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Financial Sustainability in Local Governments: Definition, Measurement and Determinants

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1 Introduction

Nowadays, the international financial crisis and several financial problems suffered by many governments around the world have again intensified the interest on the concept of financial health, financial condition or more specifically on financial sustainability. Financial condition or financial health is the ability of the governments to provide public services while being able to satisfy their present and future obligations (GASB 1987; CICA 1997). It is a difficult concept to be represented because it is not directly observable. As a matter of fact, there is extensive

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literature on determining the appropriate and suitable financial condition indicators. One of the most relevant and used measurement refers to the level of sustainability, flexibility and vulnerability of the entity (CICA 1997, 2009). Sustainability was defined as the ability of an entity to preserve the social welfare of citizens with the available resources; flexibility was defined as the capacity to adapt to the economic and financial changes; and the degree of vulnerability is defined with reference to the capacity to be independent of external financing resources.

These three features have been used previously by researches and public advisors to represent the financial condition of governments (e.g. Ammar et al. 2005; Zafra-Gómez et al. 2009a, b, c; Kioko 2013; López-Hernández et al. 2012; García-Sánchez et al. 2012, 2014; Cuadrado-Ballesteros et al. 2014; Clark 2015). But in the last years, among these three components, sustainability has adopted the most relevant status, because of the current global climate characterized by governments' financial problems and high level of public indebtedness. In fact, the International Public Sector Accounting Standards Board (IPSASB) has recently published a recommended practice guideline entitled "Reporting on the Long-Term Sustainability of an Entity's Finances", which provides information on the impact of governmental decisions on the future long-term financial sustainability. Control agencies have also highlighted the role of sustainability; for instance, the Office of the Auditor General of Canada has reported on financial condition for over 20 years, but from 2012 they have highlighted the relevance of sustainability indicators.

There is extensive literature on financial condition/health but that focuses specifically on financial sustainability and is more limited, and most of the previous studies are focused on the definition and measurement of that concept. This topic has been more developed by international authorities, such as the European Commission, the International Federation of Accountants (IFAC), the National Accounting Office (NAO), the Canadian Institute of Chartered Accountants (CICA) and the International Public Sector Accounting Standards Board (IPSASB), among others. In general, international authorities focus on aiming recommendations or practical guidelines (e.g. IPSASB 2013), reporting of information on specific indicators related to financial

sustainability (e.g. CICA 2009), or discussing the topic of fiscal sustainability proposing indicators (e.g. EU 2012, 2015). Among the empirical studies focused on financial sustainability, it could be highlighted that Rodríguez-Bolívar et al. (2016), who analyse the drivers and risk factors that affect the financial sustainability. There are other previous studies that refer to financial sustainability, but they really study another similar concept namely financial health or financial condition, using financial ratios (e.g. Drew and Dollery 2014; Andrews 2015), cost-revenue analysis (e.g. Lohri et al. 2014) or other drivers such as the cost of restoring infrastructure assets to a satisfactory condition (Jones and Walker 2007).

This chapter will contribute to financial condition literature, especially focusing on sustainability. Firstly, most of the previous studies address financial condition/health as a wide and complete concept, without taking into account the specific relevance of sustainability. Secondly, among the literature that refers to financial sustainability, it can be argued that there is a confusion regarding both the concepts. It therefore seems necessary to highlight the most suitable definition and measurement of financial sustainability. Faced with this gap in literature, the aim of this chapter is to debate the definitions of financial sustainability in public administrations, as well as discuss the empirical findings characterized by different methodological approaches. This work also presents factors that could affect financial sustainability, such as socio-economic, organizational or structural factors (Carmeli 2008; Bisogno et al. 2014). Concretely, this contribution focuses on a local level, since this concept is especially relevant at local governments because they are closer to the citizens and have to provide a wide range of public services (Rodríguez-Bolivar et al. 2014).

The rest of the chapter is structured as follows: Sects. 2 and 3 approaches definition and measurement of financial sustainability, respectively; Sect. 4 summarizes the possible determinants of financial sustainability, based on previous literature focused on that topic or other similar concepts such as financial condition or financial health; Sect. 5 concludes, engaging directions for future lines of research.

2 Definition of Financial Sustainability

There is no universal definition of financial sustainability. It has been usually considered as a component of financial condition or financial health. Generally speaking, financial condition is the capacity of an entity to comply with financial obligations using the available resources (Lorig 1941). Adapting this definition to the public sector context, financial condition could be defined as the ability of governments to provide public services while it can satisfy their present and future obligations (GASB 1987; CICA 2009).

