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# What Factors Drive Faithful Financial Reporting by Subnational Governments? Insights from Switzerland

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### Abstract

Using the context of the 26 Swiss subnational governments, this paper aims to empirically identify factors driving—or not—the use of accounting and reporting standards aimed to increase financial faithfulness. Because the 26 entities had a certain autonomy, as they jointly implemented two major successive accounting reforms over the past forty years, policy outcomes were heterogeneous. Findings suggest that both citizen demand and government supply-side factors contribute to explaining the extent to which each entity's policy led to a faithful reporting. This paper thus highlights some of the challenges in implementing supranational (e.g., IPSAS, EPSAS) or national accounting standards at lower tiers, when governments have some leeway over the process, while yet facing strong democratic scrutiny.

### Keywords

Financial faithfulness; Governmental accounting standards; Factors; IPSAS; Swiss subnational governments; Democracy.

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### 1 Introduction

The increased attention to improving public sector accountability and transparency over recent decades has encouraged various related reforms, including the modernization of accounting and reporting systems (Chan, 2003). The International Public Sector Accounting Standards (IPSAS or IPSASs, late 1990s) have fostered this process by providing a common framework for a harmonized application of accrual accounting principles (International Public Sector Accounting Standards Board -IPSASB, 2022). Accrual accounting enhances the transparency and comparability of public financial information while improving its usefulness with a view to governmental decision-making and accountability towards the general public (Manes-Rossi et al., 2016). It also facilitates a more faithful reporting of public financial information, i.e., according to a comprehensive, neutral and free from material error depiction of transactions (IPSASB, 2022). Although many national or local governments have claimed to transition towards an extensive application of accrual accounting principles, often using IPSAS as a reference, the implementation of related reforms has remained highly flexible and with heterogeneous outcomes (e.g., Christiaens et al., 2015).

Previous studies based on contingency, institutional, actor-network, legitimacy or agency theoretical frameworks, among others, have mainly focused on government representatives and officials (as suppliers and/or users), when explaining implementation processes or outcomes of accrual-based or IPSAS-related reforms, at national or subnational levels, investigating how their characteristics and interests affect the evolution of governmental accounting and reporting systems, and the resulting provision of public financial information. However, besides the government viewpoint, such outcomes also depend on a range of other primary stakeholders of public financial information (i.e., users/demanders, such as citizens, managers, investors and lenders, oversight and regulatory bodies, lobbies, analysts, auditors, the media) with different needs and interests (IPSASB, 2022). Unfortunately, these other groups remain largely under-researched (van Helden and Reichard, 2019).

This study therefore aims to tackle the evolution of governmental accounting and reporting systems and the resulting provision of public financial information through the joint and specific lens of government and citizens. Governments are generally responsible for safely managing citizen resources and monies, while providing them with the quality goods and services they need. Citizens are involuntary providers of financial resources who cannot decide whether or not to pay taxes, nor benefit from a direct exchange relationship between the resources provided and the services received (Brusca and Montesinos, 2006: 205). Public financial reports (e.g., financial statements) are thus a key accountability tool that citizens may use to evaluate whether their governments are acting responsibly and fulfilling their obligations, especially at subnational levels where concerns are most directly felt (Haustein and Lorson, 2022). However, significant discrepancies may exist between government incentives for

providing a faithful representation of the financial situation and citizen demand for transparent and accountable reporting of public financial information (Pina et al., 2009).

Using an innovative approach, this paper argues that public sector accounting reforms are inherently political processes which should consider the views of both citizens (as demanders of public financial information) and governments (as suppliers of public financial information). Therefore, the goal of the paper is to address the following research question:

What factors drive—or not—the use of governmental accounting and reporting standards that increase the faithfulness of public financial information?

The empirical investigations were conducted in the context of the 26 Swiss cantons, a heterogenous group of subnational administrative entities (equivalent to states or provinces), that jointly reformed their accounting and reporting standards on two main successive occasions between 1978 and 2018, under a strongly democratic polity. However, Switzerland's cantonal autonomy in terms of setting standards has led to heterogeneous policy outcomes. Given this research setting, a two-period pooled OLS regression model was estimated to explore citizen demand and government supply-side variables influencing 'cantonal scores of financial maturity' (CSFM)—which reflect the extent to which each entity's accounting policy led to faithful financial reporting.

This research shifts the emphasis from the incentives or challenges in support of public accounting reforms on a regulatory or organizational level (e.g., Anessi-Pessina et al., 2010; Jorge et al., 2019) to the similarities/differences in accounting reform outcomes and adherence (e.g., Christiaens, 1999; Carvalho et al., 2007; Christiaens et al., 2015). Switzerland hence offers a suitable context for investigating potential political issues at play when standards are set at an upper level and lower tiers are then advised to reform their homegrown accounting and reporting systems accordingly, while given some implementation margin (Soguel and Luta, 2021); all this, in a context where citizen views directly matter.

The remainder of the paper is structured as follows: The second section provides a literature overview and hypotheses development. The third section introduces the Swiss institutional context. Following this, the fourth section details the methodology. The fifth section presents the empirical results, and the final section is devoted to the conclusion.

# 2 Literature overview and hypotheses

### 2.1 Public accounting and financial reporting in a democratic context

Public accounting and financial reporting systems are used to inform and discharge the accountability of government representatives who manage public resources on behalf of their principals, namely citizens. However, accountability relationships between citizens and their representatives can be hard to monitor in practice, leaving room for inefficiencies or corruption (Chan, 2003). When the financial information provided thoroughly details the activities and decisions of politicians, it becomes a tool for curbing the abuse of power. Thus, government accountability improves when citizens can access high-quality public financial information.

In many European (continental) countries, public sector functioning and accountability relationships are ruled by an administrative law model of governance, implying that legislation defines the framework surrounding notably public financial management and the provision of financial information. Furthermore, public finance reforms are mainly operated through legislative revision or amendment (Jorge et al., 2019). As political processes, in a democratic context any legislative-based accounting reforms should thus consider the views of governments and, to some extent, those of citizens.

