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# Countries' adoption of the International Financial Reporting Standard for Small and Medium-sized Entities (IFRS for SMEs) – early empirical evidence

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The International Financial Reporting Standard for Small and Medium-sized Entities (IFRS for SMEs) is increasingly being adopted in a number of jurisdictions. Despite the economic importance of non-publicly accountable entities, little is known about what factors influence countries' decisions to adopt IFRS for SMEs. In a unique sample of 128 countries, we find that countries that are not capable of developing their own local generally accepted accounting principles are more likely to adopt IFRS for SMEs. We also provide evidence that in jurisdictions where full IFRS have been applied to private firms, the likelihood of adoption of IFRS for SMEs increases, suggesting that jurisdictions reduce the financial reporting burden on SMEs. Moreover, in line with prior literature, there is evidence that countries with a relatively low quality of governance institutions are more likely to adopt this new set of accounting standards. The results also hold under alternative measures and different estimation approaches. Overall, our results are helpful in understanding the worldwide diffusion of IFRS for SMEs. Standard setters and regulators might consider our study in the future development of accounting harmonisation of non-publicly accountable entities.

**Keywords:** accounting regulation; accounting harmonisation; IASB; IFRS for SMEs; non-publicly accountable entities; standard setting

## 1. Introduction

In July 2009, the International Accounting Standards Board (IASB) issued the International Financial Reporting Standard for Small and Medium-sized Entities (IFRS for SMEs). IFRS for SMEs focuses on general purpose financial statements of entities that do not have public accountability.<sup>1</sup> Non-publicly accountable entities are economically significant in most countries. For

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instance, within the European Union (EU), over 99% of enterprises belong to the SME category. Currently, over 70 countries apply IFRS for SMEs or have plans to adopt this new set of accounting standards in the near future. Given the economic importance of private firms and the widespread acceptance of IFRS for SMEs around the world, the purpose of this study is to examine what factors influence countries' adoption of IFRS for SMEs.

The literature discusses a number of potential benefits which result from a country's switch to full IFRS, such as enhancement of the integration of capital markets and commitment to a higher level of disclosure and transparency (for a detailed discussion see Hope *et al.* 2006). Prior studies focus almost entirely on adoption of full IFRS for *consolidated* accounts of domestic listed firms and on samples from non-EU countries, because the Member States of the EU jointly adopted IFRS. Consistent with the bonding theory, Hope *et al.* (2006) find that countries with weak investor protection (e.g. poor disclosure rules and anti-director rights) are more likely to adopt full IFRS.

A major motivation for our study is the lack of evidence on the influencing factors of countries' adoption of IFRS for SMEs for *single* accounts of private firms. Private firms differ from public listed firms in several ways. First, while we acknowledge that the group of non-publicly accountable entities is heterogeneous (Sellhorn and Gornik-Tomaszewski 2006), the overall majority of private firms with concentrated ownership are not organised as groups and therefore tend to prepare single accounts (unconsolidated accounts) rather than group accounts (consolidated accounts) (Nobes 2010). The distinction in the set of accounts is important with respect to the legal origin of countries (La Porta *et al.* 1998, 2008, Goncharov and Werner 2009). For instance, in many code law countries in Europe, single accounts of private firms have a clear focus on regulatory purposes, such as dividend, insolvency, or tax issues (Ball and Shivakumar 2005, Burgstahler *et al.* 2006, Katz 2006). This suggests that a switch to IFRS for SMEs as the primary set of accounting standards is particularly costly in these countries, because changing accounting rules would imply modifying tax and commercial laws (Nobes 2010).

Second, in the absence of organised capital markets, the (debt) contracting role of accounting dominates in non-public settings. In this way, the preferences of international capital providers and their forces are likely to have influence upon countries' accounting choices (Pacter 2012). For instance, IFRS for SMEs requires the preparation of a cash flow statement which is particularly useful for capital providers (Pacter 2012). Given that there are major differences between domestic accounting rules (local generally accepted accounting principles (GAAP)) and IFRS for SMEs, developing countries are likely to have incentives to adopt a set of high quality accounting standards with more standardised financial disclosures to attract external capital from institutions such as the World Bank or the International Monetary Fund (IMF) (Barth *et al.* 2008, Gordon *et al.* 2012). Prior studies at a firm level provide evidence that differences in domestic GAAP relative to IFRS can impose costs on market participants (e.g. financial analysts), and adoption of international accounting standards is likely to provide more useful information to external users (Ashbaugh and Pincus 2001, Bae *et al.* 2008).