It is a difficult concept to be represented because it is not directly observable, so it is usually determined by several measurable indicators, such as financial and fiscal ratios. Initially, Groves et al. (1981) used four magnitudes related to the solvency, with it referring to the capacity to fulfil financial obligations with the available resources; concretely, these authors refer to cash solvency, budgetary solvency, long-run solvency and service-level solvency. Later, Greenberg and Hiller (1995) proposed three indicators for measuring the financial condition, which represent the level of sustainability, flexibility and vulnerability of the entity. More recently, Zafra-Gómez et al. (2009a) connected the solvency view of Groves et al. (1981) and features of Greenberg and Hiller (1995) to represent the level of the financial condition of local governments. Zafra, López-Hernández and Hernández-Bastida (2009a) measure the financial condition, through financial ratios that represent the short-run solvency,[1] the service-level solvency[2] and the budgetary solvency,[3] which is represented by the level of sustainability, flexibility and vulnerability of the government (see Zafra-Gómez et al. 2009a).

Among these components, sustainability has adopted the most relevant status in the last years, because of the current global climate characterized by governments' financial problems and the high level of public indebtedness. Financial sustainability is related to financial condition or financial health, but they are not the exact synonyms. In general, sustainability is considered as a component of financial condition, which is a wider concept. Sustainability is more concrete, and it refers to preservation of social welfare through public policies and public

services delivery—i.e. it is the ability to maintain the existing public services and cover obligations to creditors, without increasing indebtedness and taxation levels. Therefore, focusing on public services could suggest investigating financial sustainability considering how effective a public administration should be in providing services to the citizens, rather than focusing only on its efficiency. From a theoretical perspective, this would implicitly mean looking at the public service-dominant approach (Osborne et al. 2012, 2014).

Financial sustainability has been especially addressed by standard setters and regulators. For instance, EU (2012, 2015) refers to fiscal instead of financial sustainability, as the ability of an entity to continue current public policies and public services delivery without changing taxation and indebtedness level. In a wider definition, sustainability refers to the solvency in terms of inter-temporal budget constraints, considering the ability to meet the costs now and in the future through revenues. In other words, an entity could be considered "sustainable" when it can maintain fiscal policy without changing public spending, taxation and the level of indebtedness (EU 2015).

IPSASB (2013), in the recommended practice guideline entitled "Reporting on the Long-Term Sustainability of an Entity's Finances", refers to the long-term fiscal sustainability as "the ability of an entity to meet its service delivery and financial commitments both now and in the future" (IPSASB 2013: 5). According to this guideline, financial sustainability links the public services delivery with the current level of taxation and debt limits—i.e. if an entity can cover demands for public services without increasing taxes or using debt, it will be considered as "sustainable" entity; however, if it needs to increase taxes or the level of indebtedness to carry out the current services delivery, it will be considered as "unsustainable" entity. The IPSASB (2013) definition takes into account three inter-related dimensions of long-term fiscal sustainability, namely services, revenues and debt, which are defined in Table 1. For each dimension, two aspects are considered: the capacity of the entity to manage the dimension, and the level of dependency of external factors that the entity itself cannot control (vulnerability).

Table 1 IPSASB (2013) financial sustainability dimensions

Dimension	Definition	Capacity	Vulnerability
Service	Public services that the entity can deliver, in terms of quantity and quality, given the current level of taxation and debt limits	To maintain or increase quantity and/or quality of public services	To the external factors that are detrimental for the capacity to maintain or increase quantity and/or quality of public services (e.g. if the level of public services is determined by other level of government)
Revenue	Taxation levels, given debt limits and policy intentions in terms of public services delivery	To maintain or increase taxation levels, or introduce new revenue sources	To the willingness of taxpayers to accept the taxation levels, and the dependence of external sources
Debt	Debt levels, given taxation levels and policy intentions in terms of public services delivery	To meet financial commitments or increase debt	To the market confidence and interest rate risk

Source The authors based on IPSASB (2013)

Although there are different ways to define financial sustainability, in general, features highlighted by the IPSASB (2013) and the EU (2012, 2015) have been taken into account by several scholars (e.g. Rodríguez-Bolivar et al. 2014, 2016; Lohri et al. 2014; Drew and Dollery 2014):