Public accounting and financial reporting are often perceived as a specialized, technical topic, especially by average citizens who are neither well-informed nor keen experts on the matter (Cohen and Karatzimas, 2015). Citizens also show low interest in accounting and reporting matters, as seen in their limited ability to properly understand and process the information in government financial reports (e.g., van Helden and Reichard, 2019; Haustein and Lorson, 2022). Moreover, decision-making power is usually concentrated in the hands of the political elite (Brusca et al., 2013). This is especially so under representative democracy, where citizens exert indirect control on public policy or legislation by rewarding (or penalizing) their representatives' decisions through elections. Conversely, direct democracy incentivizes citizens to collect more information and participate more intensely.

Modern political and public policy decision-making processes have aimed to better integrate citizen views since their involvement and participation in public sector governance constitutes a pillar for the quality of democracy and public trust (Fung, 2015). Accordingly, awareness is increasing about the need to further consider democratic demands, especially in terms of the transparency, accessibility and understandability of public financial information (Brusca and Montesinos, 2006; Cohen and Karatzimas, 2015; Cohen et al., 2017)—but also about the need to incentivize citizen participation in public financial decision-making, notably through co-production processes (e.g., participatory budgeting, e-democracy).

Consequently, governments are increasingly prompted to deal with citizen views—as voters, major providers of the government's financial resources or service recipients—as they align their systems with current international public sector accounting and reporting requirements, such as the IPSAS (IPSASB, 2022). Yet while public sector accounting reforms are the outcome of a technical, almost scientific process, their translation into legislation involves an intricate political interplay between different forces and agents—namely citizens and governments, in a democratic context—seeking to fulfill their own purposes (i.e., public trust and satisfaction vs. political accountability and legitimacy) (Pina et al., 2009). Hence, both elements can take potentially conflicting stances on how public financial information should be provided and then used. This depends on how they perceive and value the challenge of strengthening financial accountability and transparency, based on their respective needs and interests (Piotrowski and Van Ryzin, 2007; van Helden and Reichard, 2019). Accordingly, distinct theoretical perspectives should apply when investigating the factors driving their respective positions on this issue.

The two following subsections are not intended to present an exhaustive review of the literature that may have tackled connected issues using different theories or users' perspectives. Instead, I seek to provide relevant theoretical insights that aim to better combine both government supply and citizen demand perspectives when investigating the factors that explain the outcome of public sector accounting reforms, from a political standpoint. Indeed, this specific issue remains scarcely addressed.

### 2.2 Citizen demand-side perspective: some literature and hypothesis

The theory of political cleavage offers a consistent framework to explore a citizen demand-side perspective. According to Lipset and Rokann (1967), a variety of cleavages generally shape the outcome of political processes in western societies. These cleavages stem from socio-structural factors (e.g., class, education, culture, religion, status) and create ideological, identity or politicization-based partition blocs among voters. Cleavages encourage support for the political party, actor, or option that will best defend the group's ideology. This infers that different political or ideological streams can shape democratic demands, notably for transparency and accessibility of public information, accessibility of public information.<sup>[1]</sup>

The **educational level** is often identified as generating marked partition among voters. Highly educated citizens tend to have a broad understanding of advanced or complex political topics, including public sector accounting and financial management. Consequently, they may request more accurate and consistent information from government (e.g., Piotrowski and Van Ryzin, 2007). Carvalho et al. (2007) report that well-educated individuals are also keener to support reformative political agendas.

Although **culture** (i.e., traditions, beliefs and values) is commonly identified on the side of governments, it can also impact citizen attitudes and preferences towards public policies and management. This can manifest via different levels of confidence in State institutions, different attitudes towards publicly provided goods and services, or fiscal preferences (e.g., Anessi-Pessina et al., 2010; Pujol and Weber, 2003), also leading to varying demands for public accountability.

Citizen **partisan ideology** may also influence public policies and reform outcomes. Voter ideology impacts the strategies set by their representatives, supporting the existence of a partisan cycle model. Left-wing partisans often advocate for larger State intervention, tolerating larger deficits and higher public debt; conversely, right-wing partisans usually advocate budgetary efficiency (Cusack, 1997). By extension, citizen political ideology may also matter when discussing the extent of information requested for monitoring the quality of public resource management. Some authors show that left-wing partisans support greater access to information on public activities, as enhanced financial transparency is considered a consistent way of improving good governance (e.g., Guillamón et al., 2011; Sol, 2013) while other scholars argue that both left-wing and right-wing partisans prefer financial transparency, depending on the nature of the information reported or the political composition of the government (e.g., Piotrowski and Van Ryzin, 2007). Accordingly, our main hypothesis for the demand-side is:

H1: There is a relationship between citizen background and ideological or political position and the degree to which governments faithfully report their financial information.

# 2.3 Government supply-side perspective: some literature and hypotheses

Public choice theory provides valuable insights for explaining how government representatives choose to demonstrate to voters that they are dutifully fulfilling their social welfare goals through sound financial management. Indeed, some politicians may have a vision of welfare that diverges from that of the public, while others may selfishly try to maximize their own utility by capturing rents from the environment in which they exert their power and functions (e.g., (re-)election securing), at the risk of financial waste and inefficiencies (Buchanan and Tollison, 1972). Consequently, government representatives are not necessarily disposed to benevolently provide all required or expected information, especially with regards to financial management (Pina et al., 2009). They could seek instead to take advantage of any information asymmetry stemming from a restrictive or simplistic provision of financial content. Accordingly, elements taken from the political, financial, and institutional environment are essential for understanding how governments negotiate the trade-off between setting accounting policies, whether to enhance the faithfulness of the reported public financial information, or that make it possible to adapt the depicted financial reality to suit their own interests (Guarini, 2016).

