

SYSTEM SIMULATION FOR STRATEGIC USE OF INTERNATIONAL DEMOGRAPHIC INFORMATION: A CASE STUDY OF TRANSFER PRICING IN INTERNATIONAL BUSINESS

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ABSTRACT

This paper takes issue with sweeping generalizations against price controls and the proposals to completely relegate issues of user welfare to free market forces of supply and demand. Using a case study in global health care, it is argued that a strategic analysis of international demographic data by multinational corporations could result in pursuing transfer pricing as the preferred choice for achieving consumer surplus and corporate profitability even in the context of rigorous price controls. To put the discussion in context as well as to explore other dimensions of transfer pricing such as price controls, market segmentation, and demographic distribution, we discuss the case of transfer pricing between three divisions---the home division located in the U.S., and two overseas divisions located in two different developing countries---with divergent demographic distributions. We use implantation of cardiac pacemakers as the specific healthcare issue under discussion under different sets of assumptions.

Using results of this sample simulation, it is shown that total contribution is maximized by adopting transfer pricing as the strategy of choice. Using a pure uniform pricing strategy, in order to maximize contribution, a price of \$5450 is needed. Under this strategy, a total feasible population of 8.906 million is achieved with a total contribution of \$43,409 million. However, with differential pricing, nearly three times as much contribution, \$113,041 million, is achieved with a weighted average price that is far lower, i.e., \$1711. With maximum contribution as still the criterion, the total number of feasible patients with transfer pricing is seen to be 33.97 million, a number that is nearly four times as much as earlier. Interestingly, if one were to use maximization of feasible patient population as the criterion, the resulting price would be nearly 1/6th of the above price with a contribution level of \$62,167 million which is still nearly 1.5 times the contribution achieved by uniform pricing strategy.

Although these numbers are subject to the accuracy of the assumptions, the underlying argument is more broad-based. It can be concluded that by virtue of transfer pricing or value-based pricing, millions of additional needy users are able to afford the medical service. Although this analysis has focused on just three countries, the same logic would apply to all other countries as well. In fact, it can be said that the higher the number of countries considered and the greater the income disparity, the stronger the argument.