- *Public services delivery*: sustainability refers to the ability to maintain or increase social welfare by public services delivery. A reduction in the quality/quantity of public services provided by local governments, could affect citizens' well-being, since the most important welfare needs are usually related to public services (Cuadrado-Ballesteros et al. 2014).
- *Cost-efficiency*: sustainability has been typically viewed as the optimal scale for the cost-efficient public services delivery (Lohri et al. 2014)—i.e. the ability to provide the best public services in terms of quantity and quality with the lowest level of taxation.
- *Debt*: this feature is closely related to efficiency; the goal of providing the best public services with the lowest level of taxation could lead governments to indefinitely accumulate debt. Even there could be situations where debt and interest would be paid by issuing new debt (EU 2015). Thus, sustainability does not only refer to the revenues–expenses trade off, but also to the level of indebtedness as a mean of financing.
- *Intergenerational equity*: sustainability requires meeting current needs without compromising the ability of future generations to meet their needs (Dollery and Grant 2011). A sustainable entity can manage public finances now by ensuring that the future generations of taxpayers do not face the services provided to the current generations.

In sum, financial sustainability could be defined as the ability of the government to maintain or increase the social welfare by providing the best public services in quantity and quality with the lowest level of taxation, but without compromising the ability of future generations to meet their needs due to the continuous increase of public debt.

3 Measurement of Financial Sustainability

Debate on definition is extensive to the way of measuring financial sustainability. Without being exhaustive, Table 2 shows some indicators used for representing financial sustainability until now.

Although there is no consensus, spending, revenues and debt features are present in every definitions of financial sustainability. Thus, income statement plays a fundamental role in assessing financial sustainability, because it reports necessary resources to fulfil public services delivery (Rodríguez-Bolívar et al. 2016). Rodríguez-Bolívar et al. (2014) suggested changes for income statements to measure financial sustainability more effectively; concretely they use adjusted income by removing extraordinary items and those revenues and expenses that are unlikely to be repeated in the future.

Obviously, this accounting figure presumes that the investigated local governments adopt an accrual-based accounting system; moreover, the interpretation of the adjusted income as well as of financial ratio values and their desirable magnitude would take into account intrinsic characteristics of public sector entities (Cohen et al. 2012).

Debt dimension is also taken into consideration in measuring financial sustainability (EU 2012). For instance, as sustainability indicators the Office of Auditor General of Canada (2012) proposes measures on how a government balances its commitments and debts. Concretely, they use indicators of debt position (long-term debt and net debt), together with indicators of results of operations (annual surplus/deficit), and other additional indicators such as the debt servicing costs, the accumulated surpluses/deficits and expenses by department. IPSASB (2013) also encourages reporting information on total debt, net debt, worth and financial worth. Rodríguez-Bolívar et al. (2014) use net debt to name the second dimension of financial sustainability.

EU (2012, 2015) suggests three complex indicators to represent fiscal sustainability in the short-, medium- and long-term, namely S0, S1 and S2, respectively. On the one hand, S0 refers to sustainability challenges in the shorter term; it is a whole set of 28 fiscal and financial-competitiveness variables; for instance: primary balance, gross debt, short-term debt, gross

Table 2 Financial sustainability measures

Measures	Source
• *Non-financial budgetary results index*: current budgetary payables plus non-financial capital budgetary payables divided by the sum of non-financial current budgetary receivables and non-financial capital budgetary receivables	Zafra-Gómez et al. (2009a, b, c) Cuadrado-Ballesteros et al. (2014)
• *Adjusted income*: Income for the financial year by applying IPSAS minus extraordinary revenues plus extraordinary expenses	Rodríguez-Bolívar et al. (2014) Rodríguez-Bolívar et al. (2016)
• Net debt: total liabilities minus financial assets	
• *Long-term debt*	Office of Auditor General of Canada (2012)
• *Net debt*: financial assets less financial liabilities	
- Net debt per capita	
- Net debt as percentage of total revenues	
- Net debt as percentage of GDP.	
• Annual surplus/deficit	
• *Debt servicing costs as percentage of total revenues*: current revenues that are required to service past borrowing decisions, which in turn are not available for future services	
• Accumulated surplus/deficit as percentage of GDP	
• Expenses by department (community services, education, health, debt servicing costs and others) as percentage of total expenses	
• *Total debt:* total liabilities	IPSASB (2013)
• *Net debt:* total liabilities minus financial assets	
• *Net financial worth*: financial assets minus outstanding liabilities	
• *Net worth*: total assets minus outstanding liabilities	
• *Overall balance*: revenue plus grants less expenditure less lending minus repayments	
• *Primary balance*: overall balance, excluding interest payments	