Political competition, meaning inter-party rivalry within or between government bodies, may affect reforms aiming to increase incumbent accountability through public financial information. When political competition is low, politicians are more confident about remaining in office and promote lower levels of transparency on public activities (Sol, 2013), whereas stronger political competition compels them to signal their efforts for balanced political compromise allowing for sound financial management (e.g., Pérez et al., 2014). In contrast, political competition can induce a voluntary reduction of accessibility to accounting information when politicians worry about weakening their position or reducing their credibility; on the other hand, lower political competition may provide an incentive to communicate more extensively on public activities (Guarini, 2016). However, research in the European context highlights an overriding tendency to arrange the reported financial information when political pressure is stronger (e.g., Cohen et al., 2019). Accordingly, the second hypothesis is:

H2: There is a (negative) relationship between political competition and the degree to which governments faithfully report their financial information.

The **financial condition** of a government directly reflects the quality of its public money management. Executive members especially (e.g., finance minister) may want to report a sound and stable financial position, since their capacity of achieving this objective directly affects their reputation and personal benefits (Buchs and Soguel, 2022). Several researchers argue that lower deficits and public debt are associated with higher degrees of fiscal transparency (e.g., Guillamón et al., 2011; Sol, 2013). Yet because financial soundness is perceived as central to good governance, governments can also seek to offset an unfavorable financial condition by providing higher-quality financial information to enable tighter control (Christiaens, 1999). Indeed, transparency contributes to mitigating information asymmetry and risk perception upon voters or lenders on capital markets (Bastida et al., 2017). However, when efficiency is recurrently unmet because of blatant financial mismanagement, governments may seek to 'manage' financial information by hiding or arranging the reported information, notably to safeguard their political or electoral interests (Clémenceau and Soguel, 2018; Cohen et al., 2019). Therefore, the third hypothesis is:

H3: There is a relationship between the prevailing financial context and the degree to which governments faithfully report their financial information.

Recent objectives to improve public accounting and reporting systems have mainly involved internationally unifying policies (external harmonization), chiefly for comparability and understandability purposes. Country-based harmonization also enabled governments to align accounting practices, either horizontally—within a level of government—or vertically—across the different levels of government (Manes-

Rossi et al., 2016). In countries with decentralized or multi-level systems of governance, both horizontal and vertical harmonization may be particularly at stake at subnational levels where governments are often subject to strong comparative (or "yardstick") policy competition (Benz, 2012) or political scrutiny (e.g., Caruana and Zammit, 2019). Therefore, they may be particularly prone to coordinate their policies, to gain accountability by pursuing common goals and using similar means or standards. Usually, accounting policy **coordination** or **diffusion** is particularly strong among governments sharing geographical proximity or common administrative boundaries (Carvalho et al., 2007). Hence, the fourth hypothesis is:

H4: The diffusion of practices among governments has an incidence on the degree to which they faithfully report their financial information.

# 3 Context for public sector accounting and financial reporting in the Swiss cantons

Switzerland is a federal State comprising three institutional levels: the Confederation (national), the 26 cantons (state) and their municipalities (local). Cantonal and municipal governments share the task of delivering public services with national level, while enjoying some organizational and fiscal autonomy (e.g., tax collection, financial management and financial reporting).<sup>[2]</sup> Each cantonal and municipal government has a legislative and executive branch, both elected through universal direct suffrage.<sup>[3]</sup>

The cantonal level executive branch (including the finance minister) sets the rules and modalities for preparing and presenting public financial information. The legislative branch (Parliament) establishes the related legal framework in a cantonal Financial Management Act of Parliament (FMAP). The FMAP includes provisions on how the financial management process works. It also specifies the standards used to prepare and disclose the financial statements. According to the country's semi-direct democracy, citizens may express their opinion on any cantonal law enacted by the Parliament, including the FMAP. They may oppose amendments by requesting an optional referendum; they may also raise legislative issues through popular initiatives. Although seldom applied, these tools obviously impel government representatives to integrate citizen views in policy decision-making.

The 20th century saw several attempts to harmonize cantonal (and municipal) accounting policies. In 1977, the intercantonal Conference of Cantonal Finance Ministers (CFM) decided to design a first Harmonized Accounting Model (HAM1) (CFM, 1981) intended for cantons—and potentially their municipalities. The CFM is organized to discuss and coordinate the cantons on commonly shared fiscal matters by providing non-binding guidelines and recommendations. This means that each canton was free to implement HAM1 as well as decide when and to what extent it would comply. The heart of HAM1 consisted of a detailed chart of accounts

including a statement of financial performance and a statement of financial position. HAM1 made accrual accounting and budgeting the cantonal standard. However, it provided little guidance on recognition and measurement (e.g., hidden reserves, provisions or accrual/deferral of expenses and revenues), or additional disclosure (Soguel and Luta, 2021). This first reform was a slow process, taking until 1999 to be fully implemented by all the cantons and involving various policy outcomes.

In the early 2000s, both national and subnational levels of government faced growing concerns for improved and standardized financial reporting; this was while IPSAS became available (Soguel and Luta, 2021). In response, the secondgeneration of the Harmonized Accounting Model (HAM2) was released (CFM, 2008). It then took until 2018 for all cantons to adopt the revised model as their standard. HAM2 provides 20 standards that the cantons are free to implement or not. These standards include all IPSAS presentation guidelines and most of the recognition requirements. The revised chart of accounts remains a core element under HAM2. But in contrast to HAM1, HAM2 is more prescriptive for recognition and measurement. Furthermore, it limits the possibility of accumulating hidden reserves and imposes a more systematic accrual/deferral of expenses and revenues (Soguel and Luta, 2021). However, on some points, these standards offer the cantons alternative and less stringent accounting policies by allowing for political finessing (e.g., additional depreciation charges, annual performance smoothing, pre-financing) when preparing financial statements (CFM, 2008). By issuing a joint set of standards with alternatives, the CFM were able to fulfill the expectations of two broad categories of cantonal governments with opposite goals: (i) to give a faithful representation of their financial condition while strengthening the practicality and transparency of their financial statements for external users such as citizens; or (ii) to follow a politically strategic and conservative approach, at the occasional expense of a complete and regular presentation of financial statements (Soguel and Luta, 2021).

