Little Learning, Large Inertia: Deductible Choice in Swiss Health Insurance

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Abstract

We study deductible choices in Switzerland's mandatory health insurance market—a large-scale, transparent setting where benefits are standardized and the entire enrollee population is observed. Comparing new enrollees, who must make an active choice, with existing enrollees, who may default to their prior plan, we document large and persistent inertia: existing enrollees are 14 percentage points more likely to choose dominated deductibles and exhibit substantially higher foregone savings. Critically, we show that the age gradient in consumer inertia is driven by cumulative market tenure rather than biological age, indicating that prolonged default exposure—rather than age-related cognitive decline—is a key mechanism underlying persistent inaction. Financial incentives cannot reliably overcome this inertia: switching rates plateau at roughly 10% even when potential savings are large. Counterfactual analysis reveals that implementing a smart default would save consumers approximately CHF 2.3 billion annually, but eliminating this inertia requires a 3–4% base premium increase to offset the loss of systemic cross-subsidies.

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1 Introduction

The modern economy is increasingly defined by subscription-based business models, where consumers navigate recurring, auto-renewing contracts across media, software, telecommunications, and financial services (McCarthy and Fader, 2017). A central puzzle in this landscape is identifying the root cause of consumer inertia—the persistent failure of consumers to re-optimize their choices over time. A large literature has documented consumer inertia in insurance and subscription markets, attributing it to inattention, switching costs, search frictions, and default effects (Handel and Schwartzstein, 2018; Brot-Goldberg et al., 2023; Heiss et al., 2021). A related strand of work documents that financial decision quality declines with age, consistent with cognitive decline (Agarwal et al., 2009). However, because age and market tenure are typically confounded, it has been difficult to determine whether the observed age gradient in inertia reflects cognitive decline or simply prolonged exposure to defaults. In this paper, we disentangle biological age from cumulative market tenure and show that prolonged default exposure—rather than cognitive aging—is the primary driver of the age gradient in switching behavior.

We utilize Switzerland's mandatory health insurance market as a large-scale, highly controlled laboratory. The Swiss market is uniquely suited to this purpose for three reasons. First, unlike commercial subscription services where firms strategically obfuscate cancellation pathways and differentiate products to maximize lifetime customer value, Swiss basic insurance features fully standardized benefits and transparent, community-rated pricing. If substantial inertia persists even in this environment—which is optimized for consumer welfare and minimally complex—the friction costs observed here may represent a lower bound on inertia in more complex recurring choice settings, though the extent to which these findings generalize depends on institutional features that differ across markets. Second, the deductible choice we study is straightforward to characterize: enrollees face six deductible options, four of which are financially dominated, and the optimal deductible is a simple function of expected medical spending (Liu and Sydnor, 2022). Third, our administrative data cover the entire Swiss enrollee population from 2018 to 2022, providing both the statistical power and the demographic diversity necessary to distinguish competing explanations for inertia.

We examine deductible choices for two groups of individuals: new enrollees who entered the market in 2018 and were required to make an active choice, and existing enrollees who entered before 2018 and may default to their previously chosen deductible.[1] These two groups differ

[1]We do not observe enrollment histories prior to 2017 and therefore cannot precisely measure experience among existing enrollees. Because enrollment in Switzerland's basic health insurance is mandatory, existing enrollees may have remained in the market for decades, while new enrollees are primarily recent immigrants.

in two important respects. First, existing enrollees are subject to inertia because of default rules; indeed, only 6% of existing enrollees switched deductibles in 2019. In contrast, new enrollees must actively choose a deductible upon entry. Second, new enrollees may initially have less knowledge or familiarity with the market than existing enrollees (Ketcham et al., 2012). Differences in choice quality between the two groups therefore reflect a combination of inertia and learning.

We begin by examining deductible choices among new enrollees, who are required to make an active choice upon entering the market. Using 2019 as the first full year of observation, we find that new enrollees exhibit relatively high initial choice quality: about 70% choose the optimal deductible and only 11% select a dominated option. Nonetheless, mistakes are economically meaningful. Average foregone savings amount to roughly CHF 260 per enrollee per year, and the upper tail is substantial, with a non-negligible share of individuals incurring losses exceeding CHF 1,500. Tracking this cohort over time, we find little evidence of short-run learning. Optimal choice rates remain flat, dominated choices decline only slightly, and average foregone savings do not decrease over the four years following entry. This lack of improvement coincides with low switching rates—around 5–7% per year—suggesting that inactive choice behavior sets in quickly after market entry.

At the same time, focusing on new enrollees who do switch reveals a more nuanced pattern. Among new enrollees who change deductibles, switching is typically beneficial: 63–65% experience positive savings, with average gains of CHF 100–250 per switch. Over the period from 2019 to 2022, about 20% of new enrollees ever switch plans, achieving average annual savings of CHF 117. These gains, however, are modest relative to those realized by existing enrollees, who switch less frequently but benefit more when they do. This contrast suggests that while short-run learning is limited at the population level, the ability to profit from active re-optimization may improve only over a longer horizon.

We then study deductible choices among existing enrollees, who face the same choice menu but may passively remain in their previously selected plans. Existing enrollees exhibit substantially worse choice quality than new enrollees. Even after matching on demographics and health status, existing enrollees are 14 percentage points more likely to choose dominated deductibles and 14 percentage points less likely to choose the lowest-cost option. These differences persist over time and imply sizable financial consequences. Foregone savings are significantly higher among existing enrollees, particularly in the upper tail of the distribution,

We discuss the implications of this compositional difference—including potential migrant selection—in Section 3.

where losses exceed those of new enrollees by more than CHF 250 per year. Because greater experience would be expected to improve decision-making, these patterns provide strong evidence that default behavior and inertia play an important role in shaping insurance choices.

We further document that inertia is unevenly distributed across the population. Switching rates decline monotonically with age among existing enrollees, reaching their lowest levels among individuals aged 65 and above, even though the potential gains from switching do not decline monotonically with age. In contrast, switching behavior among new enrollees is remarkably stable across age groups, persisting up to age 80. The comparison suggests that the decline in switching with age is more attributable to cumulative market tenure than to cognitive ability. This finding refines the policy challenge: rather than focusing exclusively on elderly enrollees, effective interventions should address all enrollees early in their market tenure, before prolonged default exposure entrenches inaction.

We then examine the underlying mechanism of the inertia we document. The literature broadly distinguishes two classes of explanations for poorly informed choices: frictions and mental gaps (Handel and Schwartzstein, 2018; Brot-Goldberg et al., 2023). We show that switching behavior responds positively to financial incentives: a CHF 1,000 increase in potential savings raises switching probabilities by 5–8 percentage points. However, the response is highly non-linear, plateauing at around 10% even when potential gains are large. These findings indicate that while consumers respond to incentives at the margin, substantial inaction persists even when the stakes are high.

Finally, we quantify the aggregate welfare consequences of inertia through counterfactual exercises. We estimate that the Swiss market leaves approximately CHF 2.3 billion per year on the table due to suboptimal deductible choice—roughly 6–7% of total out-of-pocket spending. However, as Handel (2013) demonstrates theoretically, consumer inertia can stabilize risk pools by preventing adverse selection. We confirm this mechanism empirically: because over-insured enrollees currently cross-subsidize the risk pool through excessive premiums, eliminating inertia would drain approximately CHF 860 million–1.1 billion in implicit subsidies and require a base premium increase of roughly 3–4% to maintain market equilibrium.

Our findings have several implications for insurance market design and the broader economics of subscription markets. First, the absence of learning in the short term among new enrollees suggests that policies relying on repeated choice opportunities or passive experience are unlikely to substantially improve consumer outcomes. Second, the large and persistent welfare losses observed among existing enrollees highlight the importance of default rules. Because defaults disproportionately affect long-tenured individuals—regardless of age—

inertia can undermine efficient risk sorting precisely when it matters most (Bundorf et al., 2012). Third, while switching responds to financial incentives, the response is weak and highly non-linear, limiting the effectiveness of price signals or information disclosure alone. Instead, our results point to the value of interventions that directly address inertia, such as structured re-enrollment, default re-optimization, or mandatory active choice intervals. While our evidence is specific to the Swiss health insurance market, the underlying mechanisms—default effects and tenure-driven inattention—are likely relevant to other settings that rely on passive auto-renewal, such as telecommunications or financial products, though the magnitude of inertia may differ depending on product complexity, switching costs, and supply-side frictions.

Our paper contributes to two primary strands of literature. First, we add to the literature examining consumer decision-making under conditions of active choice. A growing body of evidence documents the persistent selection of dominated plans across diverse insurance environments (Liu and Sydnor, 2022; Saltzman et al., 2021; Handel and Kolstad, 2015) and links these errors to bounded rationality and information frictions (Abaluck and Gruber, 2011; Bhargava et al., 2017). While recent studies often attribute suboptimal selection to the complexity of the choice environment or "choice overload" from large menus (Abaluck and Gruber, 2023), we show that poor decision-making persists even in a "lean" choice setting. In our context, benefits are standardized and optimal deductibles are easily identifiable, yet consumers still exhibit significant "choice attenuation." This implies that the roots of poor decision-making go deeper than mere environmental complexity.

Second, our work contributes to the literature on consumer inertia and the decomposition of friction costs by examining the dynamic evolution of choice quality. While seminal evidence from Medicare Part D (Handel, 2013; Ketcham et al., 2015; Heiss et al., 2021) and Medicaid (Marton et al., 2017) focuses on specific elderly or low-income populations, we study a demographically diverse population across the entire age spectrum. This allows us to show that the age gradient in inertia is driven by tenure rather than age per se, and that inaction sets in rapidly after market entry across all age groups. Crucially, our setting allows us to isolate the role of inattention from other structural barriers. Unlike the Medicare environment where switching can be hindered by supply-side frictions—such as changes to drug formularies or provider networks (Ketcham et al., 2015)—the Swiss market features standardized benefits that are independent of the provider. In this friction-less structural setting, we find that choice quality does not improve with experience, contrasting with the "learning-to-swim" effects documented by Ketcham et al. (2012). Furthermore, our finding that switching behavior responds positively—though insufficiently—to financial incentives provides a nuanced contrast to Brot-Goldberg et al. (2023), suggesting that while inertia is powerful, it is not entirely

attributable to mental gaps: consumers retain some sensitivity to financial stakes, yet this sensitivity plateaus well before inertia is overcome.

