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Using Experiences from the U.S. to Implement Health Savings Accounts in German Statutory Health Insurance

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Abstract

This paper discusses suitable ways to implement Health Savings Accounts (HSAs) in German Statutory Health Insurance (SHI) building on the introduction of so-called Flexible Health Plans ("Wahltarife") according to Sec. 53 para. 1 Social Security Code V in 2007, which allows insurers in SHI to offer greater variety of health plans. Our focus is on the adaptability of SHI. On the one hand, the possibility to offer products differing from universal health coverage for insurers in the SHI market provides an excellent opportunity to introduce HSAs. On the other hand, we strongly believe that HSAs can lead to significant improvements in SHI. Our approach can easily be implemented into the existing system, whereby introducing HSAs in combination with High-Deductible Health Plans (HDHPs) will tackle a significant number of current problems inherent to German SHI. The introduction of significant out-of-pocket payments will induce the insured to consume medical care in a more conscious way and thereby reduce the occurring costs.

Zusammenfassung

Trotz der Umsetzung verschiedener Kostendämpfungsmaßnahmen in den letzten Jahrzehnten steht das deutsche Gesundheitswesen weiterhin vor der Herausforderung steigender Gesundheitsausgaben und einer übermäßigen Inanspruchnahme von Gesundheitsleistungen. Health Savings Account (HSAs) sind Gesundheitssparkonten, die zur Finanzierung medizinischer Ausgaben genutzt und auf welche (steuerfrei) Einzahlungen geleistet werden können. In den USA wurden sie erfolgreich zur Teilfinanzierung von Gesundheitsausgaben eingeführt. Dieser Beitrag analysiert unter Einbezug der bisherigen Erfahrungen aus den USA, inwiefern HSAs dazu beitragen können, die gegenwärtige Situation der Gesetzlichen Krankenversicherung (GKV) in Deutschland zu verbessern. Darüber hinaus wird ein Ansatz für die Einführung von HSAs geliefert, welcher keine weitreichenden Änderungen des bestehenden Systems benötigt. Anknüpfungspunkt hierfür bieten die im Jahr 2007 in der GKV eingeführten Wahltarife nach § 53 Abs. 1 SGB V. Neben Verhaltensänderungen der Versicherten, kann die Einführung von HSAs dazu beitragen, bestehende Probleme der GKV zu reduzieren und den Wettbewerb innerhalb der GKV, aber auch zwischen der GKV und Private Krankenversicherung (PKV) zu stärken.

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1. Introduction

The German health-care system has to cope with several challenges that can be observed worldwide. Rising health-care costs, a high utilization of health services due to moral hazard, and the consequences of demographic change put pressure on the financing of health expenditures in Germany.[1] Various cost-containment policies implemented over the last decades, i.e., spending caps for sectors or individual providers, reference prices for pharmaceuticals, reducing the number of hospital beds and restricting the amount of high-cost medical equipment, as well as introducing or increasing co-payments for certain services, were designed to achieve stable premium rates in German Statutory Health Insurance (SHI). However, the premiums have increased substantially over recent years and there is still a significant solvency problem for SHI. Especially the strong dependence of SHI revenues on the development of wages as well as the increasing effect of health insurance premiums on incidental wage costs and the associated negative incentives on the labor market are widely criticized. Thus, financing of health expenditures has been discussed within health sector reform debates over the last decade and was the focus of recent reforms.

Besides cost issues, the current discussion on rationing in health care – expressed for example by a priority treatment list – supports the argument that there is a need for extended individual responsibility in health care. By increasing individual responsibility, there is the potential to disburden the shared risk pool in SHI and to return to the original intention of SHI, which is financial protection against cost-intensive health risk.

Although some of the above described issues are inherent to the German system, most industrialized countries face similar challenges. Accordingly, there have been intensive discussions and reforms of health-care financing worldwide. One major change in financing health-care expenditures was the introduction of Medical Savings Accounts (MSAs) in Singapore three decades ago. Since then, MSAs have been adopted in several countries as. China, South Africa, Hong Kong, USA or their implementation is discussed within health sector reform debates i.e. Canada and UK.[2] These approaches do not only differ in their characteristics but are usually referred to as MSAs if outside the U.S. and as Health Savings Accounts (HSAs) if the current approach in the U.S. health care market is discussed.

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1 Germany spent 10.4% of its GDP on health in 2007, more than the OECD average of 8.9%, and Germany's spending on health per person was 20% higher than the OECD average (see OECD (2009), p 163). Doctors' consultations per capita counted 7.5 annually compared with the 6.8 OECD average (see OECD (2009), p 91).

2 Hanvoravongchai (2002), Shrott (2002), and Schreyoegg (2003) give a good overview on the introduction of MSAs in several countries and early experience.

MSAs are single or family savings accounts from which medical expenses are paid and to which contributions are made by individuals or employers (usually tax-exempt), or by the government. MSAs are accompanied by a High-Deductible Health Plan (HDHP), which covers catastrophic medical expenses after the deductible has been reached. The goal is to enhance cost-awareness and individual responsibility due to increased out-of-pocket payments. By this, moral hazard will be controlled, inducing a reduced demand for medical care and the overall medical costs will decrease.[3]

However, the objectives for implementing MSAs vary and depend on the specific structure of the pre-existing health care system. One major aim is to enlist health-care consumers in controlling costs, but also to stimulate savings for expected high costs of medical care in the future in order to reduce the intergenerational burden of the financing systems. Furthermore, MSAs pose an opportunity to mobilize additional funds for health-care systems.[4]

The aim of our paper is first to analyze the potential of HSAs to improve the current situation in SHI and then to design an approach to implement HSAs in the current SHI without requiring substantial changes to the system. The introduction of so-called Flexible Health Plans ("Wahltarife") according to § 53 para. 1 Social Security Code V in 2007 allows insurers in SHI to offer a greater variety of health plans. Accordingly, only the latest health-care reform enabled SHI funds to offer more than one health plan and thus provides the opportunity to implement HSAs. The focus is on adaptability of SHI for two reasons: On the one hand, the possibility to offer products differing from universal health coverage for insurers in the SHI market provides an excellent opportunity to introduce HSAs. On the other hand, the authors strongly believe that HSAs can lead to significant cost improvements in SHI. The introduction of significant out-of-pocket payments will induce the insured to consume medical care in a more conscious way and thereby reduce costs. In addition, HSAs potentially increase consumers' responsibility in SHI and the competition between SHI and private insurance.