# 4 Methodology

## 4.1 Explained variable: Cantonal scores of financial maturity (CSFM)

Soguel and Luta (2021) developed an index-based method to assess the extent to which the 26 Swiss cantons' accounting policies led to faithful reporting under each successive HAM reform. Figure 1 presents their list of criteria.

# Figure 1 — Criteria used to assess Swiss cantons' accounting standards, in decreasing order of importance

- 1. Use of accrual rather than cash basis accounting principles
- 2. Linear depreciation method, over useful life rather than degressive depreciation
- 3. Absence of additional depreciation charges (i.e., no political finessing)
- 4. Low threshold for accruals and deferrals of past or future revenues and charges
- 5. Absence of annual performance smoothing, e.g., using rainy-day funds (i.e., no political finessing)
- 6. Measurement of non-administrative assets at market value rather than at depreciated historical cost
- 7. Accrual recognition of tax revenues
- 8. Absence of pre-financing (i.e., no political finessing)
- 9. Low threshold for the recognition of capital expenditures in the statement of financial position
- 10. Start of depreciation as soon as the asset is available for use
- 11. Measurement of administrative assets at market value rather than at depreciated historical cost
- 12. Presentation of financial indicators
- 13. Separate recognition of capital expenditures from the obtained grants to finance them
- 14. Separate recognition of plots of land from buildings erected on them
- 15. Presentation of a cash flow statement in accordance with IPSAS (investing activities including vield-producing investments rather than financing activities including yield-producing investments)

Notes: Adapted from Soguel and Luta (2021). (i) IPSAS does not directly prescribe criterion 12. However, the latter contributes to the understandability of financial statements that IPSAS aims for.

For each criterion, the authors assigned a maximum value of 1 (100%) to the cantons whose accounting policy enabled a high degree of financial faithfulness, or 0 (0%) in the opposite case. As criteria may contribute with varying levels of importance to financial faithfulness, each was weighted accordingly. Eventually, the 15 weighted (and coded) values were summed to compute a 'cantonal score of financial maturity' (CSFM)—ranging between 0% and 100%—for each canton (see Soguel and Luta, 2021 for methodological precisions). A score close to 100% represented a high level of compliance with IPSAS recommendations, thus high standards of faithfulness in financial reporting. Likewise, a score close to 0 (%) reflected accounting and reporting practices that widely departed from IPSASs' benchmark, implying lower financial faithfulness. This process was performed separately for HAM1 and HAM2. [4]

Table 1 shows the CSFM scores under each HAM reform. As HAM1 already enabled an extensive use of accrual accounting, various degrees of faithful financial reporting resulted. Therefore, CSFM ranged between 27.26% (SH) and 88.25% (GE). HAM2 brought cantonal accounting standards yet closer to IPSAS, as scores rose to between 45.96% (OW) and 97.76% (ZH). Note, however, that most of the top-scoring cantons (ZH, GE, BS, LU) took the step of referring to IPSAS in their FMAP, alongside HAM2 implementation (see Fuchs et al., 2017). Overall, all

cantons took the successive reforms as an opportunity to modernize their accounting policies to some extent. However, some cantons still resort to various forms of political finessing, generating lower scores. The high standard deviations suggest that practices remained varied under each HAM.

Table 1 — CSFM and year of implementation of HAM1 and HAM2 reforms

Canton	Score of financial maturity (%)		Year of implementation	
	HAM1	HAM2	HAM1	HAM2
Aargau (AG)	48.17	76.77	1995	2014
Appenzell Ausserrhoden (AR)	47.16	68.73	1978	2014
Appenzell Innerrhoden (AI)	34.98	53.12	1979	2015
Basel Land (BL)	45.42	84.45	1981	2010
Basel Stadt (BS)	83.81	97.55	1999	2013
Bern (BE)	47.14	76.47	1989	2017
Freiburg (FR)	47.75	55.37	1996	2011
Geneva (GE)	88.25	87.37	1985	2014
Glarus (GL)	34.98	59.19	1984	2011
Graubünden (GR)	49.37	78.20	1988	2013
Jura (JU)	54.57	54.26	1979	2012
Lucerne (LU)	55.34	97.52	1988	2012
Neuchâtel (NE)	66.76	72.17	1981	2018
Nidwalden (NW)	46.71	60.54	1980	2010
Obwalden (OW)	33.33	45.96	1986	2012
Schaffhausen (SH)	27.26	65.20	1990	2018
Schwyz (SZ)	49.27	72.05	1987	2016
Solothurn (SO)	67.98	87.61	1982	2012
St. Gallen (SG)	46.59	55.21	1997	2014
Thurgau (TG)	41.49	62.40	1987	2012
Ticino (TI)	56.38	63.72	1986	2014
Uri (UR)	55.07	62.91	1984	2012
Valais (VS)	52.22	48.62	1983	2018
Vaud (VD)	50.31	57.26	1992	2014
Zug (ZG)	60.04	46.55	1979	2012
Zürich (ZH)	48.61	97.76	1982	2009
Min.	27.26	45.96	1978	2009
Max.	88.25	97.76	1999	2018
Mean	51.50	68.73	1986	2013
Median	48.94	64.46	1986	2013
Std. Dev.	13.80	15.90	6	3

Source: Adapted from Soguel and Luta (2021).

# 4.2 Explanatory variables

#### 4.2.1 Citizen demand-side variables

**Education (H1)** represents the percentage of cantonal inhabitants enrolled in a Swiss university. Given the literature previously discussed, and the Swiss context, a positive relationship is expected with the CSFM explained variable.

Since linguistic groups are more likely to share common cultural traits, values and/or beliefs, **culture (H1)** is proxied by a dummy taking the value of 1 for Frenchor Italian-speaking (Latin) cantons or 0 for German-speaking cantons. Indeed, the cultural cleavage between Switzerland's language areas is deeply rooted and often translates into diverging attitudes towards public policies. Latin (i.e., French and Italian-speaking) citizens are known to defend larger public intervention while German-speaking citizens are generally more concerned by efficiency in public services provision and rigor in financial management. A negative relationship is thus expected.

