

How the Personal Profiles of US State Governors Impact on Financial Sustainability*

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Abstract

This paper considers the extent to which the Governor's profile might influence the financial sustainability of the State government, via an empirical study of 50 US States during the period 2006–2013. The results obtained show that financial sustainability may be prejudiced when the State government experienced financial unsustainability during the previous year, and when it is led by a Governor who is a Democrat, Black, and/or long serving. A favorable influence on financial sustainability is produced when the Governor is female, serving in his/her home State, has children and has a college education. These findings highlight factors that should be considered with respect to promoting financial sustainability via public policies, providing valuable information to facilitate supervision by the State Legislature (General Assembly) and Supreme Audit Institutions. Moreover, these findings enable opposition parties and other stakeholders as citizens to evaluate the financial viability of electoral promises.

Keywords: financial sustainability, political factors, Governors' profile.

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1. Introduction

In the current socio-economic context, governments face the challenge of maintaining the sustainability of public services despite the budgetary restrictions caused by the necessary response to the COVID-19 pandemic. In most OECD countries, fiscal adjustments have been made and new strategies adopted to meet social needs and to control government debt and deficit (Padovani, Rescigno and Ceccatelli, 2018; Kluza, 2017). These issues call for urgent attention by public administrations (Buendía-Carrillo *et al.*, 2020; Padovani, Rescigno and Ceccatelli, 2018; Gardini and Grossi, 2018; IMF, 2019a and 2019b; European Commission, 2019; FASAB, 2014; GASB, 2011) and if not dealt with appropriately could severely impact on financial stability, the provision of public services, economic growth, and economic freedom (Miller and Foster, 2012). This situation would endanger the sustainability of public services and hamper or prevent the achievement of Sustainable Development Goal No. 11 (Sustainable Cities and Communities) (UN, 2019).

In this respect, academics and international organizations have highlighted the utility of financial statements as a means of measuring the financial sustainability of public services (European Commission, 2015; 2012a; IFAC, 2012; USAID, 2011; Padovani, Rescigno and Ceccatelli, 2018; Navarro-Galera *et al.*, 2021). This question has been brought into sharp focus in recent years, following successive economic crises which have provoked widespread doubts regarding the capacity of governments to deliver public services effectively and efficiently (Kluza, 2017; Navarro-Galera *et al.*, 2016, 2021; Rodríguez Bolívar *et al.*, 2014).

Political leaders produce a major impact on sustainability (da Silva Nascimento, Melo and Wanderley, 2014), often playing a crucial role in designing and implementing policies that are sustainable in terms of public revenue (Heinemann *et al.*, 2009), spending (Besley and Case, 2003; Jacoby, 2006) and debt (Efobi *et al.*, 2013; Jochimsen and Thomasius, 2014), i.e. the three dimensions of financial sustainability (IFAC, 2012). Therefore, the analysis of the personal profile of these leaders is an interesting and timely research question (Brandtner and Suárez, 2020; Buendía-Carrillo *et al.*, 2020; Navarro-Galera *et al.*, 2020; Rodríguez Bolívar *et al.*, 2018). In the USA, although each State has a plural executive, including a Deputy Governor, Attorney General, Treasurer, and various State commissioners, the Governor is a powerful figure in determining financial policy (European Commission, 2015).

Relevant aspects of political leaders' profiles include their skills, knowledge, experience, and mind-set (Navarro-Galera *et al.*, 2020; Efobi *et al.*, 2013). All of these characteristics may influence their approach to sustainability. Therefore, it would be useful to analyze the relationship between a government's policies for financial sustainability and the profile of its political leaders (Rodríguez Bolívar *et al.*, 2018; Giosi *et al.*, 2014).

Accordingly, in this paper, we identify the elements of the political leader's profile that might influence governmental financial sustainability and hence the sustainability of public services. Financial sustainability is the ability to meet service delivery and financial commitments, now and in the future, without causing a long-term increase in debt (IFAC,

2014). According to Moldavanova (2016), long-term sustainability is the ability of public institutions to fulfill their purpose in the long run.