(continued)

Table 2 (continued)

• *Short-term sustainability indicator (S0)*: a whole of 28 fiscal and financial-competitiveness variables that represent the extent to which there could be a risk for fiscal stress in over one year horizon (e.g. GDP, balance, gross debt, net debt, short-term debt, interest rate growth, old-age dependency ratio, private sector leverage, private sector credit flow, etc.) • *Medium-term sustainability indicator (S1)*: gap to the debt-stabilizing primary balance in 2020 through a steady gradual adjustment plus additional adjustment required to reach a debt target of 60% GDP in 2030 plus additional adjustment required to finance some increase in public expenditure due to ageing population up to 2030 • *Long-term sustainability indicator (S2)*: gap to the debt-stabilizing primary balance plus additional adjustment required to finance some increase in public expenditure due to ageing population over an infinite horizon	EU (2012) EU (2015)

financing need, interest rate growth, old-age dependency ratio, net savings of households, private sector debt and credit flow, financial corporations leverage, added value by construction sector, net international investment position, etc. This indicator has been useful for detecting situations of fiscal stress, by estimating risks in the short term through fiscal and macro-financial variables (EU 2012).

On the other hand, S1 and S2 refer to fiscal gaps in gross debt, primary balance and costs arising from ageing population. The former shows the adjustment effort required in terms of primary balance to be introduced until 2020, the adjustment effort required for reaching debt ratios under 60% of GDP in 2030 and the adjustment effort required for covering additional spending due to ageing population until 2030. The second indicator is very similar, but it refers to long term—i.e. S2 shows the adjustment effort required in terms of primary balance and

for covering additional spending due to ageing population over an infinite horizon. The problem is that S2 could be understandable since infinite horizon is unintuitive; thus, EU (2012) also refers to the intertemporal net worth indicator, obtained as the current net worth (i.e. total assets minus total liabilities) together with the sum of discounted future primary balances.

4 Determinants of Financial Sustainability

Previous sections have highlighted that the definition of financial sustainability is a controversial issue; therefore, there is a risk of overlapping between financial sustainability and financial condition. Furthermore, several measures of this concept have been provided, focusing on indicators such as adjusted income, long-term debt, non-financial budgetary results and so forth.

The aim of this section is to investigate what factors could be considered as determinants of financial sustainability, affecting it or providing a risk for a public sector entity to become "unsustainable". This issue is particularly relevant: if managers and politicians of public sector entities have a proper knowledge of determinants (driver and risk factors) affecting financial sustainability, they would improve their decision-making process. More specifically, managers and politicians would assume decisions that could contribute to supervise as well as retain financial sustainability, namely the ability of the entity to meet its service delivery and financial commitments (IPSASB 2013: 5). Therefore, they would both enhance the role of drivers that positively affect financial sustainability and limit risky factors that have a negative incidence on financial sustainability.

Previous studies have mainly dealt with financial health, while only a few were focused on financial sustainability. As a consequence—and in order to provide a wide picture—the ongoing analysis concerning financial sustainability determinants will take into account both kinds of research. According to Wällstedt et al. (2014), the comprehension of financial sustainability solutions and determinants requires the comprehension of financial distress reasons as well. Therefore, literature on

financial distress and its determinants should also provide an overview on viable solutions for financial sustainability. Accordingly, it begins with a discussion on the models concerning distress phenomenon. A good starting point can be the study of Carmeli (2008), whose model classifies the major sources of financial distress into three groups:

- *Structural factors*, which consists of local government size, socio-economic status of citizens and governmental resource allocation;
- *Organizational factors*, which consists of performance evaluation, transparency and the role of the local government's management; *and*
- *Hybrid factors*, essentially based on the relationship between the central government and the local government.

Figure 1 shows the model (where ovals represent latent variables, boxes represent their indicators).

Building on this model, it is worth observing that while some factors are under the control of managers (as well as politicians) of a local government, others do not.

Therefore, according to Cahill and James (1992), it is important to discern external factors from internal factors, with the former being more difficult than the latter for the local government to control. Examples of external factors are demographic and socio-economic conditions of the community, inflation and unemployment rate, which can negatively affect the finances of local governments. Examples of internal factors can be inefficient and ineffective management of budgeting and accounting procedures, a wasteful and excessive bureaucracy, a low transparency and/or corruption phenomenon, and so forth.