Additionally, at the cantonal level, the electoral system is based on a direct ballot and proportional (mainly in cantonal parliament) or majoritarian (mainly in cantonal executive) representation. Constituent partisan preferences thus tend to be reflected in the composition of cantonal bodies, especially the legislature. **Partisan ideology** (H1) represents the share of cantonal parliament seats occupied by right-wing political parties. [5] Given the mixed evidence (see subsection 2.2), the sign of its relationship with CSFM remains to be identified in the Swiss context.

## 4.2.2 Government supply-side variables

With regards to political competition, **fragmentation (H2)** indicates the number of political parties represented in the cantonal executive. Additionally, **concordance (H2)** reflects the alignment between the executive and the legislative powers through the share of seats in the parliament held by the parties represented in the executive. Considering the literature previously discussed, the sign of the relationship is respectively expected to be negative and positive in the Swiss context.

In terms of the financial context, **fiscal balance (H3)** measures the difference between total (operating and investment) revenues and expenditures. It indicates the cash available to pay down the government's debt, as well as show whether citizens paid adequate taxes and received a correct amount of public services, for a reasonable cost. The (gross) **debt (H3)** level reflects each canton's financial position, i.e., its level of reliance on debt. The trade-off between a strategically prudent or faithful reporting of financial information may be particularly salient for cantonal governments facing an unsustainable financial situation since their

reputation and chances of electoral success are directly at stake. Therefore, a negative relationship is expected in both cases.

Given Switzerland's federalist structure, municipal scores of financial maturity, (MSFM) (H4) is used to measure the extent to which the policies implemented by Swiss municipalities led to faithful reporting under each successive HAM reform. [6] Indeed, the existence of a common context and connected political issues may mean that cantonal and municipal accounting policies evolve similarly (i.e., vertical harmonization), drawing scores of financial maturity upwards (or downwards) at both institutional levels. A positive relationship should be observed.

### 4.2.3 Control variables

The cantonal **population** is a proxy for the size of government, as commonly seen in previous literature (e.g., Christiaens, 1999; Carvalho et al., 2007). The larger the population, the greater the amount of financial resources managed by governments to deliver public services (Guillamón et al., 2011). Furthermore, as the number of citizens increases, so does the amount of people with a potential interest in monitoring government activities and performance. Accordingly, larger governments may be prompted to opt for increased levels of financial disclosure to better fulfill their accountability requirements (Sol, 2013).

**Voter turnout** measures the cantonal share of participation in national ballots, since the objects submitted for vote, as well as election conditions, may differ at the cantonal level. This variable proxies citizen involvement in politics, and by extension it should reflect their demand for government transparency (Piotrowski and Van Ryzin, 2007; Sol, 2013). Higher voter turnout may indicate that citizens are more prone to request information on government activities and performance, mainly for monitoring or political awareness, whereas lower voter turnout may reflect the opposite (Guillámon et al., 2011).

Pace is a dummy variable which accounts for the differences observed among early bird cantons (EB=1) that introduced HAM reforms in the first five years and latecomer cantons (LC=0). The cantons that introduced HAM1 relatively quickly were also often those to first introduce HAM2, and likewise for latecomer cantons (Soguel and Luta, 2021). In line with previous findings, early bird cantons are expected to reach higher maturity levels over latecomer ones.

**Stage** is a dummy variable which distinguishes between HAM1 and HAM2 reform timeframes. The faithfulness of financial reporting should be overall improved between the two successive reforms.

Table 2 provides a statistical description of the model's parameters. [7]

Table 2 — Descriptive statistics for explained and explanatory variables

Variable	Min.	Max.	Mean	Std. Dev.
EXPLAINED VARIABLE				
Cantonal scores of financial maturity (CSFM)	27.26	97.76	61.11	17.12
EXPLANATORY VARIABLES				
Demand-side explanatory variables				
Education	0.53	1.79	1.04	0.30
Culture	0.00	1.00	0.27	0.45
Ideology	0.00	64.00	42.39	12.91
Supply-side explanatory variables				
Fragmentation	0.00	5.00	3.53	0.92
Concordance	0.00	1.00	0.79	0.18
Balance	-2.10	1.63	-0.03	0.59
Debt	0.85	3.46	1.72	0.61
Municipal scores of financial maturity (MSFM)	16.79	97.55	58.49	16.16
Control variables				
Population	10.21	14.08	12.05	1.05
Voter turnout	52.03	73.73	64.62	4.40
Pace	0.00	1.00	0.49	0.51
Reform stage	0.00	1.00	0.49	0.51

Notes: (i) Data sources: Swiss Federal Statistical Office, Swiss Political Year, Swiss Federal Finance Administration or own calculations. (ii) Financial variables are expressed in real terms and per capita in units of 1'000 Swiss Francs (CHF) for the sake of comparison between cantons. (iii) Cantonal population and debt variables are logarithmically transformed.

### 4.3 Regression model and estimation specification

Given the diversity of accounting policies and the different paths, the Swiss cantons offer a suitable context for investigating what helps or hinders greater financial faithfulness. Consequently, the following two-period linear regression model is used to test hypotheses on the variables that might explain CSFM under both HAM reforms:

$$CSFM_{i,t} = \alpha + \beta_1 Education_{i,t-2} + \beta_2 Culture_{i,t-2} + \beta_3 Ideology_{i,t-2}$$

$$+ \beta_4 Fragmentation_{i,t-2} + \beta_5 Concordance_{i,t-2} + \beta_6 Balance_{i,t-2}$$

$$+ \beta_7 Debt_{i,t-2} + \beta_8 MSFM_{i,t-2} + \beta_9 Population_{i,t-2}$$

$$+ \beta_{10} Voter turnout_{i,t-2} + \beta_{11} Pace_{i,t} + \beta_{12} Stage_{i,t} + \epsilon_{i,t}$$

$$(1)$$

where  $\alpha$  is the constant term,  $\beta$  are the estimated coefficients associated to each explanatory and control variables,  $\varepsilon$  is the error term, i indicates the observed canton and t represents year of HAM1 and HAM2 implementation.