The remainder of the paper is structured as follows: We describe HSAs in the U.S., placing a special focus on implementation details and experiences in the U.S. and other countries so far. In the third chapter, we first briefly emphasize the suitability of HSAs for the German system. In section 3.2 we discuss earlier concepts of introducing HSAs to SHI. Based on those results we develop an approach to introducing HSAs to SHI that is consistent with the existent system. We refer on the increased flexibility of offering contracts following the introduction of Flexible Health Plans. We also discuss the detailed design, tax subsidies, coverage for families and portability of HSAs in section 3.3 and we finally sum up the results and make a short outlook in the conclusion.

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[3] See e.g. Arrow (1963) and Shavell (1979) on moral hazard.

[4] See Hanvoravongchai (2002, 1 f.).

2. Health Savings Accounts in the U.S.

2.1 Design of Health Savings Accounts

In the U.S., most individuals receive employer-sponsored health care coverage. Employers seek coverage for their employees from commercial or nonprofit insurers or self-insure their employees. Public programs only insure health risks of the elderly (Medicare) and the needy (Medicaid), but universal coverage has not been available so far, leaving almost 46 million U.S. citizens uninsured. Recent health care reforms try to cope with the latter issue predominantly by extending the Medicaid program; however the costs and acceptance of this reform are still unpredictable.

HSAs are mostly common for individuals without public coverage, as mandated Medicare plans or the Medicare Part C Advantage plans for those who contract out from Medicare usually do not qualify for establishing and contributing to an HSA. However, withdrawals for qualified expenses from an existing HSA are still possible under Medicare. We do neglect Medicaid in the following discussion, as Medicaid requires individuals to be below certain income and asset thresholds in order to qualify. Accordingly, significant savings in an HSA would prevent eligibility. The following discussion mostly refers to nonpublic health insurance contracts, as HSAs are most common there.

In the U.S., MSAs in combination with HDHPs were first authorized by the *Health Insurance Portability and Accountability Act* of 1996. They were first implemented in a demonstration project for the self-employed and workers in small businesses on a voluntary, employer sponsored basis, and managed by insurance companies.[5] Passed by the *Medicare Prescription Drug, Improvement, and Modernization Act* in 2004, various restrictions were lifted and MSAs, renamed HSAs, were made available to the private individual insurance market.

Insured people are induced to make significant tax-free deposits to their HSA. To be eligible to open an HSA, it is mandatory to be covered by an HDHP. Table 1 displays the current rules for minimum deductibles and maximum out-of-pocket payments. Above the maximum out-of-pocket threshold insurers refund all medical expenses. Tax-exempt contributions are allowed up to the limits shown in Table 1 and can be arranged until enrolling in *Medicare*[6] at the age of 65. In addition, contributions can only be made with an existing HDHP, while withdrawals for qualified medical expenses (defined by the Inter-

[5] Since 2007 MSAs are also available in Medicare as a type of Medicare Advantage plan, but only pay to covered Part A and B services. Medicare Part D is excluded. A set amount of money is contributed annually to the MSA from Medicare, whereas enrollees cannot deposit their own money into the account. Due to small market share and few experience, we focus in our paper on non-Medicare MSAs. (See Centers for Medicare and Medicaid Services, 2010).

[6] Medicare is a statutory health insurance program for elderly and disabled persons.

nal Revenue Service [IRS]) are possible at any time even after terminating an HDHP.[7] Withdrawals used for consumption purposes other than qualified medical expenses are also possible; however, the insured have to pay their regular income taxes and an additional surcharge of 10% on such expenses. In cases when there are no funds left in the HSA, further medical expenses have to be covered by after-tax income.[8] The tax relief of HSAs also includes earned interest on the balance. The balance is interest-bearing and can be invested in the capital market either following a pre-specified investment plan or individually. This provides an incentive for financing future health expenditures.[9] In the case of death, the accumulated funds will be transferred into the spouse's HSA and treated under the same conditions. The inheritance of an HSA by a beneficiary other than the spouse leads to the termination of the HSA and the fair market value of the HSA becomes taxable to the heir.[10]

Table 1 gives an overview of the design of HSAs and HSA eligible HDHPs.

Table 1

Design of HSAs and HSA eligible HDHPs according to IRS Guidelines in 2010

		Individual coverage	**Family coverage**
HDHP	min. deductible	$1,200	$2,400
	max. *out-of-pocket* expenses	$5,950	$11,900
HSA	max. contributions	$3,050	$6,150
	max. withdrawals		
	• for qualified medical expenses	up to balance in HSA	up to balance in HSA
	• for non-qualified medical expenses	up to balance in HSA incl. income tax and penalty tax of 10%	up to balance in HSA incl. income tax and penalty tax of 10%

The combination of an HSA with an HDHP creates different incentives. Introducing high deductibles leads to a reduction of insurance premiums in two ways. On the one hand, the premiums are lower as coverage is limited. However, the insurance premiums are also reduced due to lower administrative costs and a more cost-conscious consumption of medical care by the insured. Yet, the insured face a higher financial risk since there is less risk-sharing in the case of a high deductible. HSAs provide a buffer for this financial risk as the

7 Apart from premiums for health insurance.

8 See Internal Revenue Service (2009).

9 See Fronstin (2008, 10).

10 See Internal Revenue Service (2009).

tax-exempt balance will be used to cover the deductible, in particular after a sufficient period of time in which reserves could be built up. On the other hand, HSAs are assumed to be a powerful instrument for reducing increasing health-care costs due to moral hazard. In addition, relatively low premiums for an HDHP might help to increase the overall insurance coverage in the U.S., tackling one of the major issues in the U.S. health-care system.[11]

The individual insurance mandate from the Patient Protection and Affordable Care Act (PPACA) that will be in place starting 2014 has a great potential to further increase the demand for HSAs. One major critique of the PPACA is that the individual mandate is enforced by financial penalties for most individuals without health insurance. Those who will not be affected by the increased income threshold to qualify for Medicaid can contract low-cost HDHPs and start saving within an HSA which is assumed to be more affordable than traditional insurance coverage.