Even though some of the above-mentioned factors are not easy to operationalize, several studies have investigated both internal and external factors that are expected to influence fiscal distress (Khola et al. 2005, Zafra-Gómez et al. 2009a) and public debt (Pirtea et al. 2013), at the same time emphasizing the role of both political and socio-economic factors (Guillamón et al. 2011a). From a theoretical point of view, resource-based theory can be considered as a useful tool in investigating both internal (organizational and human resources; capabilities; objectives) and external factors (Barney 1991; Grant 1991). According

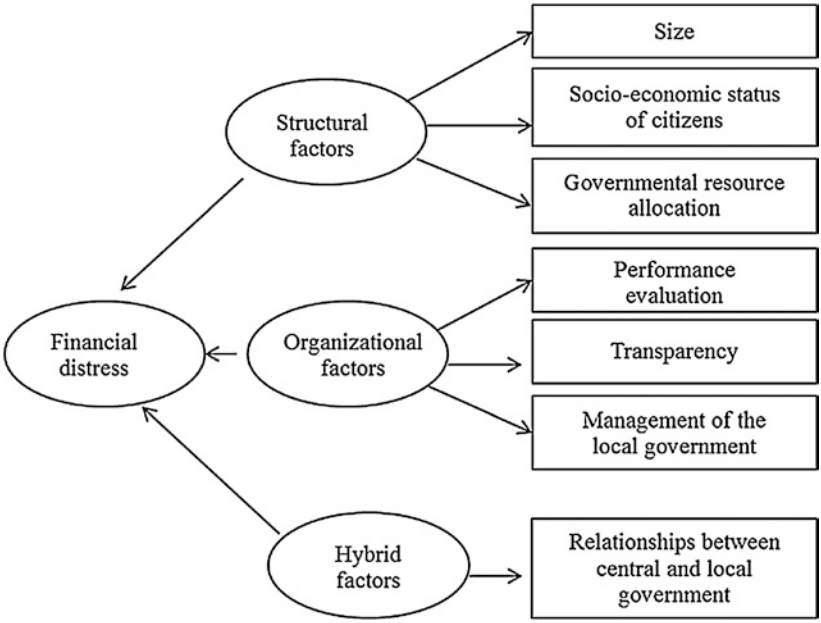

Fig. 1 Structural, organizational and hybrid factors affecting financial distress of LGs

to Wällstedt et al. (2014), "the interplay of these factors determines the municipalities' pattern of handling their resource management"; along the same lines, Knutsson et al. (2008) observe that the key for financial sustainability derives from a broad resource perspective together with a daily attention on financial issues. Moreover, the public service-dominant approach (Osborne et al. 2012; Osborne et al. 2014) could stimulate a reflection not only on the efficiency but also on the effectiveness of services provided to the citizens, while investigating the internal and external factors as determinants of financial distress.

Focusing on financial sustainability, it is worth observing that the above-mentioned factors have been also classified in accordance with their *demographic*, *socio-economic* or *political* nature. This classification

aims to take into account both the capacity and the vulnerability of the three dimensions of financial sustainability (service, revenue, debt; see Sect. 2), assuming that those groups of factors affect both the citizens' need and demand of public services as well as tax revenues, productive costs and indebtedness (Boyne et al. 2001).

The first group (*demographic factors*) consists of several variables such as: population size, population density, dependency ratio and immigration. While some of these variables are expected to affect financial sustainability positively, others represent risky factors, providing a negative effect on financial sustainability. More specifically:

- *Population size*. Previous literature found a negative effect of this variable on public debt (Guillamón et al. 2011b) as well as on public spending (Choi et al. 2010). Additionally, the recent study of Rodríguez-Bolívar et al. (2016) has found a negative effect of population size on financial sustainability as well; therefore, this variable is a risk factor for financial sustainability.
- *Population density*. Several studies argued that the higher the population density, the worst the financial condition of a public sector entity. Accordingly, this variable would have a negative impact on both public spending (Choi et al. 2010) and public debt (Guillamón et al. 2011b); in the same wavelength, it should affect financial sustainability negatively, it being a risky factor. However, results of Benito et al. (2010) as well as those of Rodríguez-Bolívar et al. (2016) were not statistically significant; therefore, the role of this factor is not so evident as one could expect.
- *Dependency ratio*. This variable tries to measure the relationship between financial sustainability and the so-called dependent population, namely population aged under or over defined thresholds (i.e. under 16 or 18 years and over 65 or 70 years). Generally, this variable should have a negative incidence on financial condition—i.e. the higher the dependency ratio, the larger the negative effect on financial condition (Khola et al. 2005; Rodríguez-Bolívar et al. 2016). However, findings of some studies (i.e. Zafra-Gómez et al. 2009b) show that this variable is not statistically significant.

