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Invited Article V

Saving for Health Care: an Interesting Option to Increase the Attractiveness of Voluntary Deductibles

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Introduction

In the last decade, the average public health expenditures per capita in OECD countries increased by 76 per cent (OECD, 2012). This increase is a serious threat to the fiscal sustainability of health-care spending and therefore of great concern to policymakers in many countries. One of the drivers of health-care expenditures is moral hazard. Moral hazard refers to the change in health behaviour and health-care consumption caused by the fact that the insurance reimburses the costs (Zweifel and Manning, 2000). To counteract moral hazard, the German, Dutch and Swiss basic health insurance schemes include the option of a voluntary deductible. A voluntary deductible implies that people can choose to pay their health-care expenses up to a certain amount out-of-pocket in return for a premium rebate. In these countries however, the premium rebate—and thereby the attractiveness of voluntary deductibles—is reduced by the risk equalisation scheme. In this article, saving for health care in combination with a voluntary deductible is proposed as an interesting option to increase the attractiveness of voluntary deductibles in these schemes.

The effect of risk equalisation on premium rebates

The insurer is able to provide a premium rebate to enrollees who opt for a voluntary deductible because these enrollees on average have lower insurance claims than enrollees without a voluntary deductible. This difference in insurance claims, and therefore the premium rebate, consists of three components. (Van Kleef et al., 2008). The first component consists of the expected out-of-pocket expenditures paid by the enrollee. Since the enrollee pays health-care expenditures up to the deductible amount out-of-pocket, the insurer has to reimburse less compared to an insurance plan without a voluntary deductible. The second component consists of the reduction in moral hazard due to the voluntary deductible. Van Kleef et al. (2008) have indicated the size of this moral hazard reduction within the Swiss basic health insurance scheme. They found that a voluntary deductible of 45 per cent of the average expected health-care expenses of the group of enrollees who opted for that deductible level, resulted in a moral hazard reduction of about 13 per cent relative to the average expected health-care expenses of that group. The third component of the premium rebate is the effect of self-selection. Self-selection occurs because, given a certain premium rebate, the healthy insured have a greater incentive to opt for a voluntary deductible than the unhealthy insured. Self-selection results in market segmentation in a way that enrollees who opt for a voluntary deductible are, on average, healthier, have lower total expenditures—and thus lower insurance claims—than enrollees who do not opt for a voluntary deductible. Van Kleef et al. (2008) indicate the size of the three components mentioned above (see table 1). In a *competitive* health insurance market, insurers will reflect these components in the premium rebate for a voluntary deductible (Van Kleef et al., 2008).

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Table 1. Three components of the potential premium rebate in case of a voluntary deductible of CHF1270 per year.[1]

	Potential premium rebate (without risk equalisation)
Out-of-pocket expenses	CHF432
Moral hazard reduction	CHF318
Self-selection effect	CHF2,439
Total	CHF3,189

However, in the presence of risk equalisation the self-selection component—and therefore the potential premium rebate—will be smaller. Risk equalisation compensates insurers for differences in expected expenses between low-risk individuals and high-risk individuals. If risk equalisation were to perfectly adjust for differences in expected expenses, the effect of self-selection on the premium rebate would be zero. In that case, the premium rebate could only consist of the expected out-of-pocket expenditure and the reduction in moral hazard. The study by Van Kleef et al. (2008) shows that a risk equalisation model based on age/gender, pharmacy-based cost groups and diagnostic cost groups, reduces the self-selection component in Table 1 to CHF630.

Germany, the Netherlands and Switzerland

Cost sharing

As mentioned in the introduction, the German, Dutch and Swiss basic health insurance schemes include the option of a voluntary deductible. Since 2009, different mandatory cost-sharing arrangements are in place in Germany. Enrollees have to pay a €10 copayment per day for hospital care and post-hospital rehabilitation, with a limit of 28 days per year per individual. Next to this, they have to pay a €10 copayment per quarter for the first visit to the physician, the first visit to the dentist and for each contact with other physicians seen without referral and a €10 copayment per day for outpatient rehabilitation services during that quarter. Finally, enrollees pay a 10 per cent coinsurance rate for non-physician care, eye care, hearing aids, orthopaedics, transportation and prescription drugs, with a minimum of €5 and a maximum of €10. Enrollees up to the age of 18 and pregnant women are exempted from these mandatory cost-sharing arrangements. The annual limit on mandatory cost sharing for non chronically ill and for chronically ill is, respectively, 2 and 1 per cent of annual assessed gross disposable income. On top of these mandatory arrangements, enrollees may opt for a voluntary deductible, which is maximised by the enrollee's income. The German insurer is free in setting the income thresholds and the corresponding deductible level. However, no data is yet available on the percentage of enrollees who opt for a voluntary deductible and on the associated premium rebates offered by insurers.