2.2 Experiences from the U.S.

A steady growth of HDHPs combined with HSAs has been observed in the U.S. market since the introduction of HSAs in 2004. The number of people with HDHPs rose from 438,000 U.S. citizens in 2004 to 11.4 million citizens in 2011. Accordingly, the current market share is about 4.3% in the private health insurance market.[12] Supporters of Consumer-directed Health Plans (CDHPs)[13] particularly emphasize the potential of HSAs to induce an economical consumption of medical care. Customers choose consciously adequate medical treatment and also influence physicians to provide health care in a more efficient way. Critics fear that HSAs will induce selection effects such that primarily healthy individuals with a high income will select CDHPs.[14]

The first surveys of the *Government Accountability Office* based on tax data seem to confirm selection.[15] Previous work also provides evidence that high-income individuals are more likely to choose an HSA, as, e.g., shown by Lo Sasso et al. (2004), Parente et al. (2004a), Parente et al. (2004b), Tollen et al. (2004), Swartz (2004), Remler/Glied (2005), Greene et al. (2006) and Hoffman/Tolbert (2006).

Tollen et al. (2004) point out the problem of risk segmentation arising from employers offering high-deductible or CDHP options alongside more tradi-

11 See Bunce (2001, 6).

12 See Yoo (2005, 1); AHIP (2011).

13 Consumer-directed Health Plan (CDHP) is the generic term for a HDHP including some savings option like a HSAs or MSAs.

14 See McNeill (2004, 186); Buntin et al. (2006, 516); Cannon (2006, 10); Dixon et al. (2008, 1120); Greene et al. (2008, 1111).

15 See GAO (2006, 6); GAO (2008, 6 ff.).

tional insurance options. They show that employees switching coverage from traditional health plans to health plans featuring some HSA characteristics consume significantly less medical care and thus tend to be healthier than employees who stay in traditional insurance. McNeill (2004) also finds that the healthy, especially young, men are those who will benefit most from CDHPs. However, there is also evidence that adverse selection might not be such an issue, as older and chronically ill individuals will also enroll in HSAs due to the reduced premiums, fixed upper limits and tax favors.[16] The ambiguity of the results so far can be partly attributed to the fact that there is only a small amount of data on HSAs, since they were only introduced in 2004.

Although HSAs are intended to attract uninsured individuals by reduced premiums and tax favors evidence does not seem to support the hypothesis so far. This is because primarily low-income individuals and families have no health insurance and thus most of them do not face high enough marginal tax rates to benefit from the tax deductibility of HSAs. In 2007, about 50% of the uninsured had a gross yearly income of $30,000 or less and half of them did not pay taxes at all.[17] Low-income individuals are also more likely to have difficulties paying the high deductible.[18]

Remler/Glied (2006) argue that HSAs significantly increase cost-sharing and, thus, must reduce moral hazard issues.[19] As mentioned before, high deductibles also have the power to reduce administrative costs as the insured are fully responsible for all their medical expenses up to the deductible. Accordingly, there will be no administrative expenditures until the deductible is reached.[20]

Different surveys have tried to estimate the influence of CDHPs on the overall medical costs; however, they reach divergent conclusions. Keeler et al. (1996) forecast a change in health costs of +1% to –13% while Nichols et al. (1996) estimate a reduction of 4% to 15% (depending on different assumptions).[21] This surprisingly small potential of CDHPs to reduce costs is – among other reasons – due to the fact that some cost-sharing elements have already been implemented in traditional health insurance as a consequence of the results of the RAND Health Insurance Experiment (RAND HIE), which was an experimental study from 1974–1982 testing how individuals react to financial incentives like co-insurance elements in health plans. In addition, the type of insured people in health plans with regard to their spending profile matters. As

16 See Keeler et al. (1996, 1669); Parente et al. (2004a, 1106 f.).

17 See Remler/Glied (2005, 4).

18 See Hoffman/Tolbert (2006, 12).

19 Using a theoretical approach, Steinorth (2011) shows that moral hazard will only be decreased under certain conditions.

20 See Bond (1999, 14).

21 See Keeler et al. (1996, 1669); Nichols et al. (1996, 7 f.). Both use Medical Savings Accounts (MSAs), the predecessors of HSAs, in their analysis.

about 10% of U.S. citizens cause nearly 57% of all medical costs, those individuals are not very likely to enroll in a CDHP and hence the potential of CDHPs to decrease the overall costs is rather limited.[22]

Despite those issues mentioned before, the significant demand for HSAs in the U.S. implies that they must have certain beneficial qualities at least for a part of the population. After a short overview on further international experience and a description of the particularities of the German health-insurance system we will discuss why some of the above-mentioned shortcomings of HSAs as seen in the U.S. will not be a major issue when transferring HSAs to German SHI.

2.3 Experiences from Other Countries

In Singapore and China, MSAs are an inherent part to finance health expenditures.[23] However, Singapore's and China's success of keeping health costs low, which is mostly attributed to the introduction of MSAs, must be carefully considered. In the case of Singapore, this success is traced back to its social and demographic peculiarities, a stringent government, as well as the opacity and different standards of measuring data, i.e. health expenditures.[24] Also in China, the observed drop in health-care spending is not solely attributable to MSAs, as the government simultaneously imposed fixed remuneration rates to providers and limits on the use of expensive diagnostic procedures and pharmaceuticals.[25]

Whereas Singapore's MSA system is universal, compulsory, and managed by the government, MSAs have been provided by private and public insurers in a number of countries to partially finance health expenditures, i.e. USA and South Africa.[26] Even though implemented in several countries over the world, empirical evidence on the efficiency of HSAs and MSAs in countries other than the U.S. is relatively scarce.

In our paper, we concentrate on Health Savings Accounts (HSAs) from the U.S. for several reasons: First of all, HSAs in the U.S. are easily integrated in the pre-existing system and second, they constitute a voluntary and not compulsory health plan option. Furthermore, the political environment in the U.S. and Germany are largely comparable. As the process of reforming the health-care systems in both countries has been a long-lasting challenge, we argue that a solution requiring the least changes to the current system is most likely to be adapted.

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22 See Remler/Glied (2006, 1074 f.).

23 Since 1984, MSAs (Medisave) are obligatory for all Singaporeans and used to finance their immediate medical care expenses. China initiated a pilot study in 1994 of implementing MSAs in two cities, expanded the program in 1996 to over 50 cities, and scheduled to include all urban areas by 1999 (see Hanvoravongchai (2002, 24 f.).

