corporations. Like with improved cost efficiency might lead to scope of reduction of price without reduction on margin. We have applied Delphi technique to arrive at specific prevalent diseases in India and identified 24 pharmaceutical firms making drugs for these diseases. We used data envelopment analysis approach to find out the cost efficiency of firms.

Keywords

Data envelopment analysis (DEA), pharmaceuticals firms, Delphi technique, cost efficiency, allocative efficiency, technical efficiency, strategy, medical technology, pricing, generics, biotech, emerging markets, marketing communication, diagnostics, medical devices

Introduction

India is now becoming a lucrative destination for global pharmaceutical giants. It is estimated that India may become a US$8 billion drug market by 2015 for the multinational corporations (MNCs). Domestic pharmaceutical market is expected to touch US$21 billion by 2015, from 7.1 billion in 2007.[1]

There is increase also in population of higher income group, who do not hesitate to afford branded costlier drugs in preference to cheaper alternatives.[2] Recent developments in pharmaceutical sector in India reveal many mergers and acquisitions (M&A) taking place, resulting in shooting up of revenues of the business. The Indian companies are getting involved in this M&A space as there is growing domestic market for cheaper versions of patent drugs (i.e., generic drugs) which also will be able to serve developed markets abroad. Unlike in past, the MNCs pharmaceutical companies are clearly shifting their strategies: from giving out manufacturing contracts to Indian companies to owning them. MNCs are attracted by the emerging markets in Indian scenario for generic drugs. This trend is noticed in the strategy of companies such as Pfizer, GSK, Abott and Sanofi. The pharmaceutical market has witnessed a strong

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