Specifically, our analysis focuses on whether the US State Governor's profile influences financial sustainability. The USA is of particular importance in this context because it was the first country to experience the Great Recession (IMF, 2019a, 2019b). Moreover, its economic recovery seems to be solidly grounded and its gradual shift to self-sustaining growth is more advanced than in other developed countries (IMF, 2019a, 2019b). Therefore, our analysis could usefully inform OECD countries about questions related to financial sustainability, thus contributing to economic recovery and helping prevent the effects of future recessions, such as that provoked by the COVID-19 pandemic. In summary, these study findings would be of interest to voters, taxpayers, tax authorities, politicians, managers, and all stakeholders wishing to mitigate future economic recessions.

2. Research hypotheses

Financial sustainability has been defined as the ability of governments to deliver current services without compromising their ability to do so in the future (GASB, 2011; IFAC, 2013; NAO, 2013). The governmental financial statement is a crucial instrument for evaluating the three dimensions of financial sustainability – revenue, expenditure, and debt (GAO, 2008; GASB, 2011; IFAC, 2013; Rodríguez Bolívar *et al.*, 2014), which determine the ability to maintain the quantity and quality of public services over time (European Commission, 2012; GASB, 2011, 1990; IFAC, 2013; NAO, 2013; Padovani, Rescigno and Ceccatelli, 2018).

Policymakers play an essential role in the management of public finance (Rodríguez Bolívar *et al.*, 2018; Jochimsen and Thomasius, 2014), adopting certain financial policies and not others according to their knowledge and concern about the viability of public services (da Silva Nascimento, Melo and Wanderley, 2014; Navarro-Galera *et al.*, 2020, 2021). In the same line, Barrilleaux and Berkman (2003) concluded that Governors influence spending policies via the budget process.

We identify two major areas of the Governor's profile – personal characteristics and preparation (i.e., experience/qualifications) – that could influence management styles and decision-making, hence public spending, revenue, and debt and therefore financial sustainability (Besley and Case, 2003; Heinemann *et al.*, 2009; Jacoby, 2006; Jochimsen and Thomasius, 2014; Mueller, 2003).

2.1. Personal characteristics

The State Governor's personal characteristics affect the political decisions taken (Jochimsen and Thomasius, 2014; Rodríguez Bolívar *et al.*, 2018). In this respect, the variables most commonly studied are gender, birthplace, age, race, marital status, children, and ideology (Jacoby, 2006; Jochimsen and Thomasius, 2014).

According to McGregor (1960), women are transformational leaders and tend to prefer action that favors the common good, adopting a people-oriented, empathic, motivational

approach to meeting the organization's goals. Hence, female Governors are expected to pay special attention to social welfare policies (Heidbreder and Scheurer, 2013), especially education and health (Besley and Case, 2003). This outlook affects the composition of public spending (Svaleryd, 2009) and might endanger financial sustainability if it results in higher deficit and debt.

Besley and Case (2003) reported that female Governors devoted twice as much agenda space to social welfare policies as their male colleagues. However, women are said to be more risk averse than men (Croson and Gneezy, 2009; Eckel and Grossman, 2008), and their less aggressive decisions could reduce spending and debt, thus benefiting financial sustainability. Therefore, we propose the following hypothesis:

H.1 *The presence of a female State Governor, which is associated with expansive social policies, worsens financial sustainability.*

Regarding the Governor's birthplace, Avellaneda (2015) concluded that policymakers elected to office in their home State were more strongly motivated to provide services promoting the community's development and public welfare. Therefore, when political leadership is exerted in the State where the Governor was born, this is associated with increased public expenditure and poorer financial sustainability, in the absence of specific measures to increase income and/or reduce debt. Therefore, we propose the following hypothesis:

H.2 *When a State Governor is elected in his/her home State, the resulting political management has a negative impact on financial sustainability.*

Studies have shown that older political leaders tend to be conservative in their financial decision-making and are associated with lower levels of public debt (Efobi *et al.*, 2013; Jochimsen and Thomasius, 2014). This prudent behavior could benefit financial sustainability, since expenditure and debt are major dimensions of sustainability (IFAC, 2013). Therefore, our third hypothesis considers the impact of the Governor's age on financial sustainability.