Since 2006, all Dutch residents aged 18 years and older have a mandatory deductible of €350 (2013) per individual per year. On top of the mandatory deductible, enrollees may opt for one of five voluntary deductible levels; €100, €200, €300, €400 or €500. The premium rebate the insured receives has to be the same for each enrollee with the same deductible level and the same health insurance product. The premium rebate for the highest deductible level varies among insurers from €180 to €288 (respectively 36 and 58 per cent of the deductible amount). The percentage of enrollees who opt for a voluntary deductible has increased from 5 per cent in 2006 to 7 per cent in 2012 (Smit and Mokveld,, 2006; ten Hove, 2012).

Swiss residents aged 18 years and older are obliged to pay a mandatory deductible of €250[2] (2013) per individual per year. On top of the mandatory deductible, they may opt for one of five voluntary deductible levels; €165, €580, €995, €1,405 or €1,820. In addition, they are obliged to pay 10 per cent

[1] Average insurance-reimbursed costs for enrollees with a voluntary deductible of CHF1,270 (i.e. 13 per cent of total enrollees) were CHF489, and CHF3,678. for enrollees with only a mandatory deductible of CHF230 (i.e. 53 per cent of total enrollees).

[2] Swiss francs are throughout the rest of the article converted to euros using an exchange rate of 1CHF = €0,8277 (1 January 2013).

of the health-care expenses exceeding the total deductible (with a maximum of €580). Children in Switzerland also have the opportunity to opt for a voluntary deductible, but with lower levels and they have to pay 10 percent of the health-care expenses exceeding the voluntary deductible (with a maximum of €290). The Swiss government has capped the premium rebate at 70 per cent of the additional deductible level (e.g. €1,275 for the highest deductible level). All Swiss insurers offer their insureds this maximum premium rebate (for each deductible level). In Switzerland the percentage of enrollees (including both adults and children) who opt for a voluntary deductible has been steady over the past five years, namely about 46 per cent (Bundesamt für Gesundheit, 2013).

These findings show that the premium rebates for voluntary deductibles (and the percentage of enrollees opting for a deductible) are substantially higher in Switzerland than in the Netherlands. The explanation for this difference is to be found in the (difference in) the quality of the risk equalisation scheme in these countries.

Risk equalisation

Since 2009, the German risk equalisation formula has been based on age, gender, occupational disability, and morbidity. Since 2012, The Dutch risk equalisation formula has been based on age, gender, region, source of income, socioeconomic status, pharmacy-based cost group, diagnostic cost group and multiple-year high costs. The Swiss risk equalisation formula has since 2012 been based on age, gender and prior hospitalisation (i.e. inpatient stay of four days or longer). Since the risk equalisation model is of higher quality in the Netherlands than in Switzerland, it is expected that the premium rebate be indeed smaller in the Netherlands, as is observed. However, because predictable profits and losses for insurers on the subgroup level still remain, risk equalisation in all three countries will undergo further improvements in the upcoming years. Consequently, the effect of self-selection on the premium rebate will reduce and the premium rebate itself will decrease. This will make opting for a voluntary deductible less attractive than it is today. Nevertheless, it may be important that (more) enrollees opt for a voluntary deductible since this would reduce moral hazard and contribute to the control of public health-care expenditures. The following paragraph provides an interesting option to increase the attractiveness of voluntary deductibles in these schemes.