24 See Barr (2001, 710 ff.).

25 See Shrott (2002, 161).

26 See Hanvoravongchai (2002); Shrott (2002); Schreyoegg (2003).

3. Implementing Health Savings Accounts in German Statutory Health Insurance

3.1 The German Health Insurance System and Health Savings Accounts

3.1.1 Particularities of the German Health Insurance System

In contrast to the U.S., the problem of not being able to attract formerly uninsured individuals does not play a role in Germany as health insurance is mandatory for everyone in the dual system of SHI and Private Health Insurance (PHI). Thus, the number of uninsured people is very low.

The fact that people with earnings above the threshold for compulsory insurance can opt out of SHI and switch to PHI distorts the fundamental principle of solidarity within SHI. Therefore, the duality of the health insurance system and the possibility for certain groups of people to leave SHI is criticized. In particular, young, healthy and single individuals have an incentive to switch to PHI due to comparably low risk – related premiums, which erodes the income redistribution within SHI.[27] It seems plausible that risk segmentation will not occur to the same level as in the U.S. when introducing HSAs to SHI, since this phenomenon is already inherent to the German health insurance system. In contrast, implementing HSAs in SHI might even prevent eligible young, healthy and high-income individuals from opting out of SHI. In these cases, HSAs are a means to reduce premiums in SHI and increase individual preferences concerning treatment decisions. HSAs may then even contribute to increasing competition between SHI and PHI such that the current selection issue may decline, as explained later.

Further distortions between SHI and PHI can be attributed to the compensation of providers and the reimbursement of medical care. Considerable differences between SHI and PHI in terms of remuneration[28] lead to biased incentives for physicians to treat privately insured individuals preferentially (e.g., shorter waiting times, extensive and more cost-intensive treatments). HSAs could overcome these issues, as statutory insured individuals with HSAs pay care providers directly up to the deductible.

In addition, introducing HSAs to SHI allows SHI funds to differentiate themselves from competitors, as currently, benefits within SHI hardly vary between the different funds, since the list of medical services covered is determined by law and ensures primary health care.

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27 Kriwy / Mielck (2006) investigate the effect of health and health behavior on the choice of insurance (SHI or PHI). They find that healthier people are more likely to be insured under PHI than under SHI in Germany (the "selection hypothesis").

28 Walendzik et al. (2009) find that, for privately insured patients, payment for the same service on average exceeds payment for SHI patients by a factor of 2.28.

The described shortcomings of the German health insurance system have been in the focus of several health sector reform debates and recent reforms. Initial point of these debates were proposals for introducing a flat rate insurance versus a citizens' health insurance, which intended to broaden the financing basis and reduce inherent distortions between SHI and PHI (citizens' health insurance) or increase competition between the two systems while maintaining PHI (flat rate insurance). As our approach of implementing HSAs is very flexible, it is also compatible with both reform proposals.

3.1.2 Out of Pocket Payments and Cost Savings Potential in SHI

So far, cost sharing and out of pocket payments under SHI are not very common and capped by law.[29] Accordingly, cost sharing is not pronounced under German SHI and greater cost savings due to reduced moral hazard can be expected compared to the U.S. Overall, it can be expected that the introduction of HSAs to German SHI will lead to inherent improvements in German SHI.

Felder / Werblow (2006) are the first to investigate the impact of an increased cost sharing in SHI and examine how higher deductibles in Flexible Health Plans influence the overall health-care costs. They estimate that a €300 deductible on top of standard copayments induces significant cost reductions. They disentangle the cost savings from selection and behavior changes and show that at minimum 28% of all cost savings are due to changes in health-care consumption by the insured. These results correspond with the RAND HIE, which also showed a significant impact on the health-care consumption induced by the level of health-insurance coverage. Accordingly, these facts indicate that there is a considerable potential for cost saving in German SHI by further introducing cost sharing and increasing out-of-pocket payments. As our approach claims for a higher deductible than the €300 from the Felder / Werblow (2006), we expect further costs savings and a greater impact on utilization as the RAND HIE shows.

One important critique of Flexible Health Plans so far is the relative low catch-up[30] among insured, which may also be due to disadvantageous taxation when choosing a Flexible Health Plan. The rapid growth of tax-incentivized private retirement products shows that tax incentives are likely to have a substantial impact on demand. In addition, the market response to HSAs in the U.S. has been much higher than the catch-up of Flexible Health Plans in Germany, which is probably due to tax incentives. Therefore, we expect a much greater market response to HSAs compared to other Flexible Health Plans be-

[29] Copayments are limited to €10 per quarter for outpatient services, €10 per quarter for dentist visits and per hospital day up to a limit of 28 days.

[30] In 2010 only 395.538 individuals in SHI chose a (deductible) Flexible Health Plan which equals about 0.6% of insured. (See German Ministry of Health (2011, 4).

fore. Health insurance funds have been reluctant to aggressively market Flexible Health Plans so far as those have to pay off for themselves. Designing a product that can attract a significant market share would also increase the interest of health insurance funds to engage in that market as they mostly compete in terms of market share.

3.2 Previous Proposals for Implementing Health Savings Accounts in German Statutory Health Insurance

3.2.1 The Concept of HSAs in Statutory Health Insurance Following Schreyoegg

Different proposals and approaches for implementing HSAs in Germany have been discussed over the last few years. Schreyoegg (2003) proposes to introduce income-dependent deductibles to SHI.[31] In addition, mandatory HSAs are installed and the insured have to make a fixed and tax-free monthly contribution from their gross income. The annual contributions equal the maximum yearly deductible.[32] Medical care is financed either via reimbursements to the insured or according to the principle of benefits in kind depending on the price elasticity of a treatment. All price-elastic treatments are paid directly by the insured up to the deductible. Price-elastic treatments above the deductible and non-price-elastic treatments are reimbursed directly to the supplier following the principle of benefits in kind.

However, the proposal of Schreyoegg (2003) does not consider the increasing competition between SHI and PHI in Germany as our proposal does. By making an HDHP mandatory, the competitive advantage of private insurance will increase due to the fact that private health insurers are much less regulated in regard to the contracts they offer. Thus, income-dependent deductibles can induce the insured above the income threshold to switch to PHI.