H.3 *The age of the State Governor is positively associated with financial sustainability.*

Black Americans have stronger perceptions of racism and are usually less satisfied with the public services received (Van Ryzin, Muzzio and Immerwahr, 2004). Therefore, Black policymakers might experience pressures to adopt policies to combat discrimination, increase social spending (Jacoby, 2006), and implement redistributive policies (Alesina and La Ferrara, 2005). Accordingly, the Governor's race may be an important factor in the priorities expressed, impacting financial sustainability via spending and revenue policies. In this respect, we propose the following hypothesis:

H.4 *Financial sustainability is negatively affected when the State Governor is Black.*

Feeney (2007) observed that the family structure is relevant to a policymaker's characteristics and actions. Similarly, Hatemi (2013) found that marital status influences economic attitudes. In this regard, too, Roussanov and Savor (2012) argue that single CEOs take more risks and invest more aggressively than married ones. However, Efobi *et al.*

(2013) found no relationship between the marital status of the policymaker and public debt. In view of these considerations, we test whether the Governor's marital status influences financial sustainability, in the view that taking less risky decisions would reduce spending and debt and confer greater security regarding tax revenues. Therefore, we propose the following hypothesis:

H.5 *A married Governor is more likely to favor financial sustainability than one who is single or separated.*

Another factor that might influence policymakers' attitudes towards debt and public finance is whether they have children (Efobi *et al.*, 2013; Jochimsen and Thomasius, 2014; Feeney, 2007). Seeking to preserve intergenerational equity (GASB, 1990; Rodríguez Bolívar *et al.*, 2014), a Governor with children could try to maintain the public services provided for future generations without increasing public debt, seeking to reduce the deficit by means of lower expenditure and higher revenues (Barro, 1974). If this were so, having children would be a positive influence on the Governor's decision-making in matters concerning financial sustainability. Therefore, we propose the following hypothesis:

H.6 *Governors with children are more likely to favor financial sustainability.*

Finally, the *Partisan Politics Matters* (PPM) thesis argues that left-wing parties favor public spending, which increases the deficit (Cusack, 1997), and are reluctant to cut public investment. On the other hand, they may underestimate revenues, and thereby under-spend (Ashworth, Geys and Heyndels, 2005). Empirical evidence suggests that the political ideology of the governmental party significantly affects its management (Rodríguez Bolívar *et al.*, 2018), in that States governed by conservative policymakers tend to spend less than those governed by liberals (Alt and Lowry, 1994), while liberal governments are more likely to increase public debt (Bel and Miralles, 2010) and public expenditure (Mueller, 2003). However, Barrilleaux and Berkman (2003) found that redistributive spending policies carried out under Democratic governors were no different from those adopted by non-Democratic governors. If this relation existed, it would affect financial sustainability, since revenue and debt are both crucial to financial sustainability (IFAC, 2013). Therefore, we consider it interesting to examine the effect of this variable on financial sustainability, as follows.

H.7 *When the Governor has a liberal ideology, this has a negative impact on financial sustainability.*

2.2. Training – education and experience

Personal education and experience influence the State Governor's management of public finances (Jochimsen and Thomasius, 2014; Moessinger, 2014), but to our knowledge, no studies have been conducted to determine their impact on financial sustainability.

According to Besley (2005), society should not ignore the quality of its public officials if they wish their public institutions to operate effectively. Similarly, Congleton and Zhang (2013) concluded that education improves both policy judgment and economic

outcomes, holding that college-educated policymakers are better equipped to solve problems and to decide about public finances and financial sustainability. Ryan, Pini and Brown (2005) highlighted the need to study the influence of political leaders' education on their financial management of public services. The *Goal Setting Theory*, too, suggests that college-educated leaders will perform better than those with less academic preparation (Locke and Latham, 2002). According to this theory, moreover, differences in public managers' capabilities and skills influence their ability to control services under efficiency criteria, which impacts on financial sustainability via public spending and debt (Navarro-Galera *et al.*, 2020).