The remainder of the paper is organized as follows. Section 2 describes the institutional background. Section 3 presents the data and empirical methodology. Section 4 reports the empirical results. Section 5 presents counterfactual analysis and policy implications.

2 Institutional Background

Switzerland operates a system of mandatory health insurance. All residents are required to purchase compulsory basic health insurance, which provides a standardized package of covered services defined by federal law. While benefits are identical across plans, insurance contracts differ along three main dimensions: insurance company, deductible level, and insurance model (i.e., network type).

Adults aged 19 and above can choose from six vertically differentiated deductible levels: CHF 300, CHF 500, CHF 1,000, CHF 1,500, CHF 2,000, and CHF 2,500, as summarized in Table 1.[2] Once the deductible is exhausted, enrollees face a coinsurance rate of 10 percent on additional medical expenditures, subject to an annual cap of CHF 700.

Premium differences across deductible levels are regulated. Specifically, the premium rebate for higher-deductible plans relative to the default plan (CHF 300 deductible) is capped at 70 percent of the incremental deductible. For example, choosing a CHF 1,000 deductible instead of the CHF 300 deductible implies a maximum allowable premium reduction of

$$0.7 \times (\text{CHF } 1{,}000 - \text{CHF } 300) = \text{CHF } 490.$$

In practice, insurers almost uniformly apply a linear rebate schedule equal to this regulatory maximum, such that the premium reduction is proportional to the increase in the deductible. This rebate structure is highly homogeneous across insurance providers. Each year, insurers submit premiums for the default deductible plan (CHF 300) to cantonal regulators for approval. Once approved, premiums for all higher deductible options are mechanically determined according to the linear rebate schedule shown in Table 1.

Premiums are community-rated within age groups. Among adults, there are two age categories: young adults aged 19 to 25, and adults aged 26 and above. Within each age group,

[2]For children (i.e., individuals aged 18 or below), seven deductible levels are available: CHF 0, CHF 100, CHF 200, CHF 300, CHF 400, CHF 500, and CHF 600.

premiums do not vary with individual health risk. Young adults face lower community-rated premiums than adults aged 26 and above, but both groups face the same choice menu over deductibles and insurance models as presented in Table 1.

Table 1: Deductible choice menu

Deductible	Co-insurance rate	Cap co-insurance	Premium (CHF)
CHF 300	10%	CHF 700	4,960
CHF 500	10%	CHF 700	$4,960 - (500 - 300) \times 70\% = 4,829$
CHF 1,000	10%	CHF 700	$4,960 - (1,000 - 300) \times 70\% = 4,479$
CHF 1,500	10%	CHF 700	$4,960 - (1,500 - 300) \times 70\% = 4,129$
CHF 2,000	10%	CHF 700	$4,960 - (2,000 - 300) \times 70\% = 3,779$
CHF 2,500	10%	CHF 700	$4,960 - (2,500 - 300) \times 70\% = 3,429$

In addition to deductible choice, consumers can select among four main insurance models: the standard (basic) model, Health Maintenance Organization (HMO) models, family doctor models, and TelMed models. Importantly, the scope of covered benefits under compulsory health insurance is identical across all models. Under the standard model, consumers have unrestricted access to physicians and hospitals. In HMO models, enrollees are required to seek care within a designated physician network or group practice and must consult this network as the first point of contact when illness occurs; in return, they receive a premium discount. Under the family doctor model, enrollees must first consult a designated primary care physician—chosen from the insurer's approved list—before accessing specialist care. This model typically offers a premium discount of approximately 15 to 20 percent relative to the standard model. Finally, under the TelMed model, enrollees are required to contact a 24-hour medical call center prior to visiting a physician, in exchange for lower premiums.

3 Methodology and Data

3.1 Data

We use individual-level administrative data from the Swiss Federal Office of Public Health, covering the entire population residing in Switzerland between 2017 and 2022. The data include basic socio-demographic characteristics (age and gender), canton of residence, deductible choice, annual medical expenditures, and insurance premiums. A key limitation of the data is that we do not observe enrollees' full enrollment histories prior to 2017. As a result, we can identify new market entrants only if an enrollee ID first appears in the data

after 2017.[3]

We apply several sample restrictions to construct our baseline analysis sample. First, we restrict attention to adults aged 26 and above who face a common choice menu and are ineligible for premium discounts or subsidies.[4] Second, we classify individuals into two groups based on enrollment timing: (i) existing enrollees, defined as individuals who joined the market before 2017, and (ii) new enrollees, defined as individuals whose enrollee ID first appears in 2018.

To ensure comparable observation windows, we further impose full-year enrollment requirements. Existing enrollees must remain continuously enrolled from 2018 through 2022. New enrollees must have no enrollment record in 2017, enter the market in 2018, and remain continuously enrolled from 2019 through 2022.

3.2 Constructing Comparable New and Existing Enrollees

New and existing enrollees differ along two institutional dimensions. First, regulations require individuals entering the market for the first time to make an active plan choice, including the choice of deductible. In contrast, existing enrollees may passively remain in the same deductible as in the previous year, implying that their observed choices may reflect inertia. Second, new enrollees may be less experienced in understanding plan options and cost-sharing rules than existing enrollees. Differences in deductible choices between the two groups may therefore reflect a combination of inertia and learning.

Beyond these institutional differences, new and existing enrollees may also differ systematically in demographics and health status. To isolate the role of inertia and learning, we construct a matched sample in which new and existing enrollees are otherwise comparable. Specifically, for each new enrollee in the baseline sample, we match one existing enrollee with the closest observed characteristics. We require exact matches on canton of residence, gender, and age group. Among candidates satisfying these criteria, we select the nearest neighbor based on measures of healthcare risk, including risk scores, indicators for chronic disease diagnoses, indicators for inpatient stays in the previous year, and non-discretionary healthcare spending in 2019. Matching on healthcare needs is particularly important in our context because some choice quality measures—such as foregone savings—are sensitive to

[3]Because enrollment in compulsory health insurance is mandatory in Switzerland, individuals already enrolled before 2017 may have been participating in the market for many years or decades. New enrollees identified after 2017 are primarily recent immigrants.

[4]Individuals aged 0 to 18 face a different deductible menu, while individuals aged 19 to 25 face the same menu as adults but receive lower, age-specific premiums.

underlying health risk.[5]

A potential concern is that new enrollees entering the market after 2017 are predominantly migrants, who may differ systematically from the native Swiss population in education, income, or cognitive abilities. In particular, if migrants are positively self-selected on attributes correlated with decision quality (Borjas, 1987), this could partially account for the higher choice quality we observe among new enrollees. Because migration is a selective process at all ages, such positive selection could also explain the flat age gradient in switching behavior among new enrollees—if migrants who relocate at age 65 are comparably capable to those who relocate at age 30, the absence of an age gradient in this group would reflect selection rather than the irrelevance of age.

Several features of our setting partially mitigate this concern. First, Switzerland's migrant population is predominantly composed of EU/EFTA nationals from neighboring countries (Italy, Germany, France), who face limited cultural and linguistic barriers (Swiss Federal Statistical Office, 2024). Data from the Swiss Earnings Structure Survey show no large systematic economic disparity between EU migrants and Swiss nationals (Swiss Federal Statistical Office, 2025). Second, our matching procedure strictly controls for canton of residence, age, gender, and healthcare risk, which absorbs much of the observable variation between the two groups.

Nonetheless, we cannot fully rule out that unobservable differences between new and existing enrollees contribute to the patterns we document. The level difference in choice quality between the two groups should therefore be interpreted as an upper bound on the effect of inertia. The differential age gradient—flat among new enrollees, steeply declining among existing enrollees—is suggestive of a tenure mechanism, but we acknowledge that migrant selection could also contribute to this pattern.

A related limitation is that we do not observe the initial deductible choices of existing enrollees. As a result, we cannot distinguish between two possible sources of their lower choice quality: (i) initially appropriate deductible choices that became suboptimal as health needs evolved over time, and (ii) initially poor choices that were never corrected. Both channels are consistent with the inertia mechanism we document—in case (i), inertia prevents re-optimization in response to changing needs, while in case (ii), inertia perpetuates initial mistakes. Our data do allow us to track the 2018 new-enrollee cohort over four subsequent years, and we find little evidence of learning or adjustment, consistent with inertia setting in

[5]We use 2019 as the baseline year for health risk measures because many new enrollees enter the market partway through 2018, making risk scores and utilization measures in that year potentially noisy or incomplete.

Table 2: Summary Statistics

	Sample before match			Sample after match		
Sample	New	Existing	Difference	New	Existing	Difference
Demographic variable						
Age	42.50	56.34	-13.84***	41.99	41.99	0.00
	(11.59)	(16.03)	(0.05)	(10.88)	(10.88)	(0.07)
Female (percentage)	0.48	0.51	-0.03***	0.48	0.48	-0.00
	(0.50)	(0.50)	(0.00)	(0.50)	(0.50)	(0.00)
Inpatient hospital state(percentage)	0.02	0.06	-0.05***	0.01	0.02	-0.00***
	(0.12)	(0.25)	(0.00)	(0.12)	(0.13)	(0.00)
Chronic disease (percentage)	0.01	0.03	-0.02***	0.01	0.01	-0.00***
	(0.07)	(0.17)	(0.00)	(0.07)	(0.08)	(0.00)
non-discretional medical spending	2011.30	4076.65	-2065.35***	1946.66	1968.11	-21.45
	(6270.20)	(9167.63)	(29.49)	(6121.72)	(5995.40)	(40.38)
Healthcare spending	2059.08	4173.03	-2113.95***	1993.40	2020.63	-27.23
	(6306.63)	(9201.01)	(29.66)	(6157.93)	(6031.78)	(40.62)
Deductible Choice in 2019						
Deductible 300	0.23	0.44	-0.21***	0.22	0.27	-0.05***
	(0.42)	(0.50)	(0.00)	(0.42)	(0.44)	(0.00)
Deductible 500	0.04	0.13	-0.09***	0.04	0.09	-0.05***
	(0.20)	(0.34)	(0.00)	(0.20)	(0.28)	(0.00)
Deductible 1000	0.02	0.04	-0.01***	0.02	0.04	-0.01***
	(0.16)	(0.19)	(0.00)	(0.15)	(0.19)	(0.00)
Deductible 1500	0.04	0.08	-0.05***	0.04	0.09	-0.05***
	(0.19)	(0.28)	(0.00)	(0.19)	(0.29)	(0.00)
Deductible 2000	0.01	0.03	-0.01***	0.01	0.03	-0.02***
	(0.11)	(0.16)	(0.00)	(0.11)	(0.18)	(0.00)
Deductible 2500	0.66	0.28	0.37***	0.66	0.48	0.18***
	(0.47)	(0.45)	(0.00)	(0.47)	(0.50)	(0.00)
Choice quality						
Dominated plan (rate)	0.12	0.28	-0.16***	0.11	0.25	-0.14***
	(0.32)	(0.45)	(0.00)	(0.32)	(0.43)	(0.00)
Optimal choice (rate)	0.69	0.51	0.18***	0.70	0.56	0.14***
	(0.46)	(0.50)	(0.00)	(0.46)	(0.50)	(0.00)
Foregone savings (CHF)	258.43	367.22	-108.79***	259.54	385.77	-126.23***
	(470.87)	(507.68)	(2.20)	(472.45)	(534.28)	(3.36)
Switch deductible (rate)	0.05	0.05	0.01***	0.05	0.06	-0.01***
	(0.23)	(0.21)	(0.00)	(0.23)	(0.24)	(0.00)
Choice stake (CHF)	229.72	412.64	-182.92***	225.86	235.75	-9.89***
	(326.99)	(358.50)	(1.53)	(324.97)	(328.88)	(2.18)
Observations	46,236	4,296,440		45,033	45,033	

Notes: This table reports summary statistics for new and existing enrollees before and after matching. New enrollees are individuals whose enrollee ID first appears in 2018. Existing enrollees entered the market prior to 2017. Matching is conducted on age group, gender, canton, and health risk measures. Standard deviations are reported in parentheses.

quickly regardless of initial choice quality.