The sample consists of an unbalanced panel of 49 observations. All the cantons—except Appenzell Innerhoden (AI) and Vaud (VD)<sup>[8]</sup>—are considered twice between 1976 and 2016, according to when they implemented each HAM reform.

Accounting reforms require extensive legal, educational, and even operational (IT, publishing) preparations. As indicated by field experts, an average of two years elapsed between the design of the new cantonal accounting standards and the corresponding rules (year t-2), and the first application (year t). The level of the explanatory and some control variables is the one that prevailed when the main policies of each reform were designed within each canton, i.e., two years before the actual introduction of each accounting model (e.g., the 1987 and 2015 levels for the canton of Bern that brought HAM1 and HAM2 into force in 1989 and 2017, respectively).

Given that the variation of the explained variable is overall more prominent between cantons than across time (see Appendix I), the model is estimated by a pooled ordinary least squares (pooled OLS) regression method to emphasize cross-sectional differences rather than temporal aspects. Robust standard errors are computed using cantonal (state) clustering to account for eventual heteroskedasticity or correlation in errors within clusters.

### 5 Results

Table 3 presents the results from the multivariate regression analysis. The adjusted R<sup>2</sup> peaks at 67%, indicating that more than half of the variance of the CSFM is explained by the set of explanatory variables. However, further robustness checks were performed to ensure results validity (see Appendix II).

Table 3 — Regression results

Explained variable: Cantonal scores of financial maturity (CSFM)				
	(1)	* `		
	Coeff.	(SE)		
Demand-side explanatory variables				
Education (H1)	0.1623	(0.1221)		
Culture (H1)	-0.1093 ***	(0.0340)		
Ideology (H1)	0.0023 ***	(0.0008)		
Supply-side explanatory variables				
Fragmentation (H2)	-0.0065	(0.0178)		
Concordance (H2)	-0.0509	(0.0644)		
Balance (H3)	-0.0469 **	(0.0171)		
Debt (H3)	0.0605 *	(0.0338)		
MSFM (H4)	0.5145 ***	(0.1431)		
Control variables				
Population	0.0364 ***	(0.0129)		
Voter turnout	-0.0055	(0.0040)		
Pace	0.0841 **	(0.0331)		
Reform stage	0.0114	(0.0585)		
Constant	-0.1005	(0.3025)		
Observations	49			
Adjusted R <sup>2</sup>	0.6656			
Clusters	25			
F-Test (Joint-sign.)	$F_{12,24} = 43.51 **$	*		

Notes: (i) \*\*\* p<0.01, \*\* 0.01 < p<0.05, \* 0.05 < p<0.10. (ii) CSFM and MSFM variables are scaled between 0 and 1 in the model. (iii) Mean VIF: 2.23.

On the demand-side for financial information, results from the regression show that citizen **educational level** plays no major role in explaining CSFM. This result differs from previous studies, notably from Piotrowski and Van Ryzin (2007) who found a significantly positive relationship between citizen education and their demand for public information transparency. Perhaps Switzerland's strong democratic institutions encourage citizen involvement in public affairs (e.g., financial management), regardless of education level.

In contrast, results suggest that citizen **cultural background** figures prominently in explaining CSFM. Latin cantons opted for standards providing, ceteris paribus, significantly lower degrees of financial faithfulness than German-speaking ones. This result is consistent with evidence that Latin citizens tend to place greater trust in the State, compared to German-speaking citizens who may expect greater fiscal discipline and tighter fiscal monitoring (Pujol and Weber, 2003). It also confirms that the Swiss cultural cleavage between language areas entails significant differences in citizen preferences or attitudes towards public policies, notably in public finance.

As for the cleavage stemming from **partisan ideology**, it has a statistically significant, positive impact on CSFM. The fact that rightist cantonal parliaments correlate with a more rigorous application of the recommended standards could reflect right-wing partisan preferences for financial accountability that would improve efficiency and reduce expenditure in the Swiss context. Although this result contrasts with previous studies indicating that left-wing political parties are keener for greater financial information disclosure (e.g., Guillamón et al., 2011; Sol, 2013), it corroborates the view that left- and right-wing partisans may be interested in supporting increased financial accountability (Piotrowski and van Ryzin, 2007). Therefore, H1 is supported, with a few reservations on the role played by citizen education level.

For the supply-side for financial information, political competition variables (fragmentation and concordance) are considered irrelevant for explaining CSFM. This suggests that despite the existence of a multi-party system, there is no marked changeover of power between the parties represented at the Swiss cantonal level. Cantonal governments may seek instead for collegial consensus on how financial information should be delivered, since their chances to remain in office could directly depend on their financial accountability. This agrees with Clémenceau and Soguel (2018) who found that political competition has no significant influence on the propensity of cantonal governments—mainly finance ministers—to manage financial statements (i.e., reduce financial faithfulness) for specific and possibly self-interested goals. Therefore, H2 cannot be verified.

The **fiscal balance** is found to draw CSFM significantly downwards. This means that cantons showing a surplus balance (positive financial performance) achieve, ceteris paribus, lower financial maturity scores than those showing a zero or deficit (negative financial performance) balance. Governments are expected to manage public monies efficiently and be accountable. When they don't, politicians may seek to legitimize their results by arranging the depicted financial reality (i.e., reduce financial faithfulness), within the limits of the law. Indeed, accrual accounting enables discretion in financial reporting with the help of deceptive accounting manipulations (i.e., political finessing) (Cohen et al., 2019). Politicians may present a more favorable (or worrisome) financial condition, or at least make it closer to government policy objectives. According to Buchs and Soguel (2022), Swiss voters tend to favor balanced accounts or small surpluses as well as re-elect the finance ministers who deliver those outcomes. Underplaying large surpluses may thus help improve appraisal of cantonal governments' financial performance. It may also reduce risks of calls for tax and subsidy cuts or spending increases which may compromise fiscal sustainability (Clémenceau and Soguel, 2018; Cohen et al., 2019). Additionally, the debt level shows an unexpectedly positive association with CSFM, albeit only at a 10% statistical significance level. In line with Christiaens (1999), this finding could mean that cantonal governments are sensitive, yet not fully conditioned by the need to mitigate the risks in debt management perceived

by voters or lenders using standards ensuring faithful financial reporting. According to these assertions, H3 is accepted, while cautiously interpreting the role played by the debt level.

