

# Supply Induced demand, *Ex post moral hazard* and Optimal Health Insurance Contract

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## Abstract

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JEL Classification: I12, D81, D82.

## Introduction

The literature dealing with excess consumption in the health care sector is dichotomic. Indeed, we distinguish overconsumption which comes from the so-called *ex post* moral hazard behavior.<sup>1</sup> (i.e the fact that policy holders' health expenditure increases with their coverage) and which comes from a supply induced demand effect, attributed to providers' moral hazard behavior.<sup>2</sup>

The *ex post* moral hazard inefficiency comes from the policy holders' overconsumption (Pauly, 1968). This overconsumption effect can be reduced through co-payment mechanisms such as deductible and coinsurance rates.<sup>3</sup> The goal of this literature is then to determine the co-payment mechanisms and the co-payment level that implements the optimal trade-off between risk mutualization on one hand and the reduction of the inefficiency on the other hand. An important aspect of this literature is that the policy holders' health

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<sup>1</sup>The reader can find a recent synthesis of the literature in Cutler and Zeckhauser (2000)

<sup>2</sup>In the same handbook, a synthesis is provided by McGuire (2000)

<sup>3</sup>See for examples Manning and Marquis (1996), Zweifel and Manning (2000).

care demand is considered. Providers' influence in the determination of the policy holders' health care consumption is then ignored.

At the opposite, a large literature deals with providers moral hazard behavior or supply induced demand (SID) <sup>4</sup>. Most of the time, providers have an informational advantage thanks to their diagnosis and they can use it to induce the policy holders demand function. The goal of this literature is to find the optimal remuneration system that minimizes the overconsumption of health care due to the SID's effect.

There are no articles so far that analyze the impact of co-payment mechanisms on providers' ability to induce demand of their patients. We assume that providers' objective functions depend on their profit and on their patients' utilities captured by an altruism parameter which weighs the patients' utilities. In the particular case where providers are completely altruist, they would become perfect agents for their patients and only *ex post* moral hazard matters. We shall remark that the providers' ability to induce the patients' health care demands depends on the policy holders financial participation. The Higher is the co-payment, the lower is their ability to induce demand. The goal of this paper is to take into account this impact in determining the optimal co-payment system. In the same framework, we shall analyze the optimal remuneration of the providers.

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<sup>4</sup>Rice (1993)