However, Jochimsem and Thomasius (2014) found no evidence of such an influence on debt, and Rodríguez Bolívar *et al.* (2018) were unable to confirm that policymakers' level of education had a statistically significant influence on local government financial sustainability. In view of these contrasting views, it would be useful to examine whether education influences US State Governors' ability to manage financial sustainability. Therefore, we propose the following hypothesis:

H.8 *Higher education is positively associated with the Governor's capabilities regarding financial sustainability.*

Furthermore, the type of education background could also influence the policymaker's decisions. Thus, an economic background could affect policy decisions (Moessinger, 2014) regarding minimum wages (O'Roark and Wood, 2011), taxation (Heinemann *et al.*, 2009) or debt (Jochimsen and Thomasius, 2014). In Spain, Rodríguez Bolívar *et al.* (2018) found that training in economics led policymakers to make better decisions regarding financial sustainability. This question is directly relevant to the role of US State Governors because it affects two major dimensions of financial sustainability: revenue and spending. In this respect, we propose the following hypothesis:

H.9 *When the Governor has an economics-related college degree this is positively associated with financial sustainability.*

Finally, the length of experience in political office can have a twofold influence on public finances. According to the *Fiscal Illusion Theory*, long-standing political leaders are more likely to keep their promises on spending and taxation, because voters can judge their credibility from experience. On the other hand, policymakers tend to accumulate power and control (Efobi *et al.*, 2013), which could increase debt (Bunch, 1991) and worsen financial sustainability.

However, from the *Goal Setting Theory*, a politician with more years in power has more experience of setting specific, viable objectives (Jochimsem and Thomasius, 2014), which may benefit financial sustainability, for example by reducing government borrowing (Jochimsen and Thomasius, 2014). We test this association by considering the following hypothesis:

H.10 *The tenure of a Governor is inversely associated with financial sustainability.*

Table 1 summarizes the study variables addressed, showing the calculation method used and the expected sign for each one, according to prior research.

Table 1: Study variables

Variable	Short form	Definition	Calculation	H ₀	Expected sign
Dependent Variable					
Financial sustainability ⁽¹⁾	FS	Ability to maintain current policies without reducing public services, increasing taxation, or creating debt.	(Revenue – Expenditure) / Debt		
Governor's Profile					
Personal characteristics					
Gender ^{(2)*}	GEN	Gender	1=Female; 0=Male	H.1	(+/-)
Birthplace ^{(2)*}	BP	Birthplace	1=Home State; 0=Born elsewhere	H.3	+/-
Age ⁽²⁾	AGE	Age	Years	H.2	+
Race ^{(2)*}	RACE	Race	1=Black; 0=Other	H.4	-
Married ^{(2)*}	MARR	Married vs. Unmarried	1=Married; 0=Other	H.5	+
Family ^{(2)*}	CH	Children	1=Children; 0=No children	H.6	+
Political ideology ^{(2)*}	IDEO	Ideology	1=Democrat; 0=Republican	H.7	(+/-)
Education / Experience					
College degree ^{(3)*}	DEG	Any college degree	1=College degree; 0=No college degree	H.8	(+)
Economics/Business Studies ^{(3)*}	ECO	Training in economics-related subject	1=Training in economics or similar; 0=Other	H.9	(+)
Tenure ⁽²⁾	TEN	Consecutive years in office	Years in office	H.10	(+/-)

Note: * Dummy variable

Source: ¹U.S. Census Bureau; ²National Governors Association; ³Published curriculum vitae

3. Study method

A panel data method was used to reduce multicollinearity and improve the efficiency of the model proposed (Wooldridge, 2009; Zhu, 2013). Our analysis focuses on data for the 50 US States during the period 2006-2013, which included the recovery from the Great Recession (IMF, 2019a and 2019b) and reflected States' differing capacities to fund spending programs (Arnold, 2004) and combat the crisis (Honadle, 2003), by measures such as tax and expenditure limits (Mullins and Wallin, 2004).

The present study, therefore, spans the periods before, during and after the Great Recession (from late 2007 to mid-2009) (NBER, 2012), when national and international organizations were sharply focused on questions of public finances and financial sustainability (European Commission, 2012a, 2012b; GASB, 2011, 1990; IFAC, 2013, 2012; NAO, 2013).

As a measure of financial sustainability, governmental financial statements report both on the sustainability of public policies (European Commission, 2012a, 2012b; GASB, 1990; IFAC, 2012, 2013; NAO, 2013; Padovani, Rescigno and Ceccatelli, 2018; Rodríguez Bolívar *et al.*, 2018; Navarro-Galera *et al.*, 2020) and on the quantity and quality of public services provided (GASB, 2011). In this respect, national (GAO, 2008; GASB, 2011) and international organizations (IFAC, 2013; LGA, 2015) have emphasized the need to address the balance between public revenue and expenditure in order to reduce public debt.