3.2.2 HSAs as a Third Column to Finance Health-Care Expenses Following Spreemann

Spreemann (2003) describes a model for the German health-insurance system that could be conceivable as a third column to cover health expenses besides the SHI and PHI. Individuals use so-called "Personal Health Accounts" (PHAs) to pay for health expenses. Having a PHA releases them from compul-

31 Deductibles will be either €600 or €1200 depending on whether the insured individual meets a certain income threshold. Low-income individuals as well as chronic patients and children are exempt from deductibles.

32 Accordingly, contributions will either be €50 or €100 depending on whether an individual is below or above the income threshold.

sory insurance under SHI. The core of the model consists of two components: a tax-favored savings account and a catastrophic insurance covering extremely high medical expenses. Funds in the account accumulate through regular minimum fees (10% of the gross wage), which are shared equally by employers and holders of PHAs until a target balance is met. Once the target balance is reached no further contributions are necessary due to the fixed interest rate of funds. If the capital in the PHA falls below the target balance as a consequence of increased use of medical services, contributions to the PHA become necessary again. Regularly, funds in the PHA are used to cover all medical expenses. However, extremely high medical costs in the price-inelastic area, which financially overburden the PHA, are covered by complementary catastrophic insurance. Premiums for this catastrophic insurance have to be paid monthly as a lump sum. Tax exemption of contributions and interest subsidize PHAs. Once having opted out of the existing health-insurance system and having established a PHA, the possibility of returning to other insurance options is very limited as holders of PHAs avoid interpersonal and intergenerational subsidization in SHI.[33]

Subsequently, the introduction of PHA to the German health insurance system could cause adverse selection. On the one hand, particularly "(…) young and health-conscious people who are ready to take over responsibility, who think and act economically, and want to be independent (…)" will prefer PHAs to traditional health insurance.[34] On the other hand, PHAs constitute a form of self-insurance discriminating low-income and chronically ill individuals. Thus they are hardly in line with the principle of redistribution in the German health insurance system.

3.2.3 Mandatory HSAs in Statutory Health Insurance Following Neubauer

The third concept follows Neubauer (2006), proposing savings accounts for all people insured under SHI. In combination with a low deductible, contributions to the savings account should be voluntary at the beginning. Similar to the concept of HSAs in the U.S., funds from the savings account cover medical expenses up to the deductible. The aim is to implement a partial capital covered system for the insured in the SHI in the medium term that might absorb demographic risk in the pay-as-you-go financed SHI system in the long run. A reduction of costs induced by insurance and by lower administrative costs is one advantage of implementing savings accounts in the SHI.[35] Implementing savings accounts for medical expenses further offers the opportunity to build up ageing reserves on an individual level within the collectively financed SHI.

33 See Spreemann (2003, 49 ff.).

34 See Spreemann (2003, 52).

35 See Neubauer (2006, 224).

Furthermore, building up capital reserves on an individual basis (in a savings account) can alleviate switching between SHI and PHI when the PHA can be used to compensate for missing ageing reserves under SHI. This may induce competition between the two systems. Therefore, moving back from PHI into SHI may also be possible by rolling over ageing reserves into the savings account. One of Neubauer's major concerns is the possibility of risk selection, when particularly young individuals with a high income, who primarily subsidize sick and poor individuals insured in SHI, reduce their premiums due to the deductible and decrease solidarity within the statutory system. This might be intensified by the peculiarity of the German health-insurance system as premiums in the SHI are income-related and not determined by risk.[36, 37]

The concept of implementing HSAs in German SHI in combination with Flexible Health Plans, as presented in this paper,[38] requires the smallest intervention in the existing German health-insurance system compared with the previously discussed models. At the same time, it aims to provide the same benefits as the other approaches. In contrast to Neubauer (2006), neither establishing an HSA is mandatory for the insured, nor are there fixed contributions to the HSA as in Schreyoegg's (2003) and Spreemann's (2006) models. Subsequently, consumers are more conscious and independent in choosing adequate health-insurance coverage in the authors' view, which may result in increased competition between the two German health-insurance systems.

3.3 Implementing Health Savings Accounts in German Statutory Health Insurance

3.3.1 Health Savings Accounts Following Flexible Health Plans

Flexible Health Plans provide the legal foundation for easily implementing HSAs in combination with deductible health plans in SHI. Deductible health plans are usually an instrument of PHI, but since 2007 SHI funds are allowed to offer deductibles within optional Flexible Health Plans. The aim of these Flexible Health Plans is to increase the insured individual's freedom of choice within the SHI, sustain transparency, and encourage competition between the different SHI funds as well as between SHI and PHI.[39]

As premiums for German SHI are income-dependent, deductible health plans under SHI include a bonus payment fixed within income classes and disbursed

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36 See Neubauer (2006, 224 f.).

37 Schulze-Ehring / Weber (2007) analyze critically the differences in premiums of deductible health plans in SHI and PHI, p. 9.

38 Schreyoegg (2003) and Puetz (2004) discuss the implementation of savings accounts on the basis of Flexible Health Plans.

39 See Schulze-Ehring / Weber (2007, 5 f.).

to the insured as she bears medical expenses (at least partially) that are usually covered by SHI. The statutory period of commitment in the health plan is three years.

The advantage of implementing HSAs on the basis of Flexible Health Plans under SHI is that no annihilation or extensive alteration of the existing German health-insurance system is necessary. HSAs can be one option within Flexible Health Plans. HSAs can, thus, be easily introduced within the legal and institutional framework. SHI will benefit from the previously mentioned positive effects of HDHPs, e.g., a reduction in premiums due to a reduction in moral hazard, a decrease in overall medical expenses and thus a reduction in the intergenerational reallocation of funds within SHI.[40] Combining HDHPs with HSAs offers further advantages: first, HSAs absorb the financial risk inherent to deductibles, thus making even high deductibles affordable for low-income individuals. Secondly, in comparison with pure deductibles, they reduce the incentive to delay necessary care due to the savings in the HSA.[41] Furthermore, offering HSAs in combination with deductibles in SHI has the potential to increase the acceptance of Flexible Health Plans in Germany, if insured people are allowed to finance those tax-exempt in an HSA. Introducing new health-insurance options under SHI can increase the attractiveness of the different funds and raise their position in competing for the insured.