Our sample is based on the list of jurisdictions on the IASB's website and covers 128 countries around the world as of 2013. The IASB's jurisdiction profiles provide a detailed summary of each jurisdiction's adoption status of IFRS for SMEs, as well as other accounting regulation issues (e.g. adoption of full IFRS; regulation of local GAAP). We apply logit and, in robustness tests, multi-period logit regression models to assess the likelihood of adoption of IFRS for SMEs. We use theories of accounting regulation to develop our hypotheses. In line with recent accounting literature (Bushman and Landsman 2010, Kothari *et al.* 2010, Leuz 2010), we argue that these theories provide a helpful framework to understand why jurisdictions regulate GAAP and how regulators respond to market forces that affect the demand for and the supply of accounting information.

Under public interest theory, regulation is a socially efficient response to market failures that are likely to lead to an underproduction of accounting information. To the best of our knowledge, no prior study at country level has empirically examined whether countries that are not capable of developing their own domestic accounting standards (local GAAP) are more likely to introduce international accounting standards issued by the IASB. To the extent these countries might find it beneficial to adopt international accounting standards, we should observe that adoption of IFRS for SMEs is more likely in countries with no local GAAP. This is consistent with our findings.

Under interest group and related capture theories of regulation, the regulator responds to the demand of specific groups. For instance, many countries in Africa have adopted full IFRS for both public *and* private firms. Different parties argue, however, that full IFRS is too complicated and burdensome for non-publicly accountable entities, and thus, the benefits for these firms are offset by high transitional and implementation costs. The Association of Chartered Certified Accountants (ACCA), headquartered in London, states: ‘Elsewhere, particularly countries which currently rely on IFRS as the basis of reporting by *all* companies of whatever size, we expect that local jurisdictions are likely to make use of the standard [IFRS for SMEs]’ (ACCA 2007). We find significant evidence for this prediction.

In line with prior literature (Ramanna and Sletten 2009), we also hypothesise that in countries where the quality of governance institutions is relatively high, adoption of IFRS for SMEs is likely to be less attractive due to high switching and negotiation costs. Our evidence is consistent with this view. We also predict that countries with a common law accounting system are more likely to switch to IFRS for SMEs, as the IASB’s framework is fairly similar to the accounting tradition of common law countries (Hope *et al.* 2006, Ramanna and Sletten 2009, Johnson 2011). While prior studies cannot provide statistical evidence that the variable of the legal origin is an important determinant of countries’ adoption of full IFRS (Hope *et al.* 2006), we do find statistically significant results, suggesting that regulatory forces are more prevalent when countries consider adoption of IFRS for SMEs for single accounts.

The contributions of this paper are several. First, this study complements prior literature by examining countries’ adoption of IFRS for SMEs, where private firms account for a large portion of economic activity and are a key to sustainable economic growth (Bernard *et al.* 2014). Prior literature limited its attention mostly to countries’ adoption of full IFRS for domestic listed firms (Hope *et al.* 2006, Ramanna and Sletten 2009). The setting of countries’ adoption of IFRS for SMEs has several features that allow us to further examine the cost-benefit trade-offs which countries face with the regulated supply of accounting information.

Second, prior studies focused on relatively small samples that range from 36 countries (Hope *et al.* 2006) to 102 countries (Ramanna and Sletten 2009). Our analysis includes both the developing and the developed countries of the EU as well as non-EU countries, resulting in a much larger sample size of 128 countries. This has the added benefit that we are able to provide additional analyses such as splitting our sample based on governance quality scores (see Section 5 for greater detail).

Third, given our unique data set, we are able to examine (1) institutional factors specific to private firms’ single accounts, such as regulatory forces (e.g. legal origin, influence of taxation), (2) determinants which have been explored in prior studies at country level (e.g. governance quality, social legitimisation pressures), and, in additional analyses, (3) determinants from relatively new information sources such as the Global Competitiveness Report by the World Economic Forum (WEF) (e.g. alternative proxies for a country’s governance quality such as the overall quality of auditing and reporting standards or the ease of access to loans). These new sources of information have not been used much in accounting literature. We believe that some of our proxies will prove to be useful for future studies which examine IFRS adoption at macro level and firm level. For instance, using these new information sources, future studies

could empirically investigate the differential effect of IFRS adoption on a country's ability to attract loans.

Finally, since this study uses a more extensive set of explanatory variables, we are able to reduce concerns regarding omitted variable problems as one explanation of endogeneity bias. However, we acknowledge that macroeconomic variables (e.g. governance quality) are a complex outcome of different endogenous political and institutional factors. Thus, relations and interactions among our explanatory variables which are difficult to model may still exist and, thus, raise concerns about endogeneity bias.