The significantly positive relationship between municipal and cantonal scores of financial maturity shows that Switzerland's subnational governments have sought to harmonize accounting policies both within and across institutional levels. As cantonal and municipal governments often share both context and many connected issues, they may coordinate when devising accounting and reporting strategies, either by jointly moving towards greater financial faithfulness, or by maintaining lower levels of financial faithfulness with conservative/prudent policies. Vertical harmonization can have strong practical implications, particularly in a situation of multi-level governance. It can improve coordination in financial decision-making or intergovernmental monitoring (Caruana and Zammit, 2019). It can also strengthen political accountability by easing intergovernmental performance comparison and benchmarking on financial matters (CFM, 2008). These comparisons and benchmarking could then help elector decisions at the ballot box (Benz, 2012). This finding echoes Carvalho et al. (2007) who showed that accounting policies tend to diffuse among governments sharing common geographical or administrative boundaries in the context of accrual-based reforms. Of course, one cannot totally exclude that how municipalities deal with financial or accounting matters can reversely or simultaneously depend on the cantonal level. Nonetheless, this finding highlights that public accounting reforms can be built upon a multi-level approach, notably in a federalist context. Therefore, H4 holds true, with specific regards to vertical harmonization occurring across government tiers [9]

Additionally, **population size** is significantly and positively associated with CSFM. As Guillamón et al. (2011) argued, this occurs because, firstly, larger governments manage higher amounts of public funds and must account for it more extensively. Secondly, larger governments are usually more effective at implementing advanced accounting reforms involving important technical and material adjustments (Christiaens, 1999). Next, results show the **pace** of implementation is also relevant. In line with Soguel and Luta (2021), early bird cantons who adopted each HAM reform quickly are also those that achieved the highest scores of financial maturity. In contrast, the negative but incidental role of **voter turnout** suggests that when popular interest for public financial management is higher, government's willingness to ensure a faithful financial reporting may be weakened, albeit not significantly. Finally, the distinction of **reform stage** is insignificant, probably because not all the cantons perceived the two successive reforms as an opportunity to evolve their standards (Soguel and Luta, 2021); some cantons maintained most of them while even sometimes relaxing others (see Appendix I).

### 6 Conclusion

Within the context of the 26 Swiss cantons and their successive adoption of two major accounting reforms over a 40-year time period, this study identified some of the factors driving their use of accounting and reporting standards meant to increase (or not) the faithfulness of public financial information. By focusing on both citizens and governments, within a framework of political cleavage and public choice theories, this innovative research contributes to the international literature on public accounting reforms, not only from a technical but also a political viewpoint.

With regards to the demand-side, empirical results suggested that cultural background and partisan ideology are significantly related to the degree of faithful financial reporting, but not educational level. As for the supply-side, results showed that a canton's government financial condition and compliance at the municipal level are significantly associated with the degree of faithful financial reporting, but not political competition. Government size and the pace of transition were also found to have a significantly positive relationship with the faithfulness of the reported financial information, while the influence of the reform stage as well as voter turnout remained incidental.

A main implication of these findings is that any legislative-based reform of accounting and reporting standards is a political process influenced to some extent by both government and citizen views in a democratic context. Hence, a bill may backfire when it does not properly reflect citizen needs and preferences, or when it chiefly satisfies a government's self-interested political goals. In contrast, it will be welcomed, not only if financial accountability and transparency are unanimously desired, but also if it is designed using democratic participatory (or collaborative) logic. Accordingly, achieving a well-balanced compromise on the standards to be used is fundamental to ensure a match with citizen interests and ability to use public financial information properly, while effectively supporting representative accountability in financial decision-making, and thus, their political reputation. Besides, the Swiss case reminds that the democratic threat on legislative-based accounting reform processes is not only theoretical; it can also materialize. For example, in the canton of Appenzell Ausserrhoden (AR), opponents initially set a referendum against modifications to adapt the cantonal Financial Act to HAM2 recommendations; fortunately, it was rejected by the people, and the second reform eventually implemented in 2014.

Allowing for a flexible implementation of accounting reforms at subnational levels may lengthen harmonization, but it is probably the price to be paid for successfully converging towards a common set of standards while accounting for the needs and interests of the different stakeholders. Switzerland has been successful on this matter. The sovereignty of Swiss subnational governments in financial and accounting matters is strong, allowing them to adapt related policy decision-making

to their own circumstances. Simultaneously, the use of accrual accounting is expanding at the cantonal level, which further strengthens the faithfulness of reported financial information (Soguel and Luta, 2021).

Switzerland's institutional setting has certainly favored the emergence of public accounting and financial reporting policies that directly account for democratic interests at the subnational level, which may contrast with other countries where decision-making for accounting and financial reporting is more centralized or concentrated by select stakeholders (e.g., Southern European countries). Nevertheless, this study provides relevant insights for other democratic contexts, where non-binding supranational or national accounting standards are incorporated into lower tiers' homegrown accounting and reporting systems with some implementation leeway; it could, for example, prove useful for European leaders in charge of centrally developing European Public Sector Accounting Standards (EPSAS) that could be easily acknowledged by EU member countries—not only decision-makers but also the general public—if they were to be adopted on a flexible basis.

Considering the limitation of the small sample size used here, upcoming studies could investigate the determinants of financial faithfulness in other (European) countries to facilitate further comparisons and broader conclusions which may be helpful for national standard-setters, decision-makers and practitioners. Also, future research could focus on the effect the faithfulness of financial information has on the quality of a government's financial management.

### Notes

[1] The literature discusses various types of cleavages. The paper addresses those considered the most relevant for the specific issue raised by this paper.

[2] Their respective competencies are laid down in the national Constitution; The Swiss financial system relies simultaneously on fiscal competition at subnational levels and fiscal equalization (i.e., horizontal and vertical intergovernmental transfers).