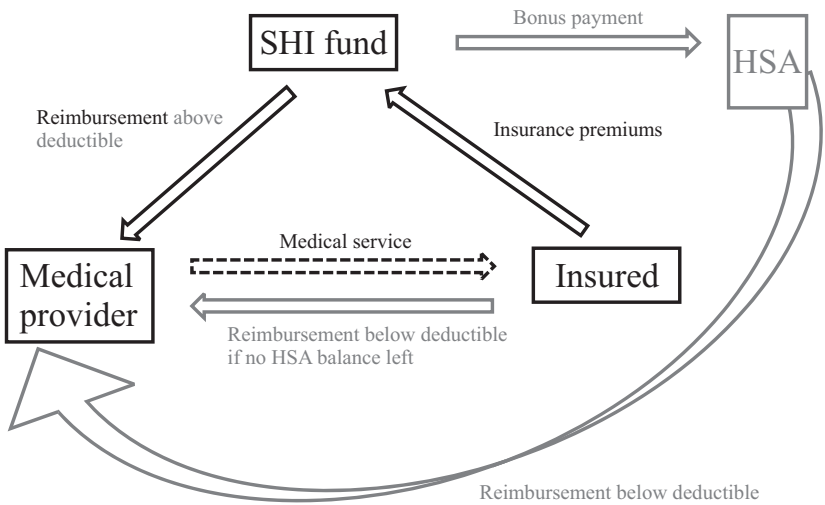

Figure 1: Traditional SHI and HSAs

40 See Scheyoegg (2003, 154).

41 See Puetz (2004, 524).

Figure 1 displays how HSAs fit into the traditional SHI system. Without HSAs, relations are marked in black while grey arrows display a Flexible Health Plan with HSAs. In the traditional approach, the insured pay their fixed insurance premium to their SHI fund, which reimburses medical providers for medical services delivered to the insured. Service flows are marked by dotted arrows while continuous arrows display cash flows. Adding HSAs to the system implies that the SHI fund only reimburses the provider above the deductible while the insured are responsible for reimbursement below the deductible. If the balance in their HSA suffices, they can pay the providers from their HSAs, otherwise they have to use other personal funds.

3.3.2 Deductibles

When implementing HSAs in the German market it has to be ensured that the HDHP and contributions to an HSA are in an economical relation. Felder/Werblow (2006) show that even a small deductible has a substantial impact on health-care consumption. Furthermore, a recent study on optional deductibles within Flexible Health Plans in SHI concluded that participants of optional deductibles have lower health care costs (€284) than the reference group.[42] As the RAND HIE shows that higher out-of-pocket expenses increase the induced behavioral change compared to full insurance, we propose a sufficiently great deductible in order to induce substantial behavioral changes of insured people as well as of suppliers.[43] Among the available Flexible Health Plans in the German market deductibles are sometimes so low that they will be exceeded after a few visits to a physician or one stay in a hospital. Yet, there is no explicit regulation concerning the maximum deductible that can be offered in Germany. However, the law forbids SHI funds from disbursing a bonus payment of more than 20% of yearly premiums or €600.[44] This implicitly determines the maximum deductible.[45] The existing deductible health plans in SHI are solely dependent on income, which will somehow adjust the deductible to the bonus payment and guarantee to some extent that insured individuals are likely to finance the deductible.[46] However, this approach has led to some cases where deductibles are very low (around €100) and significant changes in health-care consumption cannot be expected. Introducing HSAs will provide individuals with an incentive to save for future health-care costs and might, thus, allow higher deductibles. Accordingly, the minimum deductible should not fall below €1,000, as in the U.S. and Switzer-

42 See Hemken et al. (2011, 175).

43 See the results of RAND HIE, Newhouse et al. (1993).

44 See Ulrich et al. (2008, 20 ff.).

45 § 53 subs. 8 Social Security Code V.

46 See Puetz (2003, 72).

land,[47] while cost sharing above this deductible can also be implemented.[48] In order to implement substantial deductibles, a change in law is required. Also, the maximum for bonus payments must be increased to be able to offer behavior-changing deductibles.

3.3.3 Health Savings Accounts and the Reimbursement of Medical Expenses in German SHI

Combining HSAs and deductible health plans is supposed to stimulate individuals to use medical care more consciously.[49] In order to achieve changes in the insured's behaviour through a deductible, it is necessary for patients to be sufficiently informed about the costs and benefits of different treatments. This requires medical costs to be billed directly to the patient and then to be reimbursed by the insurer. This is contradictory to the principle of benefit in kind inherent to German SHI, as patients can use medical services without being directly charged by the provider, as demonstrated in figure 1. Remuneration is exclusively conducted between the SHI funds and the providers, leaving the insured without any information about the costs of treatment.

Concerning the present deductible plans, SHI funds use accounting models that counterbalance the costs of all used services up to the deductible and the bonus payment, which the insured receive dependent on their income. Due to the difficulty of breaking down the cost of every treatment, SHI funds use lump sums for pricing dental and out-patient treatment (with prescriptions). Subsequently, these lump sums do not reflect the actual consumption of resources and thus fail to establish complete transparency of costs. Hence, an exact allocation of costs is inevitable to induce changes in behaviour through deductibles.

In order to avoid biased incentives and to guarantee straightforward and fast compensation, implementing HSAs within Flexible Health Plans is only reasonable when the insured choose reimbursement of medical expenses.[50] We are aware of the fact that reimbursement of medical expenses causes higher administrative costs. As argued in the U.S., deductible health plans reduce adminis-

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47 See IRS (2009); Werblow (2002). Felder / Werblow (2002) show a decrease in medical consumption of about two-thirds when increasing deductibles to 1,200 and 1,500 sFr.

48 However, German law limits maximum out-of-pocket payments for individuals insured in SHI to 2 % of gross income. As individuals are fully subject to social insurance contributions if their annual gross income exceeds €9,600, the maximum possible deductible in their case would only be €192. Under this law, a social graduation of deductibles would automatically be implemented.