Saving for health care

Known as Health Savings Accounts (HSA), saving for health care is increasingly popular in America and other countries such as Singapore, South Africa and China (Hurley and Guindon, 2008). An HSA consists of a high-deductible health plan combined with a savings account that may be used to pay for expenses under the deductible. The enrollee receives interest on the account balance and, under certain conditions, does not have to pay taxes on the contributions to the savings account. Since the enrollee is the owner of the savings account, the account can be transferred when the enrollee switches employer or insurer. Saving for health care in combination with a voluntary deductible could also be introduced in Germany, the Netherlands and Switzerland to make opting for a voluntary deductible more attractive. The idea is to combine the voluntary deductible with a savings account upon which the premium rebate is deposited. The account balance is then used to pay for out-of-pocket expenses due to the voluntary deductible. The financing of the savings account may be designed as presented in Table 2, where a Swiss enrollee has opted for a voluntary deductible of €1,820. The premium rebate of €1,275 is deposited on the savings account (column 2). During, for example, five years, the enrollee saves a maximum of €6,375 (column 3). If, in the first year, the enrollee is confronted with €730 in out-of-pocket expenses due to the deductible (column 4), this will be paid from the savings account. At the end of the first calendar year, the enrollee will then have an account balance of €545 (column 5). For the coming years this will continue in the same way.

***Table 2. Example of saving for health care in combination with a voluntary deductible of €1820 per year in Switzerland*.**

	Premium rebate	**Total premium rebate on savings account**	**Health-care expenses under the voluntary deductible**	**Account balance at the end of the calendar year**
Year 1	€1,275	€1,275	€730	€545
Year 2	€1,275	€2,550	€365	€1,455
Year 3	€1,275	€3,825	€1,820	€910
Year 4	€1,275	€5,100	€0	€2,185
Year 5	€1,275	€6,375	€730	€2,730

Introducing saving for health care in combination with a voluntary deductible can increase the attractiveness of voluntary deductibles because of three reasons. First, Kahneman and Tversky (1979) have done extensive research on decisions under risk in which they developed the prospect theory. In this theory it is assumed that individuals treat outcomes as deviations (i.e. gains and losses) from a reference point and are more sensitive to losses than to gains at the same magnitude. The latter is called loss aversion. Saving for health care in combination with a voluntary deductible could change the enrollees' reference point when deciding to opt for a voluntary deductible. Without saving for health care, the enrollee has to pay for all health-care expenses under the voluntary deductible out-of-pocket. With saving for health care, the enrollee is (partly) prepared for these expenses because of his savings account. This could positively influence the reference point and increase, ceteris paribus, the attractiveness of voluntary deductibles. Second, the perceived loss aversion could be reduced due to saving for health care. Since, in the case of saving for health care, opting for a voluntary deductible is combined with a savings account, the perceived loss is reduced to the difference between the voluntary deductible level and the premium rebate. In upcoming years, the perceived loss could even be reduced to zero because the savings could exceed the deductible level. Third, enrollees could be afraid of incurring liquidity problems when opting for a voluntary deductible. Liquidity problems occur when the enrollee receives an invoice to pay the voluntary deductible, but is at that moment not able to pay the bill. Extensive literature on saving underlines that people have self-control problems (Katona, 1975). This means that individuals find it difficult not to spend their money on other purposes (Nyhus and Webley, 2006). Saving for health care can mitigate this lack of self-control and, *ceteris paribus*, reduce the risk of incurring liquidity problems. Consequently, the attractiveness of voluntary deductibles could be increased.

Conclusion

Health-care expenses are, among others, driven by moral hazard, which results from having (comprehensive) health insurance. Providing enrollees with the option of a voluntary deductible is one of the instruments governments have to counteract moral hazard. However, in the German, Dutch and Swiss basic health insurance schemes, the benefit from opting for a voluntary deductible (i.e. the premium rebate) is reduced due to (improvements of) risk equalisation. To increase the attractiveness of voluntary deductibles, saving for health care in combination with a voluntary deductible could be introduced. In that case, the voluntary deductible is combined with a savings account upon which the premium rebate is deposited and can then be used to pay for health-care expenses under the voluntary deductible. Consequently, the attractiveness of voluntary deductibles is increased and more enrollees than today could be inclined to opt for a voluntary deductible. This would reduce moral hazard and contributes to the control of health-care expenses. Therefore, further research on the optimal design of saving for health care and its potential effects is necessary.

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