Table 2 presents summary statistics for both the raw and matched samples. In the unmatched data, new enrollees are, on average, younger and healthier than existing enrollees. After matching, the two groups are well balanced along observed demographic and health dimensions. Despite this balance, their deductible choices differ: existing enrollees are more likely than new enrollees to choose low-deductible plans.

3.3 Constructing Choice Quality Measures

Our analysis focuses on a specific dimension of plan choice: deductible selection. As described in the institutional background, all insurers offer the same set of deductible options with identical cost-sharing rules. While plans vary by insurer and insurance model (network type), evaluating choice quality along these dimensions is substantially more complex because of differences in provider access and non-price attributes.

In contrast, determining the optimal deductible choice in this setting is relatively straightforward (Biener and Zou, 2024). Throughout the paper, we use the term "optimal" to denote the deductible that maximizes an enrollee's utility under full information. In general, the optimal cost-sharing design depends on healthcare needs, risk preferences, and responses to moral hazard. However, Biener and Zou (2024) show that in the Swiss health insurance market, for a wide range of empirically relevant risk aversion parameters, the optimal deductible is either CHF 300 for high-risk individuals (with annual medical spending above CHF 2,000) or CHF 2,500 for low-risk individuals (with spending below CHF 2,000).

To account for moral hazard responses, we follow the framework of Einav et al. (2013). Let t denote an enrollee's realized non-discretionary medical spending. After observing t, enrollees trade off the utility from additional medical consumption against the marginal cost-sharing implied by their plan. Under this framework, the enrollee's optimal total medical spending under plan j is given by

$$m(t, j) = \max\{0,\, t + \omega(1 - c'_j)\},$$

where c'_j denotes the marginal coinsurance rate under plan j, and ω captures the magnitude of moral hazard responses. In our baseline analysis, we set $\omega = 182$, corresponding to the mean estimate reported in Einav et al. (2013), and conduct robustness checks for alternative values of ω.

Given each individual's observed spending $m(t_i, \tilde{j})$ under the chosen plan $\tilde{j}$, we invert the above relationship to recover t_i. We then use this inferred t_i to compute counterfactual spending $m(t_i, j)$ under all alternative deductible options. For each plan j, out-of-pocket spending is given by $c_j(m(t_i, j))$, where $c_j(\cdot)$ denotes the plan's cost-sharing schedule. Total plan spending is defined as the sum of out-of-pocket spending and the plan premium. Conditional on t_i, the optimal deductible minimizes total plan spending.

Using this framework, we construct three measures of choice quality. First, following

Biener and Zou (2024), we classify all deductible choices other than CHF 300 and CHF 2,500 as dominated, and construct an indicator for whether the enrollee chooses a dominated deductible. Second, we construct an indicator for whether the enrollee chooses the optimal deductible. Because enrollees may not perfectly anticipate their future healthcare needs at the time of choice, we consider two benchmarks: a myopic benchmark, in which the optimal deductible is determined by healthcare spending in the previous period, and a perfect-foresight benchmark, in which the optimal deductible is determined by contemporaneous spending. Third, we compute foregone savings, defined as the difference between total plan spending under the chosen deductible and that under the optimal deductible.

4 Empirical Analysis

This section presents empirical evidence on how enrollees choose deductibles in the Swiss health insurance market. Guided by the institutional features and choice quality measures introduced in Section 3, we study two groups of individuals who face the same menu of deductible options but differ in their decision environment: new enrollees, who must make an active choice upon entry, and existing enrollees, who may passively remain in their default plan. This comparison allows us to separately assess the roles of limited attention, learning, and inertia in driving sub-optimal insurance choices.

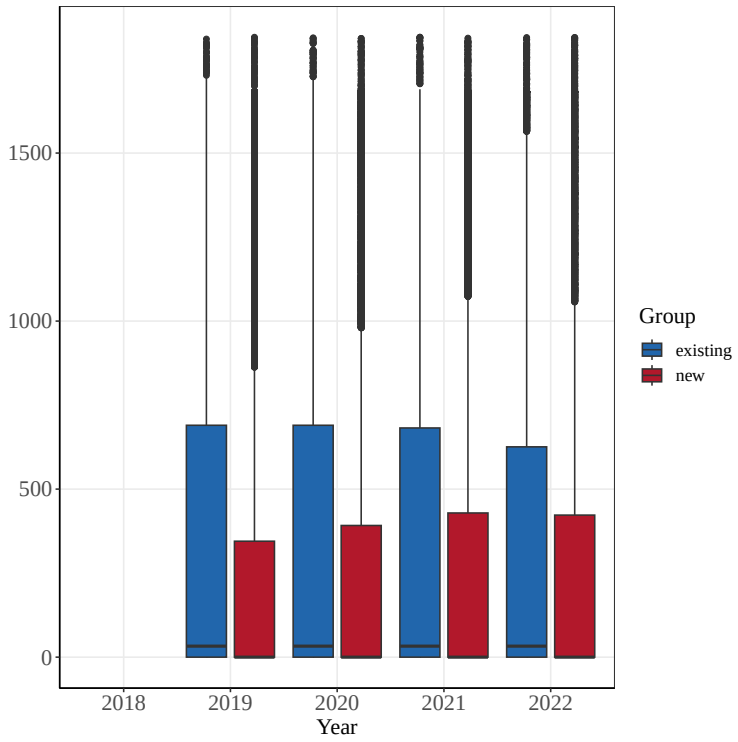
4.1 Choices of New Enrollees and Consumer Learning

We begin by analyzing deductible choices made by new enrollees. Focusing on new enrollees provides a clean benchmark because these individuals are required to make an active choice and are not mechanically defaulted into a prior plan. As discussed in Section 3, we take 2019 as the first year of analysis for this group, since many new enrollees have only partial-year enrollment in 2018.

Table 2 shows that new enrollees exhibit relatively high choice quality in their first full year of enrollment. Approximately 70% of new enrollees choose the optimal deductible, while only 11% select a dominated option. Nonetheless, sub-optimal choices are economically meaningful. Average foregone savings amount to CHF 260 per enrollee per year.

Figure 1 (red bars) illustrates the distribution of foregone savings for new enrollees. While the majority of individuals cluster near zero—consistent with optimal choice—the upper tail is substantial. The 75th percentile of foregone savings is around CHF 350, and a non-negligible fraction of enrollees incur losses exceeding CHF 1,500. Table 3 provides the average foregone

Figure 1: Distribution of Foregone Savings



Notes: This figure plots the distribution of foregone savings for new enrollees and existing enrollees. Foregone savings are defined as the difference between realized total spending under the chosen deductible and the cost-minimizing deductible, conditional on realized health care utilization.

savings for new enrollees, and the size is around CHF 270, accounting for almost 6% of out-of-pocket spending. These patterns indicate that even in a setting where the optimal deductible is straightforward to determine, active choice does not guarantee optimality for all consumers.

A key question, then, is whether such suboptimal choices among new enrollees would diminish over time, as would be expected under a learning or mental gap model. If consumers initially make poor choices because they lack knowledge or financial literacy, repeated exposure to the market should lead to systematic improvements in the quality of their choices.

We examine whether learning behavior exists in the short run by assessing how the quality of choice among new enrollees changes over 2019-2022, the four years immediately after their initial choice in 2018. Figures 2 and 3 show that over the five years following market entry, the rate of choosing the optimal deductible remains essentially flat, and the share of dominated choices declines only slightly. Consistent with the choice pattern, in Figure 1 (red bars) and Table 3, we find no reduction in foregone savings across the four years. Together,

these results indicate little evidence of learning in deductible choice in the short run.