[3] This contrasts with other countries where executive representatives are not designated by the people but appointed by a president, a prime minister, or a Parliament. In Switzerland, the chances of elected representatives remaining in their position are directly related to how citizens hold them accountable for their actions and decisions.

[4] Admittedly, HAM1 was designed and implemented in most cantons prior to the advent of IPSAS in the late 1990s. However, HAM1 already provided a sound framework for an

extensive implementation of accrual accounting that partially conforms with current international requirements. HAM2 then strengthened the already-reformed standards and further improved their compliance with IPSAS, while still allowing some flexibility, notably for political finessing. But in general, the content addressed as well as the approach chosen remained quite similar under each HAM. Instead, the main challenge was in how the Swiss cantons set their accounting and reporting standards accordingly, when implementing each of the two reforms. Under this setting, each canton's FMAP-established standards were easily assessed, using an identical set of criteria and the same metric under both HAM reforms (see Soguel and Luta, 2021).

[5] The cantonal parliament approves the budget on behalf of citizens (in some cases subject to a direct popular approval, e.g., referendum on new spending projects). Thus, it can also use financial statements to scrutinize budget application by the executive.

<sup>[6]</sup> A separate legal framework is commonly provided for financial management and reporting at the Swiss municipal level. It applies indifferently to all municipalities within each canton (i.e., 26 financial laws for municipalities). Although not necessarily in the same year as the cantons, both HAM reforms were also introduced at the municipal level—except for Vaud (VD) and Appenzell I. (AI)—and resulted in varied outcomes. Accordingly, MSFM variable was constructed using the same method as for CSFM.

[7] The control variables used in this study were already highlighted in previous literature on public accounting and reporting of financial information at subnational levels of governments. Other control variables previously considered (e.g., GDP, unemployment, financial dependency) were not included either due to the lack of data availability or because of their minor relevance in the Swiss cantonal context. Furthermore, a variable was considered to control for Switzerland's institutions of direct democracy (i.e., the ease of resorting to initiatives and optional referenda at the cantonal level; see Frey and Stutzer, 2000), but it was eventually dropped for lack of statistical significance.

[8] Appenzell Innerhoden (AI) is totally excluded from the sample, while Vaud (VD) is only considered under HAM1. In those cases, missing data at the municipal level would otherwise compromise testing hypothesis 4 (see note 6).

[9] The role played by the diffusion of practices was also tested among cantons, by replacing MSFM with the (average) score of financial maturity obtained by the canton's geographical neighbour(s) (see Carvalho et al., 2007). However, this variable was not statistically significant. This suggests a stronger harmonization occurred between cantonal governments and their municipalities than among cantons themselves.

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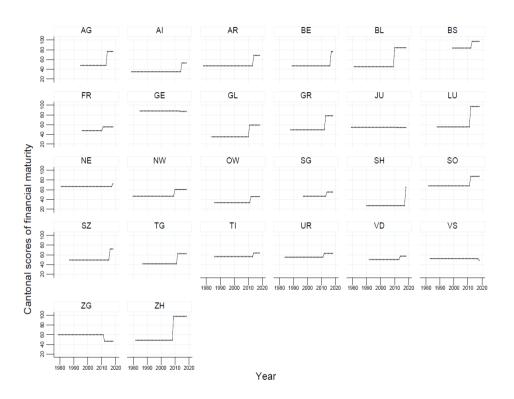
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# Appendix

Appendix I — Cantonal scores of financial maturity (y-axis) over the time period of 1978-2018 (x-axis)



Note: Each canton's score changed on one single occasion, which corresponds to when it transitioned from HAM1 to HAM2 accounting model.

Appendix II — Robustness checks

Explained variable: Cantonal scores o	f financial mat	urity (CSFN	<i>M</i> )	
	(2)		(3)	
	Coeff.	(SE)	Coeff.	(SE)
Demand-side explanatory variables				
Education (H1)	0.1879	(0.1441)	0.1623	(0.1221)
Culture (H1)	-0.1068 **	(0.0459)	-0.1093 **	(0.0340)
Ideology (H1)	0.0001	(0.0011)	0.0023 **	(0.0008)
Supply-side explanatory variables				
Fragmentation (H2)	0.0106	(0.0213)	-0.0065	(0.0178)
Concordance (H2)	-0.0696	(0.0801)	-0.0509	(0.0644)
Balance (H3)	-0.0432 **	(0.0198)	-0.0469 ***	(0.0171)
Debt (H3)	0.0810 **	(0.0367)	0.0605 *	(0.0338)
MSFM (H4)			0.5145 ***	(0.1431)
Control variables				
Population	0.0425 ***	(0.0149)	0.0364 ***	(0.0129)
Voter turnout	-0.0028	(0.0039)	-0.0055	(0.0040)
Pace	0.0743	(0.0437)	0.0841 **	(0.0331)
Reform stage	0.1111	(0.0829)	0.0114	(0.0585)
Constant	-0.1137	(0.3241)	-0.1005	(0.3025)
Observations	52		49	
Adjusted R <sup>2</sup>	0.5206		0.6656	
Clusters	26		25	
F-Test (Joint-sign.)	$F_{11,25} = 13.26$		$F_{12,24} = 43.51***$	

Notes: (i) \*\*\* p<0.01, \*\* 0.01<p<0.05, \* 0.05<p<0.10. (ii) In regression (2), MSFM variable is removed from the model. Since data limitation imposed by this explanatory variable are eliminated (see note 8), all the cantons are contained in the sample henceforth composed of 52 observations. Results remain overall close to those presented in Table 3, which suggest that the model is not significantly affected by the possible shortcomings of MSFM variable. (iii) In regression (3), p-values for cluster-robust standard errors are estimated using the wild-cluster bootstrap-t procedure to account for the small number of clusters which are sometimes unbalanced. (iv) To further test the model's sensitivity, it was estimated using t-1 and t-3 year-lagged values, as well as without any lag. The coefficient's significance remained universally stable across regressions. These supplementary results are available upon request from the author.