Following the indications of the above-mentioned organizations, we define governmental financial sustainability as follows:

$$Financial\ sustainability = \frac{Revenue - Expenditure}{Debt} \quad (1)$$

The data used to quantify the dependent variable were drawn from published financial statements; those for revenue and expenditure, including interest payable on debt, from published budget information; and those for public debt, from the corresponding balance sheet at the end of the fiscal period.

A positive value for financial sustainability means the public economy generates sufficient resources to meet its obligations, while a negative one means the administration must act to finance the deficit incurred, by increasing short-term debt, by reducing public expenditure or by increasing taxes.

In the context of US States, these decisions may be influenced by the Governor's personal characteristics, qualifications, and experience. These factors are incorporated into our model as follows:

$$FS_{it} = \beta_0 + \beta_1 GEN_{it} + \beta_2 BP_{it} + \beta_3 AGE_{it} + \beta_4 RACE_{it} + \beta_5 MARR_{it} + \beta_6 CH_{it} \\ + \beta_7 IDEOw_{it} + \beta_8 DEG_{it} + \beta_9 ECO_{it} + \beta_{10} TEN_{it} + u_{it}$$

where "i" is the i-th transversal unit (State Governments) and "t" is the time (year).

The panel data technique was used for this analysis because it enabled us to pool various time series and thus increase the number of observations (Zhu, 2013). In other words,

we have a vector of variables for N (50 US governments) over T periods of time (8 years, from 2006 to 2013): x_{it} for $i=1, \dots, N$ and $t=1, \dots, T$. The error term (u_{it}) is composed of α_i (unobservable heterogeneity, i.e. the unobservable characteristics of governments that have a significant impact on their financial sustainability) and e_{it} (random error).

The Generalized Method of Moments system (Blundell and Bond, 1998) was used to detect possible endogeneity in the independent variables (Roodman, 2009; Jochimsen and Thomasius, 2014). In addition, two-step estimation was performed with the Windmeijer correction (Roodman, 2009; Windmeijer, 2005), the collapse option was applied to minimize the number of instruments (Roodman, 2009), the Arellano-Bond test was used to check for second-order autocorrelation (Arellano and Bond, 1991) ($p = 0.917$), and the Hansen test of over-identifying restrictions ($p = 0.536$) (Hansen, 1982) controlled for data endogeneity (Table 2).

Table 2: Tests

Test			
Hansen test	Chi ² (31)	29.64	Pr>Chi2=0.536
Arellano-Bond test	Ar(1)	z= -3.87	Pr>z=0.00
	Ar(2)	z=-0.10	Pr>z=0.917
Sample	N=400	n=50	T=8
Instruments	49		

The model considers the possible influence of financial sustainability during a previous period (FS lagged 1 period) on current financial sustainability, considering that decision-making does not have an immediate effect on budget allocations.

4. Results

4.1. Descriptive analysis

Table 3 shows that financial sustainability varied considerably during the study period. Thus, in fiscal year (FY) 2006, all State Governments were able to meet 32% of their debt (positive financial sustainability), in FY2009, none were in this position. In FY2013, financial sustainability was again positive in most State Governments, and all but Kentucky, Louisiana, and Massachusetts were able to cover at least 29% of their mean debt. The Great Recession, therefore, provoked similar points of inflexion in financial sustainability in the majority of US States.

Most of the State Governors were male (345 of 400 observations during the eight-year study period; 168 before and 177 after the Great Recession). Table 3 shows that during 2006-2009 ($50 \times 4 = 200$ observations) only 82 Governors were in office in a State other than that of their birth; during 2010-2013, this figure increased to 94 (of 200 observations).

The mean age of the Governors was 57.5 years (SD: 7.6659). The majority of the Governors were aged 53-65 years (247/400 observations), because younger candidates

are unlikely to be elected and older Governors have greater difficulty in being re-elected (Besley, 2007). By race only 10 of the 400 observations corresponded to Governors who were Black. Most were married and had children.