Table 3: Spending and Switching for the 2018–2022 Cohort

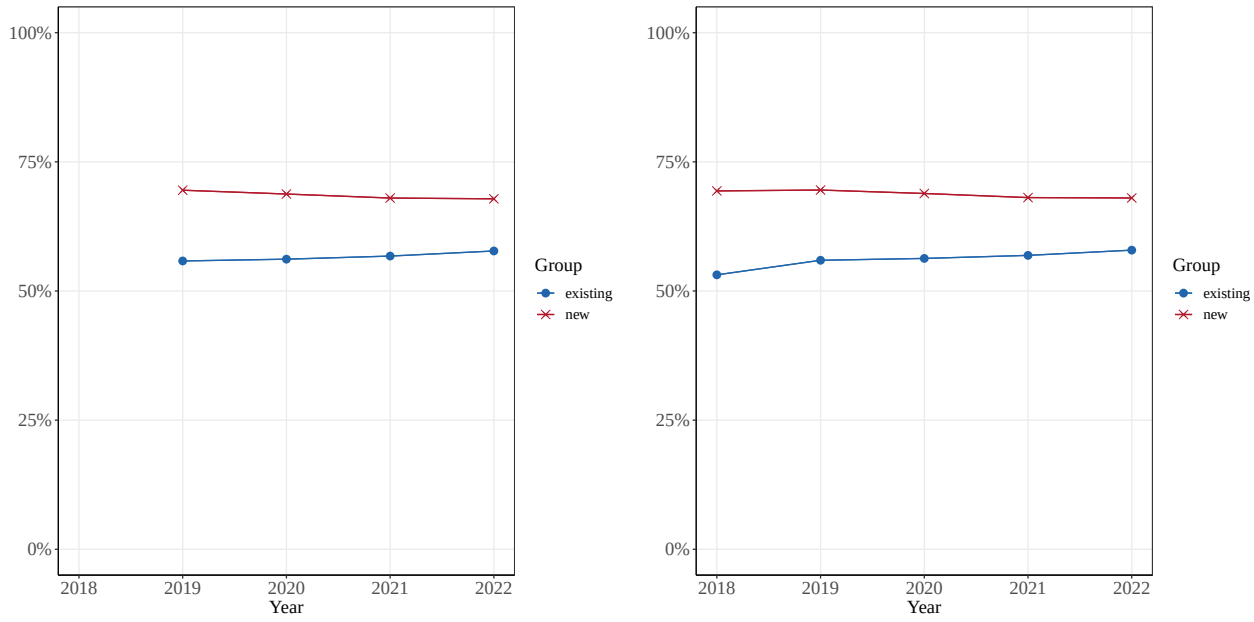
	2018	2019	2020	2021	2022
New enrollee, $N = 45,033$					
Switched deductible from the prior year (%)	–	5.4	6.9	6.1	5.4
Total OOP spending	4104	4516	4624	4735	4782
OOP spending in minimum plan	3793	4277	4381	4493	4542
Foregone savings	-	260	272	272	272
Foregone savings as percent of total OOP(%)	-	5.7	5.9	5.7	5.7
Existing enrollee, $N = 45,033$					
Switched deductible from the prior year (%)	8.9	6.1	5.7	5.2	5.0
Total OOP spending	4586	4673	4774	4864	4897
OOP spending in minimum plan	4219	4319	4436	4540	4590
Foregone savings	-	386	373	359	345
Foregone savings as percent of total OOP(%)	-	8.3	7.8	7.4	7.0

Notes: This table reports total out-of-pocket spending, minimum possible spending, and switching behavior for the 2018–2022 cohort. Out-of-pocket spending includes premiums and cost-sharing. Minimum spending is computed using the cost-minimizing deductible under the ex post approach.

One interesting pattern we highlight is that the lack of learning over time is consistent with the low switching rate among new enrollees. In fact, Table 4 shows that the annual switching rate is around 5.4% to 6.9% among the new enrollees right after they join the market. The numbers are close to the switching rates by existing enrollees, who have been in the market for many years. It seems that inertia, or inactive choices, sets in quite rapidly when enrollees enter the market. In Appendix A, we further examine the cummulative switching rates. We find that less than 10% of new enrollees ever switched plans four years after their initial entry of the market.

Despite a low overall switching rate, we also focus on those who switched plans in the four years immediately after the initial choices and examine whether they benefit from switching. If new enrollees gain experience in the market, they should derive positive value from switching. Table 4 shows that, on average, new enrollees benefit from switching plans: among those who switch plans, the mean savings from switching is around CHF 100 to CHF 250, calculated as the difference in the out-of-pocket costs (premium plus cost-sharing) between their chosen plan and the choice last year. We also find that 63%- 65% of new enrollees who switch their choices experience positive outcomes from plan switching. In Table 5, we further calculate the cumulative switching and savings from switching from 2019 to 2022. We find that 20% of new enrollees ever switch plans and achieve an average annual savings of CHF 117, representing

Figure 2: Rate of Choosing the Optimal Deductible



(a) Myopic

(b) Perfectly foresight

Notes: This figure shows the share of individuals choosing the optimal deductible over time. Panel (a) defines optimality under a myopic benchmark, using lagged health expenditures. Panel (b) defines optimality under a perfect-foresight benchmark, using contemporaneous expenditures. New and existing enrollees are shown separately.

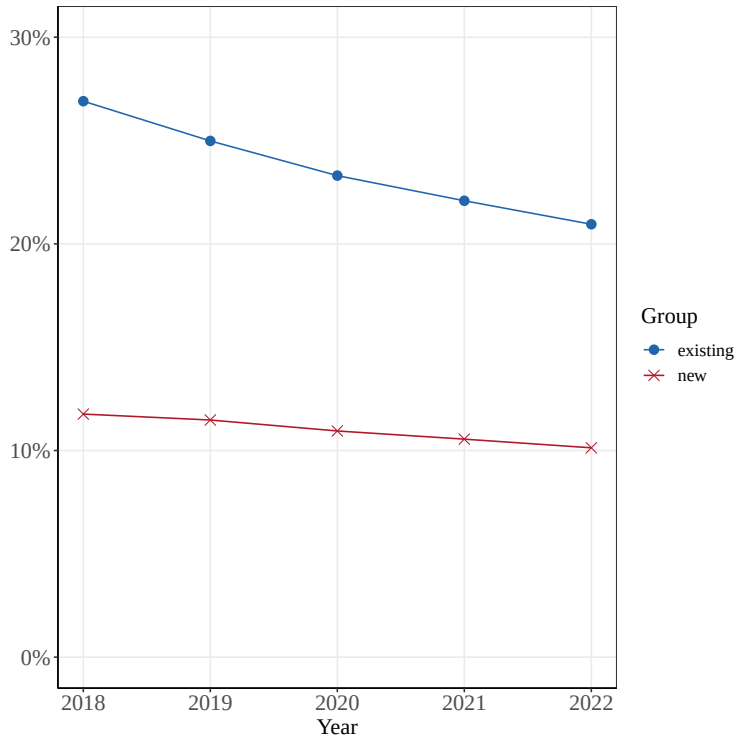
about 2.2% of their total out-of-pocket spending.

Table 4: Switching and savings from switching, 2019-2022:

	2019	2020	2021	2022
New enrollee, $N = 45,033$				
Switched deductible from the prior year (%)	5.4	6.9	6.1	5.4
Ex post approach with perfectly inelastic demand for healthcare				
Mean savings from switching	251	177	119	137
Median savings from switching	462	420	357	416.1
Percent that saved > 0 from switching (%)	65.8	65.3	63.8	65.2
Existing enrollee, $N = 45,033$				
Switched deductible from the prior year (%)	6.1	5.7	5.2	5.0
Ex post approach with perfectly inelastic demand for healthcare				
Mean savings from switching	448	329	270	260
Median savings from switching	463	446	372	381
Percent that saved > 0 from switching (%)	76.0	72.8	70.9	70.8

Notes: This table reports switching rates and savings from switching among matched new and existing enrollees from 2019 to 2022. Savings are calculated among the individuals who switched in the year.

Figure 3: Rate of Choosing the Dominated (Intermediate) Option



Notes: This figure plots the share of individuals choosing a dominated deductible (intermediate plans) over time.

We evaluate the economic magnitude of these savings by comparing them with existing enrollees. We find that existing enrollees gain more from switching. For example, among existing enrollees who have switched in the past four years, the mean savings from switching are approximately CHF 260-CHF 450; the cumulative savings from switching are CHF 193, accounting for 4% of total out-of-pocket spending; and more than 70% of existing enrollees who switch plans experience positive gains. These findings suggest that learning may occur over the long term. With a longer period in the market, existing enrollees appear better at navigating options and derive greater benefits from switching.

We also benchmark our results with Ketcham et al. (2015), who find evidence of learning among Medicare Part D enrollees. To directly compare our results with theirs, we also restrict our population to those who aged 65 and present the measures in Table 6. Overall, we find that switching rates in our sample are much lower than those observed among Medicare Part D patients in their context (3%-5% in our setting vs 10%-11% in their setting). The difference may be driven by the complexity of the task (our enrollees must choose basic medical insurance plans, whereas Part D enrollees choose only prescription drug plans) or by

Table 5: Cumulative switching and savings from switching, 2019- 2022:

	2019	2020	2021	2022
New enrollee, $N = 45,033$				
Percent of current enrollees that have ever previously switched deductible plans (%)	5.4	11.6	16.5	20.3
Actual OOP spending by those who ever previously switched	4853	5031	5185	5234
Ex post approach with perfectly inelastic demand for healthcare				
OOP spending if stayed in the original plan and never switched	4920	5141	5299	5351
Annual savings by current enrollees who ever previously switched	67	110	114	117
Savings as a percent of total OOP spending (%)	1.4	2.2	2.2	2.2
Total year enrollees	9,146	9,146	9,146	9,146
Annual savings from cumulative switching (millions)	0.6	1.0	1.0	1.1
Total cumulative savings from switching (millions)	0.6	1.6	2.7	3.7
Existing enrollee $N = 45,033$				
Percent of current enrollees that have ever previously switched deductible plans (%)	14.1	18.4	22.0	25.1
Actual OOP spending by those who ever previously switched	4642	4740	4840	4862
Ex post approach with perfectly inelastic demand for healthcare				
OOP spending if stayed in the original plan and never switched	4752	4899	5019	5055
Annual savings by current enrollees who ever previously switched	109	159	179	193
Savings as a percent of total OOP spending (%)	2.4	3.3	3.7	4.0
Total year enrollees	11,323	11,323	11,323	11,323
Annual savings from cumulative switching (millions)	1.2	1.8	2.0	2.2
Total cumulative savings from switching (millions)	1.2	3.0	5.1	7.2

Notes: This table tracks individuals who have ever switched plans over the years. The annual savings amount that enrollees saved by switching from the deductible choice to the current plan.

other institutional differences between the two markets.

4.2 Choices of Existing Enrollees and Inertia

We now turn to the deductible choices of existing enrollees, who face the same choice menu but operate under a different institutional environment. Unlike new enrollees, existing enrollees may remain passively in their previously selected deductible unless they actively switch. As a result, their observed choices may reflect inertia rather than deliberate optimization.

Table 6: Switching and savings from switching for aged 65, 2019-2022:

	2019	2020	2021	2022
New enrollee				
Switched deductible from the prior year (%)	5.1	4.0	3.9	3.8
Number of enrollees	2,178	2,471	2,795	3,185
Ex post approach with perfectly inelastic demand for healthcare				
Mean savings from switching	389	124	78	161
Median savings from switching	462	217	217	346
Percent that saved > 0 from switching (%)	73.0	65.0	68.8	75.8
Existing enrollee				
Switched deductible from the prior year (%)	2.8	3.5	3.2	3.2
Number of enrollees	2,178	2,493	2,885	3,243
Ex post approach with perfectly inelastic demand for healthcare				
Mean savings from switching	309	117	197	118
Median savings from switching	372	178	252	147
Percent that saved > 0 from switching (%)	78.7	70.5	72.8	66.0

Notes: This table reports switching behavior and savings from switching for individuals aged 65.