- *Immigration*. This variable is expected to produce negative effects as well, since high migration flows would increase social spending and the level of indebtedness, at the same time having a negative influence on the financial performance of a local government. However, this variable has not been proved to have a significant impact on financial sustainability, with findings of previous studies being contradictory (Rodríguez-Bolívar et al. 2016).

The second group of variables (*economic factors*) consists of: budget results, gross domestic product, level of unemployment and firm's concentration. More specifically:

- *Budget results*. According to the Fiscal Sustainability Report (EU 2012), budget results (surplus/deficit) would have a great incidence on long-term sustainability and several studies have empirically demonstrated this influence. Findings from Rodríguez-Bolívar et al. (2016) show a positive relationship between financial sustainability (expressed by adjusted income) and budget surplus, while those from Brusca et al. (2015) emphasize the role of variables such as capital and personal expenditures as well as financial independence of the local government. However, findings from Guillamón et al. (2011a) did not show a statistically significant relation between financial transparency and budget results.
- *Gross domestic product (GDP)*. This variable is considered as one of the main factors that would affect financial sustainability, due to its direct relationship with tax revenues, public debt and more generally fiscal transparency (Easterly and Rebelo 1993; Andreula et al. 2009). Accordingly, several studies have found a statistically significant effect of GDP on financial sustainability.
- *Level of unemployment*. This variable has been largely used in previous studies concerning financial distress and sustainability, especially in the current context of global crisis. A negative link has been previously found, since a high level of unemployment would imply both a reduction of tax revenues a local government could collect as well as an increase in social expenditures (Zafra-Gómez et al. 2009a; Benito

et al. 2010; Brusca et al. 2015; Rodríguez-Bolívar et al. 2016), which could damage financial sustainability.
- *Firm concentration*. This variable is strictly related with both the unemployment rate and the local GDP and it has been considered as a driver for financial sustainability (Rodríguez-Bolívar et al. 2016).

The third group of variables (*social factors*) consists of:

- *Education level*. The level of education of citizens is perceived as a relevant social variable, since it would affect the demand for information, therefore improving transparency and encouraging the adoption of a more sustainable behaviour (Rodríguez-Bolívar et al. 2016).
- *Citizens' quality of life*. Cuadrado-Ballesteros et al. (2014) provide interesting findings concerning the relationship between the quality of life and the financial health of a local government, demonstrating that such a (positive) relationship does exist.

Finally, previous studies have also considered a fourth group of factors (*political factors*), which should affect the financial condition of a local government, especially focusing on the following:

- *Partisan and budget cycles*. This would express the effect on financial distress and sustainability of political decisions assumed during the pre-election year, the election years and the post-election year. Findings from Benito et al. (2012) as well as Vicente et al. (2013) have largely investigated these factors. García-Sánchez et al. (2014) empirically found that electoral proximity damages the financial health of local governments, especially in terms of sustainability. Other scholars have also studied the effect of political sign of the local governments. For instance, Kiewiet and Szalky (1996) provided evidence that conservative parties have a lower level of debt, and similarly García-Sánchez et al. (2014) evidenced that left-wing parties are usually under worse financial health than others. However, Vicente et al. (2013) did not find a relationship between political ideologies and the level of debt.