According to the US National Center for Health Statistics (Martinez, Daniels and Chandra, 2012), the Governors in our sample met the national pattern for average age at first marriage (26 for women and 28 for men) and at first birth (23 for women and 25 for men).

Table 3 also shows that in the first period (2006–2009) most Governors had a progressive outlook, but in the second, this pattern was reversed, and the majority were conservative. The vast majority (94.50%) had a college degree, but only 19.54% had one related to business or economic studies. With respect to tenure, in the first period, most Governors had been in office for three years, and 17 of the 50 retained power from 2006 to 2009. However, after the Great Recession, most States elected Governors who had never held this office before.

4.2. Statistical analysis

The empirical results obtained (Table 4) highlight the influence of certain aspects of the Governor's profile on the financial sustainability of public services. This influence was negative for race ($p = 0.05$), ideology ($p = 0.02$) and tenure ($p = 0.00$), and positive for gender ($p = 0.04$), birthplace ($p = 0.02$), children ($p = 0.02$) and college degree ($p = 0.05$). Neither age, married status, nor economics-related degree were statistically significant. Moreover, financial sustainability lagged for one period significantly influenced the financial sustainability of the current year.

These results corroborate hypothesis H.1, confirming that male and female Governors exercise different styles of management, and so the Governor's gender significantly influences financial sustainability. Thus, women are less aggressive in their decision-making (Croson and Gneezy, 2009; Eckel and Grossman, 2008) and are more attentive to social welfare policies, through greater expenditure on education and health (Besley and Case, 2003; Heidbreder and Scheurer, 2013).

Rodríguez Bolívar *et al.* (2018) studied Spanish municipalities and reported that female mayors were more empathetic to citizens' concerns and needs, undertook more social initiatives (health, education, dependency, etc.), and sought to reduce the gap between advantaged and disadvantaged citizens. These results, together with our own study, confirm the validity of the *McGregor Theory* regarding the impact of female officials on financial sustainability. We conclude, therefore, that when the State Governor is female, the expansive effects of gender on spending are offset by the benefits of female prudence in financial decision-making.

The study results also lead us to confirm hypothesis H.2, namely that when Governors are elected in their home State this is likely to benefit financial sustainability, a finding that extends the conclusions of Avellaneda (2015) on the association between mayoral expertise and government performance.

Table 3: Descriptive analysis

		Dependent Variable												
		2006					2009					2013		
SAMPLE		Mean	Std. Dev.	Min	Max	Observations (n)	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean
		0.4457 ¹	1.76 ¹	1.85 ¹										
FS	0.0925	0.1975 ²	-0.13 ²	1.07 ²	254	FS>0	50	0.3	FS>0	0	-0.66	FS>0	47	0.29
	0.4004 ³	-1.73 ³	1.12 ³		146	FS<=0	0	2	FS<=0	50		FS<=0	3	
Independent Variables														
SAMPLE		2006-2009					2010-2013							
Variable	Mean	Std. Dev.	Min	Max	Mode	Freq	(%)	Mode	Freq	(%)	Mode	Freq	(%)	
Governor's Personal Characteristics														
GEN	0.1375	0.3448	0	1	0	345	86.25	0	168	84.00	0	177	88.50	
BP	0.47	0.4997	0	1	0	212	53.00	0	118	59.00	1	106	53.00	
AGE	57.533	7.6659	36	75	59	23	5.75	62	13	6.50	64	13	6.50	
RACE	0.025	0.1563	0	1	0	390	97.50	0	195	97.50	0	195	97.50	
MARR	0.9075	0.2901	0	1	1	363	90.75	1	182	91.50	1	181	90.50	
CH	0.9075	0.2901	0	1	1	363	90.75	1	183	91.50	1	180	90.00	
IDEO	0.48	0.5002	0	1	0	208	52.00	0	106	53.00	0	114	56.00	
Governor's Education / Experience														
DEG	0.2283	0.5003	0	1	1	378	94.50	1	192	96.00	1	186	93.00	
ECO	0.3970	0.4997	0	1	0	317	80.46	0	162	81.00	0	155	79.90	
TEN	2.4595	0.4999	0	13	2	66	16.50	3	19	55.50	7	23	11.50	

FS – Financial Sustainability; GENERAL – Gender; BP – Birthplace; AGE – Age; RACE – Race; MARR – Married; CH – Children; IDEO – Ideology; DEG – College degree; ECO – Economics/Business Studies; TEN – Tenure.