At first glance, existing enrollees appear to exhibit inertia, which results in low choice quality. Table 2 shows that only 6% of existing enrollees switch deductibles in a given year, and only 56% choose the optimal deductible. However, neither pattern alone is sufficient to establish inertia. Low switching rates could reflect stable health needs, and low optimality rates could reflect persistent knowledge gaps rather than default effects.

To isolate the role of inertia, we compare existing enrollees to new enrollees who are observationally similar in demographics and health status, as described in Section 3. If existing enrollees were making active, informed choices, their greater market experience should lead to choice quality at least as high as that of new enrollees.

The data strongly reject this hypothesis. Table 2 shows that, even after matching, existing enrollees in 2019 are 14 percentage points more likely to choose a dominated deductible and 14 percentage points less likely to choose the optimal deductible than new enrollees. Figures 2 and 3 demonstrate that this gap persists over time: existing enrollees are consistently 15–20 percentage points less likely to choose the optimal deductible under both the myopic and perfect-foresight benchmarks. Because any remaining differences in knowledge or experience would bias existing enrollees toward better choices, these estimates provide a lower bound on the impact of inertia on choice quality.

The financial consequences of inertia are substantial. Figure 1 compares the distribution

of foregone savings between matched new and existing enrollees. While the median and lower quartile are similar across groups, the upper tail differs sharply. The 75th percentile of foregone savings among existing enrollees exceeds that of new enrollees by more than CHF 250 per year—an amount comparable to the entire upper-tail loss of new enrollees at entry. For the quarter of enrollees with the worst outcomes, foregone savings reflect roughly equal contributions from initial choice errors (as observed among new enrollees) and inertia-induced failure to adjust. Table 3 reports that the average foregone savings are around CHF 350-CHF 390 for existing enrollees, much higher than the values for new enrollees ($\sim$ CHF 260).

Age Dynamics in Switching Behavior We next examine heterogeneity in switching behavior across age groups among existing enrollees. Figure 4 illustrates a clear monotonic decline in market engagement as enrollees age. While younger cohorts exhibit higher propensities to adjust their coverage frequently, the probability of switching deductibles drops significantly among older enrollees, reaching its lowest point for those aged 65 and above. In contrast, the benefits of switching, measured as the total spending difference between the default and cost-minimizing options, are not monotonic with respect to age. The key takeaway is that longevity in the market reinforces a 'sinking' effect: consumers become increasingly anchored to their initial plans over time. This age-driven inertia is a primary driver of the persistent sub-optimalities observed in the existing population, as older enrollees fail to re-optimize despite changing health risks. Note that the monotonic pattern only exists among existing enrollees. Among new enrollees, we find a much more stable switch rate across age groups (until age 80). The comparison suggests that the decline in switch rate with age is more attributable to market experience than to cognitive ability.

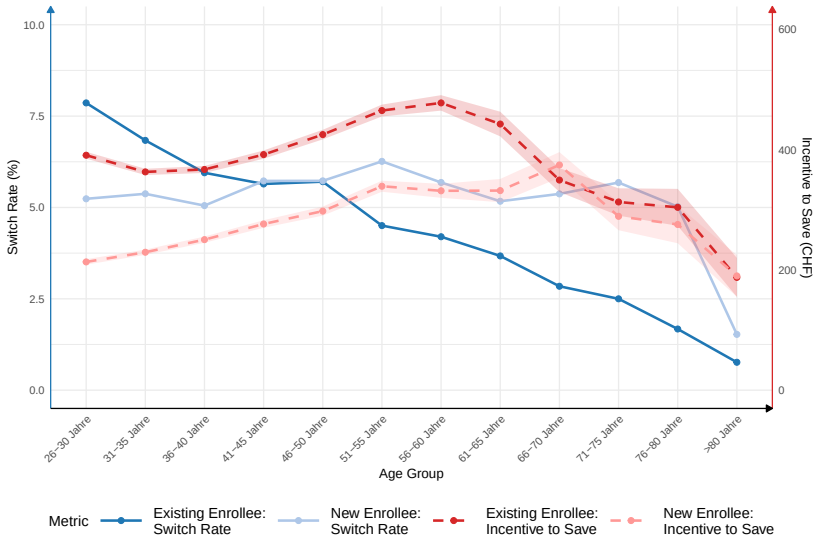
4.3 Mechanisms: Frictions versus Mental Gaps

Finally, we investigate whether the inertia we document is better explained by friction-based models or mental gap models of default effects (Brot-Goldberg et al., 2023). The key distinction is whether individuals are more likely to switch when the benefits of switching are larger. Under friction models, higher potential gains should increase switching; under mental gap models, switching is largely unresponsive to incentives. We examine this distinction empirically.

4.3.1 Switching Behavior and Incentives to Switch

First, we examine whether enrollees are more likely to switch plans when doing so yields greater benefits. We define the incentive to switch, v_{it}, as the difference between total

Figure 4: Switch Rate and Incentive to Save by Age Group (2019)



Notes: This figure illustrates age patterns in switching behavior and incentives to switch. Solid lines plot annual deductible switching rates by age group. Dashed lines plot the incentive to switch, defined as the difference between total spending under the default deductible and the cost-minimizing deductible, conditional on realized utilization. New and existing enrollees are shown separately.

spending under the default deductible plan and that under the optimal deductible plan. Total spending is measured as out-of-pocket spending (adjusted for moral hazard) plus the premium. Variation in the incentive to switch across individuals indicates differences in choice quality in the last period or in health needs that change in the current period. Fluctuation of the value within an individual over time indicates changes in health needs.

We first estimate the relationship between switching behavior and this incentive using cross-sectional variation:

$$\mathbf{1}(switch)_i = \beta_0 + \beta_1 v_i + \varepsilon_i, \tag{1}$$

where $\mathbf{1}(switch_i)$ is a dummy variable indicating whether the individual chooses a different deductible than last year, and γ_i are individual fixed effects. We estimate equation (1) using both existing and new enrollees in 2020. Thus, the variation is identified across individuals.

The above comparison may not reflect a causal effect of switching behavior on the benefits of switching if the correlation between switching and incentives to switch is driven by other confounding factors, e.g., differences in demographics and other factors between those facing larger and smaller incentives to switch. To make a causal statement, an ideal experiment

would be to randomly assign individuals to different default plans and compare their switching rates. Lacking such random variation, we leverage the within-individual variation in incentives to switch by using panel data and adding individual fixed effects in the regression and estimate model (2):

$$\mathbf{1}(switch)_{it} = \beta_0 + \beta_1 v_{it} + \gamma_i + \varepsilon_{it}. \tag{2}$$

Controlling for individual fixed effects ensures that other individual characteristics, including risk preferences, education level, and other unobserved characteristics, do not confound the results. The fixed-effects specification exploits within-person variation in incentives to switch over time by comparing the same individual's switching behavior under different incentives across years.

Table 7 shows that switching probabilities increase with the incentive to switch. A CHF 1,000 increase in potential savings raises the probability of switching by 5–8 percentage points, depending on the specification. Importantly, this relationship persists when we include individual fixed effects, exploiting within-person variation over time and ruling out time-invariant unobserved heterogeneity.

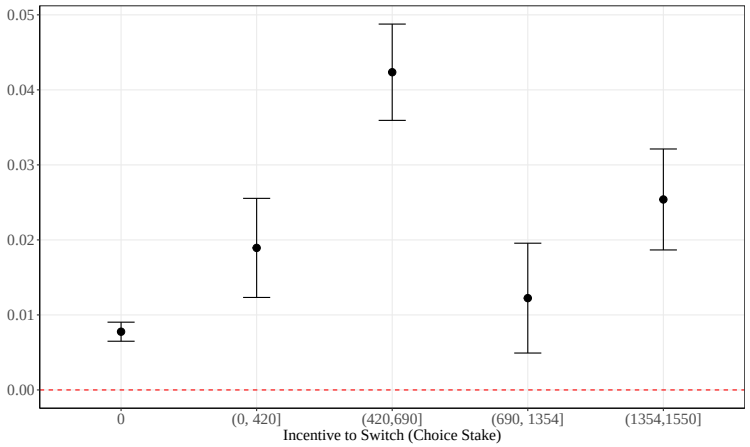
Table 7: Switching and Incentives to Switch

	Switching Rate (1)	Switching Rate (2)	Switching Rate (3)	Switching Rate (4)	Switching Rate (5)
(Intercept)	0.037***				
	(0.001)				
Incentive to switch (000 CHF)	0.053***	0.082***	0.090***	0.082***	0.082***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)
Chronic disease					−0.008+
					(0.004)
N	90 066	180 132	315 231	180 132	180 132
R2 Adj.	0.013	0.066	0.082	0.067	0.066
R2 Within Adj.		0.013	0.016	0.013	0.013
Std.Errors	IID	by: PersonID	by: PersonID	by: PersonID	by: PersonID
FE: PersonID		X	X	X	X
FE: Year				X	

Notes: This table reports regression estimates of the relationship between the incentive to switch and deductible switching behavior. The dependent variable is an indicator for switching the deductible relative to the previous year. The incentive to switch is measured in thousands of CHF. Specifications include individual and year fixed effects as indicated. Standard errors are clustered at the individual level.

However, the response is not monotonic. Figure 5 shows the switching rate among those whose default plan is already optimal (incentives to switch being zero) and those with positive incentives to switch. For the latter, we create four equal-sized bins based on the incentives to

Figure 5: Switching Rate and Incentive to Switch



Notes: This figure plots average switching rates by quintile of the incentive to switch. The incentive to switch is defined as the difference in total spending (premium plus out-of-pocket costs) between the enrollee's default deductible and the cost-minimizing deductible. The leftmost bar shows enrollees whose default plan is already optimal (zero incentive). The remaining four bars correspond to equal-sized bins of enrollees with positive incentives. Switching rates increase with incentives up to the median level but plateau at approximately 10% for higher incentive groups, suggesting that large financial stakes alone are insufficient to overcome inertia.

switch. We find that the switching rates rise with incentives only up to the median incentive level. For enrollees facing very large potential gains, switching rates plateau at around 10%. This pattern suggests that, although some inertia is consistent with rational frictions, substantial inaction persists even when switching would yield substantial financial benefits.