49 See Buntin et al. (2006, 516); Dixon et al. (2008, 1120).

50 Already, now, it is possible to choose reimbursement of medical costs rather than benefits in kind. However, this option has to be explicitly chosen by the insured and is not yet very common.

trative costs since the insured are solely responsible for medical costs below the deductible.[51] Any expenses below the deductible do not have to be administered by the SHI fund and do not cause any costs. The skewness of distribution of medical expenses supports the significance of the latter argument, as for instance in the U.S. five percent of the population accounted for almost half of the medical expenses (49%) in 2004.[52] Health expenditure profiles in German SHI also show that insured in the age of 20 to 40 consume medical care for around €1,000 per year.[53] Because of the extreme skewness of medical expenses, as for many age groups, average medical spending is in the range of the deductible and due to the induced reduced utilization, we estimate that a substantial portion of individuals do not file any claims with their SHI funds in an average year. This should compensate for higher costs caused by reimbursement of medical expenses above the deductible.

Thus, the implementation of HSAs in combination with deductibles in the German health-insurance market should be combined with reimbursement of medical costs rather than benefits in kind in order to have a substantial effect on the reduction of administration costs below the deductible and create the right incentives for utilization.

3.3.4 Deposits to and Withdrawals from Health Savings Accounts

Due to the particularities of German SHI, we suggest that contributions to HSAs are only possible from obtained bonus payments in Flexible Health Plans. This will automatically lead to a situation with yearly contributions to an HSA going below the yearly deductible, which guarantees that HSAs will not be used as tax shelters. However, after some time this so-called donut hole can easily be covered by the accrued balance of the HSA.

The actual savings[54] will be on a voluntary basis as the introduction of Flexible Health Plans aimed to increase consumers' choices. Mandatory savings do not comply with those aims.[55] The incentives for savings are provided by tax favors. As the balance of an HSA can only be used for medical expenses this narrows consumers' choice of how to spend the money compared with deductible health plans without HSAs. This will again be compensated for by the tax incentives. To earmark the balance of an HSA for medical costs also seems reasonable as out-of-pocket payments have increased in SHI over the last few years.

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51 See Bond (1999), p 14.

52 See Stanton / Rutherford (2006, 3).

53 See Niehaus / Finkenstaedt (2009, 13).

54 Accumulation of bonus payments.

55 See Puetz (2004, 524).

The balance of an HSA will be invested in the capital markets, e.g., by a cooperation partner of the SHI fund. According to government-funded pension schemes, financial institutions require certification to offer HSAs. We are aware of the fact that cooperation between German SHI funds and private institutions must be strictly regulated. Yet, the German private pensions (so-called "Riester") contracts provide a good example of a successful collaboration between financial institutions and the public sector. Furthermore, experiences from U.S. show that such cooperation works in the field of HSAs. Accordingly, we propose that the HSAs should be handled by private financial institutions. This also includes a check that their customers are allowed to receive tax subsidies only in cases where the insured have an HDHP. It is crucial that the insured are constantly enabled to obtain information on their balance and withdrawals at all times. In addition, the insured will receive compulsory information on their balance once a year.

On the one hand, withdrawals will be possible to finance the deductible. On the other hand, financing health care that is not covered under SHI will be possible from an HSA, i.e. on the secondary health market. This includes treatments that are completely excluded from SHI coverage and also upgrading treatments, e.g. patented drugs or laser tonsillectomies. In the case of higher-value services, only the gap between the costs the SHI usually reimburses for such a treatment and the actual price has to be paid from the HSA, the remainder will be covered by SHI. This will lead to greater freedom of treatment choice for individuals insured under SHI and will potentially decrease implicit rationing in SHI.

3.3.5 Tax Favors for Health Savings Accounts

In the following section we discuss how the above-described concept of HSAs can be implemented in German taxation. Under the German tax system, health-insurance premiums were partly tax-exempt up to a threshold until October 2010.[56] Starting in October 2010 all health-insurance premiums are tax-exempt up to the level of medical care that is provided by SHI. Accordingly, part of the insurance premiums for PHI is not tax-exempt, if a higher level of care is provided than in SHI. However, if people insured under SHI receive bonus payments for reducing their coverage, they have to pay taxes on these payments. This will create incentives to choose an HDHP with an HSA where contributions are tax-exempt rather than having an HDHP without an HSA. Arguments for the tax exemption in HSAs can easily be found as the deposited money will be used to cover medical expenses.

[56] In 2009, this threshold was €2400, which also includes premiums for long-term care insurance, unemployment insurance, personal liability insurance and accident insurance.

At present, enrolling into a Flexible Health Plan under German SHI leads to a lower tax exemption as the bonus payment is taxed. On the aggregate level, enrolling into a Flexible Health Plan thus implies higher tax revenues. As mentioned before, we propose to use these higher tax revenues to be reinvested and to create tax incentives to contribute to an HSA. If the insured can carry forward the full tax exemption under full coverage to a HDHP with a HSA, there will be no extra cost occurring in order to create incentives to switch to a tax exempt HSA. This rather remedies the tax disadvantages from choosing a Flexible Health Plan than creating further public costs.

The balance of HSAs will – as described before – be invested in the capital markets. To obtain a certain security level a minimum amount of interest will be guaranteed, as is usual in German life insurance. The earned interest will also be tax-exempt, which will further increase the demand for HSAs compared with standard deductible contracts. As capital gains are also tax-exempt until a certain threshold in general, not taxing the earnings on HSAs can intensify anti-selection as only individuals with capital earnings above this threshold will benefit.[57]

To reduce the remaining selection issues and to increase the demand for HSAs for lower-income individuals as well, we suggest that individuals can either choose tax-exempt contributions to their HSAs or receive a fixed tax subsidy on their HSA balance.[58] Such a choice has been very successfully implemented in German "Riester" contracts where individuals can also choose to receive either tax exemption or a fixed subsidy. This will guarantee that all individuals – regardless of income – can benefit from the tax favors in HSAs and will reduce selection issues. Introducing a tax subsidy for low income risk would of course impose additional costs for the tax payers. However, Corneo et al. (2007) show that an increase of the tax subsidies does not significantly increase the number of low-income individuals as well as their savings ratio in case of the Riester retirement plans. Accordingly, expected costs of introducing a subsidy for low-income individuals are not expected to be excessive.