Note: (1) Overall; (2) Between; (3) Within

Source: Devised by the authors. STATA12

Table 4: The model

Financial Sustainability	Acronym	Coefficients	Std. Err.
FS lagged 1 period	L1.FS	0.2847*	0.0348
Gender	GEN	0.3331*	0.0478
Birthplace	BP	0.0597*	0.0227
Age	AGE	0.0016	0.0013
Race	RACE	-0.2206*	0.0577
Married	MARR	-0.0498	0.0343
Children	CH	0.0990*	0.0271
Political ideology	IDEO	-0.1071*	0.0257
College degree	DEG	0.2924*	0.0538
Economics studies	ECO	0.0131	0.0288
Tenure	TEN	-0.0198**	0.0067
Cons		-0.0368	0.1161

Note: Wald Chi²(17) = 336458.31***

All variables are treated as endogenous, except the time-period dummies.

Note: * *P*-value <=0.05, ** *P*-value <0.01.

However, we found no evidence of any relation between the Governor's age and financial sustainability (H.3), contrary to studies conducted in Africa and Germany which affirm that age influences financial decision-making (Efobi *et al.*, 2013; Jochimsen and Thomasius, 2014).

According to our results, the Governor's race was associated with financial sustainability, so hypothesis H.4 is accepted. This confirms prior studies conducted in the USA (Alesina and La Ferrara, 2005; Jacoby, 2006), according to which the Governor's race could influence political preferences concerning financial sustainability. Specifically, Black Governors tend to increase public spending (Jacoby, 2006), thus jeopardizing financial sustainability. Our finding extends this prior research, which was focused mainly on expenditure.

Although marital status had no significant influence on financial sustainability (and therefore we reject hypothesis H.5), Governors with children were more likely to favor financial sustainability than the childless, so hypothesis H.6 is accepted. These results are in line with studies of public debt in Africa and Germany (Efobi *et al.*, 2013; Jochimsen and Thomasius, 2014). Our finding extends previous research by addressing three dimensions of financial sustainability: expenditure, revenue, and debt.

The study results show that the policies of liberal Governors could jeopardize financial sustainability, through increased public expenditure (Mueller, 2003) and debt (Bel and Miralles, 2010), and therefore we accept hypothesis H.7. These findings are consistent with the PPM thesis (Schmidt, 1996; Krauser, 2000) and with a study of Spanish municipalities which found that government by a progressive party contributed to increasing the public deficit. Moreover, progressive parties were more reluctant to cut public investment and employment, thereby increasing debt (Rodríguez Bolívar *et al.*, 2018).

These findings concerning the influence of the Governor's profile suggest that in States governed by a man who is Black, was born in a different State, has no children and shares the Democrat ideology, public policies will present less budget flexibility, and require more rigorous short-term control (i.e. transparency) by the State Legislature, Supreme Audit Institutions, and voters.

With respect to the Governor's education and experience, we find that the possession of a college degree is associated with greater financial sustainability (so hypothesis H.8 is accepted) but business/economics training has no additional influence (so hypothesis H.9 is rejected). These findings corroborate Congleton and Zhang (2013), who also found that US Governors with university studies, regardless of the subject matter, were better equipped to resolve questions about financial sustainability. However, in the case of Spanish city councils, Rodríguez Bolívar *et al.* (2018) reported that the mayor's education had no statistically significant influence on financial sustainability.

Our results show that the Governor's continuing presence in office is inversely associated with financial sustainability and therefore we accept hypothesis H.10. These findings suggest that long tenure is prejudicial to financial sustainability, because factors such as the accumulation of debt (Bunch, 1991) and political control (Efobi *et al.*, 2013) outweigh the positive effects of accumulated experience (Jochimsen and Thomasius, 2014). However, this is contradicted by Rodríguez Bolívar *et al.* (2018), whose study of Spanish municipalities detected a positive relationship between financial sustainability and the duration of a political party in power. Our results contrast empirically with the *Fiscal Illusion Theory*. Finally, we show that the financial sustainability of the previous year could influence that of the present one.