Taken together, these results indicate that inertia in deductible choice is partly—but not fully—explained by rational frictions. Even in settings with simple menus and transparent incentives, many consumers fail to adjust away from suboptimal defaults, resulting in persistent and economically meaningful losses.

5 Counterfactual Analysis and Policy Implications

The preceding analysis documents that consumer inertia in deductible choice is large, persistent, and driven by market tenure rather than cognitive decline. A natural question follows: what would happen if we could eliminate this inertia? The answer, as we show in this section, involves a profound micro-macro tradeoff. At the individual level, the choice architecture is failing consumers, costing them over CHF 2 billion annually—and financial incentives alone cannot wake them up. Only a smart default will. At the systemic level, however, those same inertial consumers are currently overpaying into the risk pool, and fixing their individual mistakes would drain over a billion francs in implicit cross-subsidies,

forcing premium increases for everyone. We quantify both sides of this dilemma through two counterfactual exercises. Both counterfactual calculations use all of the existing and new enrollees aged 26 and above over 2019–2022. The details of the calculation is in Appendix B.

5.1 The Cost of Inertia: A Smart Default

We first estimate the aggregate welfare loss from suboptimal deductible choice. For each existing enrollee in year t, we calculate foregone savings as the difference in total spending (premium plus cost-sharing) between the enrollee's chosen deductible and the cost-minimizing deductible under perfect foresight. This provides an upper bound on the gains from a "smart default" that automatically assigns each enrollee to their individually optimal plan.

The results are striking in their magnitude. In 2019, total foregone savings among existing enrollees amount to approximately CHF 2.5 billion, with an average loss of CHF 361 per enrollee per year. Including new enrollees raises the total to CHF 2.6 billion. While the aggregate loss declines modestly over time—to CHF 2.1 billion by 2022—it remains economically substantial throughout the observation period. On average, the Swiss market leaves roughly CHF 2.3 billion per year on the table due to inertial deductible choice, representing approximately 6–7% of total enrollee out-of-pocket spending.

These numbers establish the first-order welfare gain of eliminating inertia: an algorithmic smart default that moved every enrollee to their cost-minimizing plan would recapture the bulk of this loss. Even under a more conservative counterfactual—assigning existing enrollees the same average choice quality as new enrollees—aggregate savings would amount to CHF 40–230 million annually.[6]

5.2 Risk Pool Equilibrium Effects

However, eliminating inertia does not come without systemic consequences. As Handel (2013) demonstrates, consumer inertia can stabilize the risk pool by preventing the adverse selection that would arise if all consumers continuously optimized. When inertial consumers remain in plans with lower deductibles than they need, they pay higher premiums for coverage they do not use, effectively cross-subsidizing the system. Removing this inertia—however well-intentioned—risks unraveling these implicit transfers.

[6]We calculate the difference between the average annual foregone savings for matched existing and new enrollees, then multiply this number by the total number of existing enrollees in that year to obtain the estimates. The range reflects the fact that the difference in the average foregone savings between new and existing enrollees narrows over time as new enrollees' own choice quality deteriorates with market tenure.

We investigate this mechanism directly in the Swiss market. For each existing enrollee, we compute the insurer's margin under two scenarios: (i) the status quo, where the enrollee remains in their current plan, and (ii) the counterfactual, where the enrollee moves to their cost-minimizing plan. The insurer's margin is defined as premium revenue minus payout (gross medical spending less the enrollee's cost-sharing contribution).

The results reveal a substantial systemic deficit. In 2019, total insurer margins under the status quo are CHF 3.0 billion. Under the counterfactual where all enrollees optimize, margins fall to CHF 1.8 billion—a loss of approximately CHF 1.1 billion. This deficit arises because over-insured enrollees (those on unnecessarily low deductibles) currently pay high premiums for coverage they do not use, effectively cross-subsidizing the system. We estimate that over-insured enrollees overpay by approximately CHF 1.6 billion annually relative to their individually optimal plans.[7]

If insurers were to maintain the same aggregate margin in a frictionless world, base premiums would need to increase by approximately CHF 130–165 per enrollee, or roughly 3–4%. This finding confirms, in a large-scale mandatory insurance market, the mechanism identified by Handel (2013): the same inertia that harms individual consumers also depresses premiums for the broader market. Policymakers considering smart defaults or mandatory re-enrollment must account for the equilibrium premium adjustment that would follow.

Our findings are consistent with recent empirical evidence from the Dutch health insurance market—which shares key structural features with Switzerland, including mandatory enrollment, annual deductible choice, and community-rated premiums. Croes et al. (2025) document that consumer inertia in the Dutch system counteracts adverse selection in deductible choice, providing direct empirical support for the cross-subsidization mechanism we quantify here. Together, the Swiss and Dutch evidence suggest that this tradeoff is a general feature of mandatory insurance markets with deductible choice, rather than an artifact of a particular institutional setting.

Taken together, the two counterfactual exercises reveal a fundamental policy dilemma. The micro-level problem is clear: the current choice architecture is failing individuals, and financial incentives—even when large—cannot reliably induce re-optimization. A smart default is the

[7]The insurer margin under the status quo is $M_{it}^{sq} = P_{it} - (G_{it} - OOP_{it})$, where P_{it} is the enrollee's annual premium, G_{it} is gross medical spending, and OOP_{it} is cost-sharing. The counterfactual margin is $M_{it}^{cf} = P_{it}^{*} - (G_{it} - OOP_{it}^{*})$, where asterisks denote values at the cost-minimizing deductible. Premiums are recovered using the regulated rebate: the CHF 2,500 deductible carries an annual reduction of $(2{,}500 - 300) \times 0.70 =$ CHF 1,540 relative to the CHF 300 baseline (KVV Art. 95 Abs. 2). The per-capita premium increase is $\Delta = (\sum M_{it}^{sq} - \sum M_{it}^{cf})/N_t$, and the percentage increase is $\Delta/\bar{P}_t$.

only intervention that would recapture the CHF 2.3 billion in annual welfare losses. However, the macro-level reality complicates any straightforward implementation. Because inertial consumers are currently overpaying through excessive premiums on dominated plans, they implicitly subsidize the entire risk pool by CHF 860 million–1.1 billion per year. Eliminating their mistakes—however well-intentioned—would drain these cross-subsidies and necessitate a base premium increase of approximately 3–4% to maintain market equilibrium. Any redesign of enrollment architecture must explicitly anticipate and manage this equilibrium adjustment, balancing individual welfare gains against the aggregate cost of unwinding the implicit subsidies that inertia currently provides. Because Switzerland's basic insurance market features standardized benefits and transparent pricing, the average annual foregone savings of CHF 345 per enrollee may serve as a useful benchmark, though direct comparisons to other markets should account for differences in product complexity, choice architecture, and supply-side institutions.

6 Conclusion

This paper provides evidence on how consumers choose deductibles in a regulated health insurance market where coverage is standardized and optimal cost-sharing is relatively easy to characterize. Using nationwide administrative data from Switzerland, we document persistent patterns of suboptimal deductible choice that arise not primarily from lack of access to information, but from limited re-optimization once an initial choice is made. We further show that the age gradient in inertia—widely attributed to cognitive decline—is driven almost entirely by market tenure, and we quantify the aggregate welfare consequences of inertia through counterfactual exercises. Our analysis is subject to data limitations: we do not observe enrollment histories prior to 2017 and therefore cannot determine whether the lower choice quality among existing enrollees reflects deterioration of initially appropriate choices or persistence of initially poor ones. Our comparison of new and existing enrollees may also be affected by compositional differences, as new enrollees are predominantly recent immigrants. We address these concerns through matching on observable characteristics and by focusing on within-group patterns that are less sensitive to level differences between the two populations.

Our findings have several implications for insurance market design and, more broadly, for the design of any market relying on recurring consumer choice under auto-renewal. First, the absence of learning in the short term among new enrollees suggests that policies relying on repeated choice opportunities or passive experience are unlikely to substantially improve consumer outcomes. Even when consumers initially make an active choice, they rarely revisit

or revise that choice in subsequent years, despite accumulating information about their health risks. Second, the large and persistent welfare losses observed among existing enrollees highlight the importance of default rules. Because defaults anchor consumers progressively with market tenure—regardless of age or cognitive ability—inertia can undermine the risk-protection role of insurance precisely when it matters most.

Third, while switching responds to financial incentives, the response is weak and highly non-linear. Even large potential savings do not reliably trigger re-optimization. This limits the effectiveness of policies that rely solely on price signals or information disclosure to induce active choice. Instead, our results point to the potential value of interventions that directly address inertia, such as structured re-enrollment, default re-optimization, or mandatory active choice intervals triggered by market tenure rather than age.

Fourth, our counterfactual analysis reveals a fundamental policy tension. While a smart default would save consumers approximately CHF 2.3 billion annually, the implicit cross-subsidies generated by inertia currently stabilize insurer revenues, and their removal would necessitate a base premium increase of roughly 3–4%. Policymakers and platform designers must weigh the individual welfare gains of eliminating inertia against the systemic equilibrium consequences—a trade-off that extends well beyond health insurance to any subscription market where passive auto-renewal governs consumer behavior.

More broadly, our finding that inertia is a function of market tenure rather than biological age suggests that the "sinking effect" we document may extend to other recurring choice architectures, though the magnitude will depend on institutional specifics such as product complexity, switching costs, and supply-side frictions. The Swiss market, with its standardized benefits and transparent pricing, provides a setting where many common barriers to switching are absent, suggesting that the average annual foregone savings of CHF 345 per enrollee may represent a lower bound relative to more complex choice environments. However, we caution against direct extrapolation, as other markets feature different information structures, stakes, and competitive dynamics. Understanding how contract design interacts with consumer behavior remains central to ensuring that markets relying on recurring choice deliver effective outcomes for consumers.

A Appendix: Formalizing the Sinking Effect

Throughout the main text, we document that consumer inertia intensifies with market tenure and refer to a "sinking effect" whereby enrollees become progressively anchored to their default plan. In this appendix, we formalize this phenomenon using survival analysis. Rather than simply reporting that switching rates are low, we model the precise dynamics of how—and how quickly—new market entrants lose their propensity to actively re-optimize.

A.1 Setup and Motivation

Our 2018 new enrollee cohort provides a natural setting for survival analysis. All individuals entered the Swiss health insurance market simultaneously, so they share a common tenure clock that starts at zero. We observe them annually from 2019 through 2022, yielding up to four years of follow-up. The "event" of interest is the first deductible switch—the first time an enrollee actively changes their cost-sharing plan after initial enrollment. Enrollees who never switch during the observation window are right-censored at their last observed year.