To increase flexibility for HSA holders and, thus, to make HSAs more appealing, we allow withdrawals for purposes other than medical expenses, as in the U.S. model. This is particularly important in situations of financial need, e.g. due to the loss of a job. However, tax subsidies have to be paid back or the current balance will be subject to income tax when not used for medical costs, depending on the tax favor chosen before. Otherwise, individuals could abuse HSAs for general savings rather than saving for medical expenditures. In the U.S., consumption withdrawals from HSAs are also subject to a penalty tax, if the balance is used for non-medical consumption.[59] Therefore, we propose that individuals have to pay for increased administrative costs if they decide to

[57] See Table 2 in the appendix.

[58] See Neubauer (2006, 225).

withdraw money for non-medical consumption. However, these additional fees will be redeemed when individuals have reached a certain age as in the U.S.

3.3.6 Health Savings Accounts for Families

As mentioned before, we strongly support the thesis that families that only have a conjoint health insurance plan must have a higher minimum deductible in their HDHP. Otherwise, families are more likely to reach the minimum deductible and, thus, HSAs will become less attractive to them. Accordingly, the treatment of all the family members who are subsumed under one insurance contract will account for the joint deductible. However, we suggest that treatments for minors will be excluded from that in order to secure that children will receive sufficient medical treatment in all cases. This is also consistent with German regulation so far as there are no out-of-pocket payments for underage persons.[60] However, if one or both parents do have an HSA they will also be eligible to use their balance for the medical treatment of their children, which might not be covered by SHI.

In the case of a conjoint health-insurance contract for married couples, the spouses can decide to open a conjoint HSA as well. The HDHP will then have a minimum deductible that will equal double the minimum deductible for a single person, comparable with the U.S. As non-working married individuals without their own income are co-insured under their spouse's SHI for free, the insurance premium will be equal to the premium of a single person. However, families with an HSA must receive higher bonus payments due to higher deductibles in order to compensate for that. If both spouses have their own insurance contract, both spouses must have the opportunity to open single HSAs. In order to avoid financial discrimination against working couples, both spouses should have the opportunity to finance their spouse's medical expenditures from their HSA.

3.3.7 Portability of Health Savings Accounts in the Case of Death, Divorce, Change of Health Plan, Switching within Statutory Health Insurance or Switching to Private Health Insurance

To enhance the market for HSAs the accrued balance must be inheritable. A spouse or life partner will be able to decide whether to continue the existing HSA, to transfer the balance of their dead spouse's or partner's HSA to their own HSA if they have one or simply to bequeath the balance of an HSA. If the

[59] However, this penalty tax will be redeemed when individuals are older than 65 and are under Medicare.

[60] § 28 para. 4 Social Security Code V.

funds of an HSA are not continued as or transferred to an HSA, the tax favors must be paid back and the balance will be taxed. In the case of a divorce, the balance of an HSA has to be divided between the two ex-spouses according to the divorce settlement. Ex-spouses can decide whether they want to either continue single HSAs or use the money for other consumption purposes. In the latter case they have to pay back the received tax favors and pay the additional administrative fee when younger than 65.

However, the balance of an HSA will still be available even after quitting an HDHP and returning to other insurance plans regardless of whether the new plan is under SHI or PHI. The balance can still be used to pay for medical treatments that are not included in the new health plan and for out-of-pocket expenses.

4. Conclusions

HSAs have been successfully introduced in several countries and have been accepted by insurers as well as by insured people to the same degree. Our paper investigates whether the introduction of tax-favored HSAs to German SHI is possible and desirable. We developed an approach that is compatible with the existing SHI system in Germany, building on the newly defined Flexible Health Plans. Contrasting previous proposals to implement HSAs in German SHI our approach requires the smallest changes to the existing system and allows the greatest freedom to customers when arranging their health insurance. Therefore, we analyze the particularities of German SHI as well as financial and fiscal aspects.

By implementing HSAs as proposed here, the insured consume health care in a more conscious way. On the one hand, the insured receive more information on the actual treatment costs. On the other hand, the high deductible reduces moral hazard. Altogether, there will be a more price-elastic demand for medical care as long as the insured have not reached the deductible, which is likely to lead to an overall cost reduction. The greater financial risk that is imposed on the insured due to the HDHP will be reduced by the accrued balance in an HSA. Accordingly, HSAs increase incentives at least partially to self-insure. This will lead to a greater private responsibility for health care and more consumer-directed health care.

The increased co-determination of the insured and possible cost reductions have the potential to enhance competition between SHI and PHI. The combination of an HSA with an HDHP will be particularly interesting to individuals who are planning to leave SHI due to the lower prices and greater freedom of choice in PHI. Accordingly, the focus of our paper is on how HSAs can be implemented in SHI. However, to ensure competitive fairness, tax favors for HSAs when combined with an HDHP must also be available under PHI. Proposing how CDHPs can be arranged for PHI is a promising scope for further investigations into how HSAs fit into the German health-insurance system.

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Appendix

The following example illustrates the possible savings within a tax treatment for low-, medium- and high-income non-married individuals (€20,000, €40,000 and €80,000 gross income after all tax deductions). We assume in all the cases an HDHP with a deductible of €1,000, which induces a bonus payment of €700. The marginal tax rates follow the German tax tables and for the sake of simplicity we assume that the premium payment does not change the marginal tax rate. We assume that the received bonus is invested risk-free at an interest rate of 4% and that individuals have to pay 25% capital gains tax outside the HSA. For the sake of simplicity, we omit the solidarity surcharge. To be precise, solidarity tax contribution and also church taxes if applicable are also reduced if the income tax burden decreases. For the sake of simplicity and as these extra taxes are much lower, we omit them in the following example.

Table 2

Example of the Tax Subsidies of an HSA in Different Income Brackets

	€20,000	€40,000	€80,000
Marginal tax rate	28.14%	37.34%	42.00%
Deductible	€1,000	€1,000	€1,000
Contribution to an HSA	€700	€700	€700
Balance after a year in an HSA	€728	€728	€728
Bonus payment after tax	€503.02	€438.62	€406.00
Bonus payment after tax and interest of a year	€518.11	€451.78	€418.18

This example shows that the tax-favored investment of the bonus payment in an HSA leads to significant tax savings in all three cases. Yet, the high-income group has the highest savings potential. However, as the tax progression within the German taxation scheme starts much earlier than in the U.S., selection issues do not play as important a role in Germany. Even though the absolute tax subsidy does increase with income, the relative subsidy in relation to gross income decreases in income in this example. Due to these factors, the selection issues can be assumed to be less significant in the German SHI than in the U.S. However, they may still play a role.