For policymakers, these results suggest that greater control is needed of public policies in States where the Governor has no university studies and has been in office for many years. In these cases, the State Legislature and Supreme Audit Institutions should exercise more restrictive short-term control mechanisms on budget policy, and greater political transparency is urged so that citizens can evaluate the financial viability of electoral promises.

5. Discussion and conclusions

Our findings suggest that female State Governors are likely to achieve greater financial sustainability than their male counterparts because they are more prudent, which offsets their preferences for more expansive policies. These findings extend previous research by addressing the three dimensions of financial sustainability: revenue, expenditure, and debt. Moreover, female Governors encourage citizens to participate in decision making, thereby increasing trust in government and hence tax compliance. This finding provides valuable information to voters concerned about the sustainability of public services, enabling them to elect Governors who are more committed in this respect.

Similarly, Governors who hold office in their home State are more likely to foster financial sustainability, perhaps because this identity lends them a greater awareness of the

State's necessities and demands, leading them to prefer sustainable policies that will develop the community. Moreover, this identity could increase public revenues by raising voters' confidence in government. Thus, voters, taxpayers and tax authorities should be aware of this relation between the Governor's birthplace and the financial sustainability of public services.

However, contrary to prior research, we detected no association between the governor's age and financial sustainability, perhaps because in our sample most Governors were aged 50–60 years and therefore presented similar characteristics. This finding suggests further research is needed into the influence of policymakers' age in other types of public administration or in countries where the age range of senior officials is wider.

On the other hand, the Governor's race does influence financial sustainability, possibly because Black Governors implement expansive social policies, in order to benefit minority groups and gain their support. This finding is novel; to our knowledge, no previous studies have examined this association, although racial considerations are known to influence social spending. These questions are of interest to voters, taxpayers, and tax authorities.

Our findings also show that the Governor's family background may influence financial sustainability, which is weakened if the Governor has children, although no such relation was observed for marital status. This suggests that their parental role may lead Governors to adopt expansive social welfare policies in areas such as education and healthcare.

Finally, the management of financial sustainability seems to be affected by the Governor's ideology. This knowledge could inform voters, taxpayers, and tax authorities of the policy priorities of candidates for Governorship according to their ideology. Confirming prior research, we show that Democrat Governors are more likely to introduce social welfare policies, thereby increasing public spending and possibly jeopardizing financial sustainability. On the contrary, Republican Governors would be more likely to implement conservative policies and maintain financial sustainability.

For policymakers, these findings provide useful new knowledge. In summary, the results suggest that when the personal risk factors we highlight (male gender, born in a different State, Black race, no children, Democrat ideology) are present, budget flexibility should be reduced, control mechanisms (State Legislature functions and Supreme Audit Institutions) strengthened, and transparency instruments employed to facilitate supervision by the political opposition and to enable voters and other stakeholders to evaluate the financial viability of the electoral promises made.

With respect to the Governor's education and experience, we confirm prior research findings that university graduates, regardless of the degree subject, possess the knowledge and ability necessary to resolve problems and to decide appropriately about financial sustainability (in line with the *Goal Setting Theory* thesis). Future research could usefully consider in greater detail the influence of policymakers' educational background on the financial performance of their institutions.

Our findings also show that the political control acquired during a Governor's extended tenure may prejudice the State's financial sustainability, outweighing the beneficial

effects of greater experience. Consequently, to maintain long-term financial sustainability, it might be necessary to restrict the number of terms a Governor may serve.

Finally, this paper presents useful information for voters, taxpayers, public services users, tax authorities, political parties, fiscal authorities, central government officials, and other stakeholders. Our conclusions extend prior research findings about the repercussions of political factors on financial parameters (expenditure and debt) by jointly analyzing the three dimensions of financial sustainability (spending, revenue, and debt). Crucially, we show that the Governor's personal characteristics, experience, and education are relevant to his/her decisions and impact on the financial sustainability of public services.

Consideration of these findings will benefit the future management of public finances in response to economic crises such as that caused by the COVID-19 pandemic. We show that the financial vulnerability of governments in this respect varies according to the profile of their political leaders. Accordingly, continuing efforts are needed to measure the impact of political factors on financial sustainability.

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