This design addresses a key identification challenge: in cross-sectional data, it is impossible to distinguish whether low switching rates among long-tenured enrollees reflect a causal tenure effect or selection (i.e., individuals who are inherently passive self-selecting into long tenure). By tracking a single cohort from market entry, we observe the within-cohort evolution of switching behavior as tenure accumulates, holding the composition of the cohort fixed.

We proceed in two steps. First, we estimate Kaplan-Meier survival curves to visualize the probability that a new enrollee has not yet switched by each tenure year. Second, we compute discrete-time hazard rates to measure the annual conditional probability of first switching.

A.2 Kaplan-Meier Survival Curves

We define the survival function $S(t) = \Pr(\text{no switch by year } t)$ and estimate it nonparametrically using the Kaplan-Meier estimator. Figure 6 presents the results.

Panel A shows the overall survival curve. At market entry (2018), the survival probability is 1 by construction. By the end of the first year of tenure (2019), approximately 97% of new enrollees have not yet switched—only 2.7% make an active change in their first opportunity. By year 4 (2022), the survival probability remains above 85%, and the median survival time is never reached: more than half of all new enrollees *never* switch their deductible over the four-year observation window. The curve's shape is revealing. It declines gradually and

approximately linearly, with no sharp drop-off at any particular tenure year. This implies that the transition into inertia is not a sudden event triggered by a specific experience; rather, consumers gradually and steadily lose engagement with their plan choice as tenure accumulates.

Panel B stratifies the survival curves by age group at entry. The curves exhibit broadly similar shapes across age groups, with all cohorts experiencing the same gradual sinking into their default plan. The 66+ group exhibits modestly higher survival (lower switching), while younger and middle-aged cohorts are closely clustered. The parallel decay across groups suggests that the sinking effect operates similarly regardless of age at entry.

A.3 Discrete-Time Hazard Rates

Because our data are observed at annual intervals, we compute discrete-time hazard rates: the probability of switching for the first time in year t, conditional on not having switched in any prior year. Formally, the hazard rate at tenure t is:

$$h(t) = \Pr(\text{first switch in year } t \mid \text{no switch before year } t) = \frac{d(t)}{n(t)}, \tag{3}$$

where $d(t)$ is the number of first-time switchers in year t and $n(t)$ is the number of enrollees still at risk (not yet switched and still observed).

Table 8 reports the results. The overall hazard rate starts at 2.7% in year 1 (2019), rises to 4.3% in year 2, and then plateaus at approximately 4.3–4.6% through year 4. Two features of this pattern are noteworthy. First, the hazard rates are uniformly low: even at their peak, fewer than 5% of at-risk enrollees switch in any given year. The median survival time is never reached, meaning that the typical new enrollee remains in their initial plan indefinitely. Second, the hazard stabilizes quickly. After a modest increase from year 1 to year 2—likely reflecting a learning period in which some enrollees discover that their initial choice was suboptimal—the switching rate plateaus at a level far below what would be expected if consumers were continuously optimizing.

To benchmark these rates, Ketcham et al. (2015) report that in Medicare Part D—a setting with substantially more supply-side frictions including formulary changes, plan exits, and tier restructuring—cumulative switching rates reach approximately 10–11% per year. Our Swiss setting, where benefits are fully standardized and no such supply-side disruptions exist, produces comparable cumulative switching of approximately 15% over four years. The similarity is striking: even in a transparent, standardized market free of structural

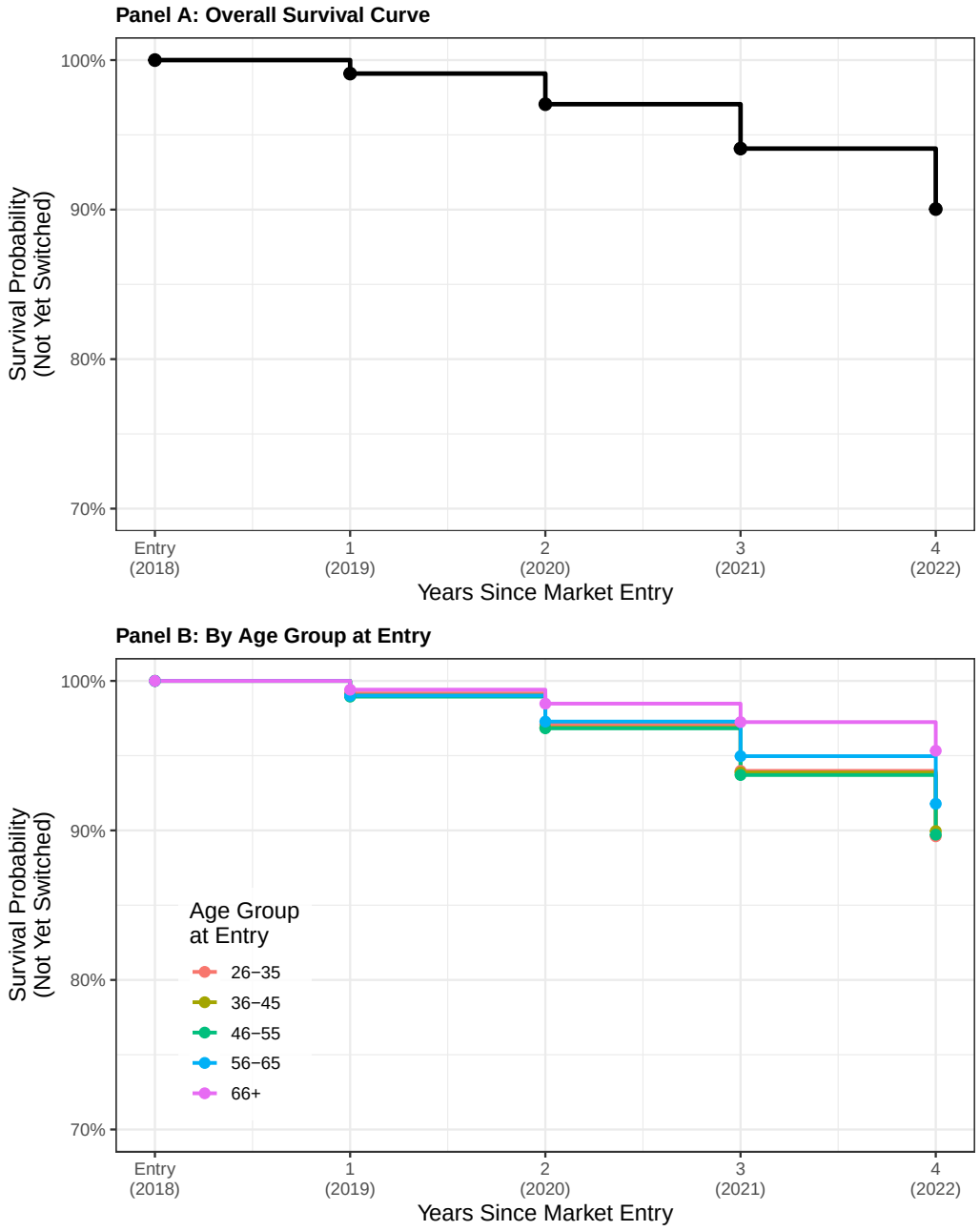


Figure 6: Kaplan-Meier Survival Curves: Time to First Deductible Switch

Notes: This figure plots Kaplan-Meier estimates of the survival function (probability of not having switched deductibles) for the 2018 new enrollee cohort, tracked from 2019 through 2022. Panel A shows the overall survival curve. Panel B stratifies by age group at market entry. The event is defined as the first deductible switch. Enrollees who never switch are right-censored at their last observed year. $N = 639{,}890$ new enrollees; 57,818 events (9.0%).

switching barriers, consumers exhibit inertia of a magnitude similar to that observed in far more complex environments. This suggests that the hazard rates we document reflect a

Table 8: Discrete-Time Hazard Rates: Probability of First Switch by Tenure Year

Age Group	Year 1 (2019)	Year 2 (2020)	Year 3 (2021)	Year 4 (2022)
26-35	0.025	0.042	0.045	0.045
36-45	0.027	0.045	0.048	0.043
46-55	0.030	0.045	0.049	0.045
56-65	0.031	0.042	0.046	0.039
66+	0.021	0.025	0.026	0.023
All	0.027	0.043	0.046	0.043

Notes: This table reports discrete-time hazard rates for the 2018 new enrollee cohort. Each cell shows the probability of switching deductibles for the first time in a given year, conditional on not having switched in any prior year. The at-risk population shrinks each year as switchers exit the risk set.

behavioral baseline—the rate at which consumers re-optimize when the only barrier is their own inattention.

A.4 Discussion

The survival analysis formalizes two key properties of the sinking effect documented in the main text:

1. **Rapid onset.** Over 90% of new enrollees never switch their deductible within four years of market entry. The transition from active chooser to passive default-holder occurs within the first one to two years of tenure, after which switching propensities stabilize at uniformly low levels. The cumulative switching rate of approximately 15% over four years is comparable in magnitude to the annual rates observed in Medicare Part D (Ketcham et al., 2015), despite the Swiss market's far simpler and more transparent choice architecture. This suggests that the sinking effect we document reflects a behavioral baseline—the irreducible friction cost of recurring choice under auto-renewal defaults.

2. **Resilience to incentives.** The hazard rate plateaus at under 5% per year regardless of tenure, implying that the vast majority of enrollees remain anchored to their initial plan indefinitely. This pattern is consistent with the mechanism analysis in the main text: while financial incentives can induce marginal switching, the choice architecture itself—specifically, the auto-renewal default—is the binding constraint on consumer engagement.

These findings provide a behavioral micro-foundation for the inertia documented in the

main analysis and reinforce the policy conclusion that interventions must directly address the default mechanism—through mandatory active choice intervals, algorithmic default re-optimization, or structured re-enrollment—rather than relying on financial incentives or information provision to counteract the sinking effect.

B Appendix: Counterfactual Methodology

This appendix describes the construction of the counterfactual exercises reported in Section 5, so that a reader with access to the underlying data can reproduce all reported figures.

B.1 Data

The analysis uses individual-level administrative records from the Swiss Federal Office of Public Health (BAG), covering the full population enrolled in mandatory health insurance from 2017 to 2022. For each enrollee-year, we observe the approved monthly premium, the chosen deductible, annual gross medical spending, and total premiums paid. The sample is restricted to adult enrollees on the standard deductible menu (CHF 300 to CHF 2,500) over the period 2019–2022, yielding approximately 6.8 million existing enrollees per year.