Obviously, the above-mentioned factors should not be considered as an exhaustive list; as a matter of fact, scholars have also used other (related) factors, such as population growth rate, percentage change in both the

Table 3 Determinants of financial sustainability

Determinants	Sources
Demographic factors	
• Population size (*risk factor*)	Choi et al. (2010) (+ effect on public spending) Guillamón et al. (2011b) (+ effect on public debt) Rodríguez-Bolívar et al. (2016) (– effect on adjusted income)
• Population density	Benito et al. (2010) Choi et al. (2010) (+ on public spending) Guillamón et al. (2011b) (+ effect on public debt) Rodríguez-Bolívar et al. (2016)
• Dependency ratio	Khola et al. (2005) (– effect on government revenue and expenditure) Zafra-Gómez et al. (2009b) Rodríguez-Bolívar et al. (2016)
• Immigration	Benito et al. (2010) (+ effect on tax burden) Rodríguez-Bolívar et al. (2016)
Economic factors	
• Budget results	Guillamón et al. (2011a) Brusca, Manes Rossi and Aversano (2015) Rodríguez-Bolivar et al. (2016)
• GDP	Easterly and Rebelo (1993) Andreula et al. (2009) Rodríguez-Bolívar et al. (2016)
• Level of unemployment	Benito et al. (2010) (+ effect on tax burden) Rodríguez-Bolívar et al. (2016) (– effect on adjusted income and net debt)
• Firm concentration	Rodríguez-Bolívar et al. (2016) (+ effect on adjusted income)
Social factors	
• Education level	Rodríguez-Bolívar et al. (2016)
• Quality of life	Cuadrado-Ballesteros et al. (2014)
Political factors	
• Partisan and budget cycles	Vicente et al. (2013) Benito et al. (2012) García-Sánchez et al. (2014)

employment and personal income (Wang et al. 2007) or the balance between the fiscal structure and the environment as well as characteristics of the fiscal structure of institutions (Hendrick 2004). Accordingly, without being exhaustive, Table 3 summarizes the driver/risky factors mainly used by scholars in investigating the determinants of financial sustainability.

All the above-mentioned factors are strictly inter-related with each other; in order to achieve a more complete and systemic view (Carmeli and Cohen 2001; Knutsson et al. 2008), scholars largely support a multi-dimensional perspective (Park 2004; Watson et al. 2005), aiming at taking into account the combined (positive and negative) effect of all the variables on financial sustainability of a local government.

5 Conclusions and Directions for Future Research

As previously indicated, financial sustainability could be understood as a component of a wider concept, namely financial health or financial condition (CICA 1997; Zafra-Gómez et al. 2009a, b, c; Cuadrado-Ballesteros et al. 2014), which refers to the ability of governments to provide public services while it can satisfy financial obligations (Lorig 1941; GASB 1987; CICA 2009). Although there is no universal definition, in general, they tend to take into account some core elements: the optimal scale for the cost-efficient public services delivery—that is covering citizens' demands with the lowest level of taxation and indebtedness for preserving intergenerational equity.

This definition takes into account the three dimensions proposed by the IPSASB (2013), namely service, revenue and debt. Thus, measures of financial sustainability should be led to represent these three dimensions, since debate on definition is currently extensive to measure financial sustainability. Financial sustainability is closely related to incomes (EU 2012; IPSASB 2013), so income statement has been traditionally used to represent this concept; since it shows items of revenues and expenses based on the accrual basis, it refers to the capacity of the

government to provide public services with available resources without the need to incur debt. Accordingly, previous studies use the income statement adjusted for extraordinary items to represent financial sustainability (Rodríguez-Bolívar et al. 2014, 2016).

Recently, using a sample of Spanish local governments, Rodríguez-Bolívar et al. (2016) have evidenced that income statement is a good approach for financial sustainability, representing the three dimensions proposed by the IPSASB (2013). However, further international evidence is necessary to finally determine the appropriateness of this measure. For instance, it could be interesting to incorporate a measure of debt, such as the net debt or total debt per capita, along with an indicator of fiscal balance (e.g. primary or overall balance), following suggestions of the IPSASB (2013). In addition, a more complex financial sustainability indicator should take into account some competitiveness variables, such as those the EU (2012, 2015) suggested, especially variables related to socio-economic issues (GDP, ageing population, credit flow, savings of households, etc.). It would also be particularly interesting if scholars continued to contribute to this line of research, thus improving the definition and measurement of financial sustainability.

In addition, this chapter has highlighted the main determinants for financial sustainability, illustrating both the drivers and the risky factors mainly used in previous studies. Several considerations to take note of emerge. Firstly, a large part of the variables adopted in investigating financial sustainability has been used in analysing financial health as well. Even though these two concepts are strictly related to each other, financial health is considered to be wider than financial sustainability. Accordingly, factors affecting the former could not have a significant incidence on the latter. For example, some variables (i.e. population density) while affecting financial condition (Choi et al. 2010; Guillamón et al. 2011b), do not seem to be relevant for financial sustainability (i.e. Rodríguez-Bolívar et al. 2016) or vice versa—i.e. budget results, which have been found relevant for financial sustainability (Rodríguez-Bolívar et al. 2016) but it was not significant for financial transparency (Guillamón et al. 2011a).