B.2 Recovering Premiums at Every Deductible Level

We observe each enrollee's monthly premium p_i at their chosen deductible d_i. The annual premium at the CHF 300 baseline is:

$$P_{300,i} = 12 \cdot p_i + (d_i - 300) \times 0.70. \tag{4}$$

This inverts the regulated rebate: an enrollee on a higher deductible pays a lower premium, and the difference is $(d_i - 300) \times 0.70$ per year. The premium at any deductible d is then:

$$P_{d,i} = P_{300,i} - (d - 300) \times 0.70. \tag{5}$$

B.3 Computing Out-of-Pocket Cost-Sharing

The out-of-pocket cost at deductible d given gross medical spending G_i is:

$$OOP_{d,i} = \begin{cases} G_i & \text{if } G_i \leq d, \\ d + 0.10 \times (G_i - d) & \text{if } d < G_i \leq d + 7{,}000, \\ d + 700 & \text{if } G_i > d + 7{,}000. \end{cases} \tag{6}$$

B.4 Identifying the Cost-Minimizing Deductible

The total cost to the enrollee under deductible d is $C_{d,i} = P_{d,i} + OOP_{d,i}$. The cost-minimizing deductible is:

$$d_i^* = \begin{cases} 300 & \text{if } C_{300,i} \leq C_{2500,i}, \\ 2{,}500 & \text{otherwise.} \end{cases} \tag{7}$$

B.5 Counterfactual Exercise 1: The Cost of Inertia

Foregone savings for enrollee i in year t is:

$$FS_{it} = C_{d_i,i} - C_{d_i^*,i} \geq 0. \tag{8}$$

In 2019, the average foregone savings among existing enrollees is CHF 361, with approximately 6.8 million adult enrollees in the sample. Aggregating yields the total welfare loss:

$$\text{Total welfare loss}_t = \sum_{i \in \text{existing}} FS_{it}. \tag{9}$$

For 2019, this sum amounts to CHF 2.5 billion. Including new enrollees raises the total to CHF 2.6 billion. Over the 2019–2022 period, the annual average is approximately CHF 2.3 billion, representing 6–7% of total enrollee spending. This exercise uses perfect foresight: we evaluate choice quality using realized spending in year t, providing an upper bound on the gains from a smart default.

B.6 Counterfactual Exercise 2: Risk Pool Equilibrium

For each existing enrollee, the insurer's margin under the status quo is:

$$M_{it}^{sq} = P_{it} - \underbrace{(G_{it} - OOP_{d_i,it})}_{\text{insurer payout}}, \tag{10}$$

where P_{it} is the observed premium, G_{it} is gross spending, and $OOP_{d_i,it}$ is cost-sharing at the chosen deductible. In 2019, the aggregate status quo margin across all existing enrollees is CHF 3.0 billion.

Under the counterfactual where the enrollee moves to the cost-minimizing deductible d_i^*:

$$M_{it}^{cf} = P_{d_i^*,it} - (G_{it} - OOP_{d_i^*,it}). \tag{11}$$

When all enrollees optimize, many shift to the CHF 2,500 deductible, lowering their premiums and increasing their cost-sharing. This reduces insurer premium revenue while also reducing insurer payouts. On net, the counterfactual aggregate margin in 2019 falls to CHF 1.8 billion. Gross medical spending G_{it} is held constant—we do not model moral hazard responses to the change in cost-sharing.

The systemic deficit is the aggregate margin loss from universal optimization:

$$\Delta_t = \sum_i M_{it}^{cf} - \sum_i M_{it}^{sq} < 0. \tag{12}$$

In 2019, $\Delta_t \approx -$CHF 1.1 billion. The deficit declines modestly over time to CHF 860 million by 2022 as the composition of enrollee spending shifts. To maintain the same aggregate margin, the required per-capita premium increase is:

$$\delta_t = \frac{|\Delta_t|}{N_t}, \qquad \text{percentage increase} = \frac{\delta_t}{\bar{P}_t} \times 100, \tag{13}$$

where $\bar{P}_t$ is the average annual premium. With approximately 6.8 million existing enrollees and an average annual premium of CHF 4,182 in 2019, this yields a per-capita increase of CHF 163, or 3.9%. Across the 2019–2022 period, the required increase ranges from CHF 129 to CHF 165 per enrollee (3.1–3.9%).

B.7 Interpretation and Limitations

Three features of this methodology merit discussion. First, the perfect-foresight assumption in Exercise 1 provides an upper bound on welfare losses; in practice, a smart default would need to predict future spending, which would yield somewhat smaller gains. Second, Exercise 2 holds gross spending constant, ignoring potential moral hazard responses to deductible changes. If enrollees who move to higher deductibles reduce their utilization, insurer payouts would fall further, partially offsetting the systemic deficit. Third, both exercises treat the 70% rebate rate as a binding constraint. In practice, some insurers offer rebates below the regulatory maximum; our calculations therefore represent the case where premium differentials across deductibles are at their largest.

References

Jason Abaluck and Jonathan Gruber. 2011. Choice Inconsistencies among the Elderly: Evidence from Plan Choice in the Medicare Part D Program. *American Economic Review* 101, 4 (June 2011), 1180–1210. doi:10.1257/aer.101.4.1180

Jason Abaluck and Jonathan Gruber. 2023. When Less is More: Improving Choices in Health Insurance Markets. *The Review of Economic Studies* 90, 3 (2023), 1011–1040. doi:10.1093/restud/rdac050

Sumit Agarwal, John C. Driscoll, Xavier Gabaix, and David Laibson. 2009. The Age of Reason: Financial Decisions over the Life Cycle and Implications for Regulation. *Brookings Papers on Economic Activity* 2009, 2 (2009), 51–117. doi:10.1353/eca.0.0067

Saurabh Bhargava, George Loewenstein, and Justin Sydnor. 2017. Choose to Lose: Health Plan Choices from a Menu with Dominated Option. *The Quarterly Journal of Economics* 132, 3 (Aug. 2017), 1319–1372. doi:10.1093/qje/qjx011

Christian Biener and Lan Zou. 2024. More options, more problems? Lost in the health insurance maze. *Journal of Risk and Insurance* (Feb 2024). doi:10.1111/jori.12461

George J. Borjas. 1987. Self-Selection and the Earnings of Immigrants. *American Economic Review* 77, 4 (1987), 531–553.

Zarek Brot-Goldberg, Timothy Layton, Boris Vabson, and Adelina Yanyue Wang. 2023. The Behavioral Foundations of Default Effects: Theory and Evidence from Medicare Part D. *American Economic Review* 113 (10 2023), 2718–58. Issue 10. doi:10.1257/AER.20210013

M. Kate Bundorf, Jonathan D. Levin, and Neale Mahoney. 2012. Pricing and Welfare in Health Plan Choice. *American Economic Review* 102, 7 (2012), 3214–3248. doi:10.1257/aer.102.7.3214

Ramsis Croes, Frederik Schut, and Marco Varkevisser. 2025. Adverse selection and consumer inertia: Empirical evidence from the Dutch health insurance market. *The European Journal of Health Economics* 26 (2025), 295–313. doi:10.1007/s10198-024-01725-8

Liran Einav, Amy Finkelstein, Stephen P Ryan, Paul Schrimpf, and Mark R Cullen. 2013. Selection on Moral Hazard in Health Insurance. *American Economic Review* 103, 1 (Feb. 2013), 178–219. doi:10.1257/aer.103.1.178

Benjamin Handel and Joshua Schwartzstein. 2018. Frictions or Mental Gaps: What's Behind the Information We (Don't) Use and When Do We Care? *Journal of Economic Perspectives* 32, 1 (Feb. 2018), 155–178. doi:10.1257/jep.32.1.155

Benjamin R Handel. 2013. Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts. *American Economic Review* 103, 7 (Dec. 2013), 2643–2682. doi:10.1257/aer.103.7.2643

Benjamin R. Handel and Jonathan T. Kolstad. 2015. Health Insurance for "Humans": Information Frictions, Plan Choice, and Consumer Welfare. *American Economic Review* 105, 8 (2015), 2449–2500. doi:10.1257/aer.20131126

Florian Heiss, Daniel McFadden, and Joachim Winter. 2021. Inattention and Switching Costs as Sources of Inertia in Medicare Part D. *American Economic Review* 111, 1 (2021), 162–200. doi:10.1257/aer.20180409

Jonathan D Ketcham, Claudio Lucarelli, Eugenio J Miravete, and M. Christopher Roebuck. 2012. Sinking, Swimming, or Learning to Swim in Medicare Part D. *American Economic Review* 102, 6 (Oct. 2012), 2639–2673. doi:10.1257/aer.102.6.2639

Jonathan D. Ketcham, Claudio Lucarelli, and Christopher A. Powers. 2015. Paying Attention or Paying Too Much in Medicare Part D. *American Economic Review* 105, 1 (Jan. 2015), 204–233. doi:10.1257/aer.20120651

Chenyuan Liu and Justin Sydnor. 2022. Dominated Options in Health Insurance Plans. *American Economic Journal: Economic Policy* 14, 1 (Feb. 2022), 277–300. doi:10.1257/pol.20190312

James Marton, Aaron Yelowitz, and Jeffery C. Talbert. 2017. Medicaid program choice, inertia and adverse selection. *Journal of Health Economics* 56 (2017), 292–316. doi:10.1016/j.jhealeco.2017.10.002

Daniel McCarthy and Peter Fader. 2017. Subscription Businesses Are Booming. Here's How to Value Them. *Harvard Business Review* (Dec. 2017). Digital article.

Evan Saltzman, Samuel Scheffler, Jeremy M. Shapiro, Moritz Sudhof, and Pietro Tebaldi. 2021. Measuring the Value of Choice in Health Insurance. *American Economic Review* 111, 12 (2021), 3921–3976. doi:10.1257/aer.20200448

Swiss Federal Statistical Office. 2024. Population by Migration Status. Federal Statistical

Office. https://www.bfs.admin.ch/bfs/en/home/statistics/population/migration-integration/foreign.html

Swiss Federal Statistical Office. 2025. Swiss Earnings Structure Survey 2024: Initial Findings. Federal Statistical Office. https://www.bfs.admin.ch/bfs/en/home/statistics/work-income/wages-income-employment-labour-costs/earnings-structure.html