Accordingly, future lines of research, even if they are expected to take into account both the relationships and the conceptual differences between financial sustainability and financial condition or health, should provide more insightful theoretical considerations supporting the selection of drivers and risky factors. More specifically, the choice of these variables would be supported both by empirical findings of previous studies and by specific and coherent theoretical lens through which financial sustainability has been (and could be) investigated. For example, Wällstedt et al. (2014) explicitly refer to the resource-based view, arguing that it may be useful for explaining the financial sustainability and the overall function of local governments (see also Carmeli and Cohen 2001, who refer to this theoretical approach in investigating financial crisis of local authorities).

In this way, the selection of determinants would take into account their nature (demographic, economic, social and political factors) as well as the external/internal dichotomy, as clarified in the previous section. This, in turn, would suggest considering the potential incidence on financial sustainability of several variables such as organizational routines, skills of employees, attitude to collaborate within the entity and with other organizations, objectives of the entity and so forth. Old institutional economics, coupled with new institutional sociology, would represent strong theoretical (as well as methodological) lens through which these variables should be investigated (Scapens 1994; Burns and Scapens 2000; Scapens and Varoutsa 2010). Additionally, it is worth recalling again the potentialities offered by the arising public service-dominant approach. Osborne et al. (2012: 149) argue that the four propositions they provided[4] could "recognize and respond to the external, inter-organizational reality" of the New Public Governance, representing an approach through which "genuinely sustainable models of public services delivery can be understood, developed and facilitated for the future".

Coherently, a related implication for future researches would concern the methodological approach to be used in investigating determinants for financial sustainability. While quantitative approaches, which have been largely used in previous studies since they shed light on the role

played by several factors (classified according to their nature), are very beneficial, further knowledge could derive from qualitative approaches. Understanding the specific organizational conditions of a given local government, coupled with the knowledge of external variables, would improve the comprehension of financial sustainability. Managers and politicians, while having a very limited control on demographic, economic and social conditions of the local community, can steer internal factors, superintending organizational routines, motivating and stimulating employees in achieving objectives at the same time improving efficiency and effectiveness. This would have a positive incidence on the service provided to the citizens, which is one of the financial sustainability pillars.

In sum, having a systemic view of the financial sustainability determinants (Carmeli and Cohen 2001; Knutsson et al. 2008; Park 2004; Watson et al. 2005), means improving the decision-making process of managers and politicians, supporting better the ability of an entity to meet its service delivery and financial commitments (IPSASB 2013: 5), which in turn means having a positive effect on the welfare of the state, citizens' quality of life, well-being, accountability and so forth.

Since a "sustainable" government can maintain public services delivery without changing fiscal policy, in terms of spending, taxation and public debt, citizens' demands will be covered without jeopardizing present and future fiscal situation. Sustainable local governments will be able to efficiently deliver social services, housing, transport, health, education, culture and leisure, security services and so on, that are closely related to welfare factors (Cuadrado-Ballesteros et al. 2014; González et al. 2011). Additionally, financial sustainability is intrinsically related to accountability, because accountability is essential for managing public resources efficiently and effectively, which requires strong fiscal discipline (Schaltegger and Torgler 2007).

Because of the link between financial sustainability and these relevant issues (welfare, accountability, quality of life, etc.), this is a very valuable concept to be deeply studied in the future. Scholars may contribute by creating an alert system to avoid governments incur in unsustainable situations that may damage the well-being of citizens. In addition, future studies could be focused on how efficiently and effectively

public services provide without changing fiscal policies (spending, revenues and debt). For instance, functional decentralization, externalization and other reforms based on New Public Governance model may help regarding how financial resources are managed by governments, searching not only for efficiency, but especially for effectiveness, quality, accountability and good governance.

Notes

1. Short-run solvency: the capacity to generate enough cash to fulfil financial obligations in the short run.
2. Service-level solvency: the capacity to provide the level of public services necessary to maintain the social well-being of the citizens.
3. Budgetary solvency: the ability to generate enough income to pay for expenses and not incur a deficit.
4. These four prepositions concern: Strategic orientation; Marketing public services; Coproduction; and Operations management.

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