## 2. Institutional background

IFRS for SMEs is intended to be used by private firms which do not have public accountability. According to IFRS for SMEs Section 1.3,

an entity has public accountability if a) its debt or equity instruments are traded in a public market or it is in the process of issuing such instruments for trading in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local and regional markets). (IASB 2009)

The IASB neither uses quantitative size criteria nor the legal form of entities as indicators for the application of this new set of accounting rules. IFRS for SMEs (as well as full IFRS) is a set of accounting standards developed by a private standard setting body without binding character. Hence, regulatory action at country level is necessary to permit or mandate the use of IFRS for SMEs. We discuss several possible adoption scenarios in EU and in non-EU countries and point out how (supra) national regulatory and market forces are likely to influence countries' adoption decisions. With respect to EU Member States, we acknowledge that some aspects of our discussion are speculative; however, we believe that analysing a policy issue before a decision is made by the countries involved is important.

In Europe, contrary to full IFRS, the European Commission (EC) rejects the option to adopt IFRS for SMEs at supranational level and leaves it to the Member States to make individual decisions with respect to adoption of IFRS for SMEs. In June 2013, the new EU Accounting Directive (2013/34/EU) was issued and the EC argued that 'the IFRS for SMEs would not appropriately serve the objectives of simplification and reduction of administrative burden' (EC 2013). For instance, the EU Accounting Directive does not require the preparation of a cash flow statement, whereas this is mandatory under IFRS for SMEs. Further, due to incompatibilities between the EU Accounting Directive and IFRS for SMEs, the EC emphasises that Member States must consider the requirements by the EU Accounting Directive when making decisions to adopt IFRS for SMEs (EC 2013).<sup>2</sup>

In recent years, the European consultation process on IFRS for SMEs shows substantially divergent opinions with regard to the potential application of IFRS for SMEs. Opponents of IFRS for SMEs stress the complexity of the standard for small firms and point out the limited relevance only for companies engaged in international trade activities (Eierle *et al.* 2011). In certain EU Member States, such as Germany and France, the link between taxation and capital maintenance rules is likely to make the application of IFRS for SMEs burdensome by modifying existing rules or duplicating reporting requirements for firms (local GAAP and IFRS for SMEs).

There are different possible adoption scenarios in these EU countries: The national regulator may permit IFRS for SMEs for individual accounts for information purposes, but national GAAP will continue to be required for regulatory purposes. Based on Article 5b of the IAS Regulation (No. 1606/2002), some European countries follow this approach for the use of full IFRS for individual accounts of private firms (e.g. Germany and Romania).<sup>3</sup> Further, governments may

converge to some degree domestic accounting standards with IFRS for SMEs. Both scenarios have the added benefit that national regulators would fully comply with the EU Accounting Directive – an important supranational condition when EU countries make adoption decisions. In addition, countries could continue to follow the ‘two-standard’ system, that is, listed firms follow full IFRS for consolidated accounts and private firms apply national GAAP for individual accounts (non-adoption of IFRS for SMEs) (Street and Larson 2004). Thus, in countries where governments and market participants have gained positive experiences with domestic GAAP, non-adoption is likely to remain the status quo.<sup>4</sup> Therefore, it is most likely that governments will consider the preferences of preparers and users in their decisions as well as economic and political costs and benefits (Ball 2006).

In other EU Member States, where regulatory forces between financial accounting and tax accounting are typically minimal or non-existent (e.g. the UK and Ireland), we expect that adoption of IFRS for SMEs *as issued* by the IASB will be – according to the statements by the EC above – unlikely, because there are differences in recognition and measurement rules between IFRS for SMEs and the EU Accounting Directive. The European Financial Reporting Advisory Group (EFRAG) provides a detailed overview of accounting issues with which IFRS for SMEs is incompatible with the EU Accounting Directive (EFRAG 2010). Accordingly, either governments adopt IFRS for SMEs with modifications or they converge their national GAAP with IFRS for SMEs to comply with the requirements of the Accounting Directive. Furthermore, regulators may create a new accounting standard based on IFRS for SMEs; again, provided that this new set of accounting standards fully complies with the requirements of the Accounting Directive. For instance, in the UK, the Financial Reporting Council (FRC) has issued the Financial Reporting Standard 102 (for fiscal years starting on or after 1 January 2015) which is based on IFRS for SMEs, but with significant modifications in order to be consistent with company law.<sup>5</sup>

Finally, in non-EU countries, we expect that supranational forces are less prevalent. Voluntary adoption of IFRS for SMEs has three main advantages compared to mandatory adoption: First, voluntary adoption leaves it up to the individual firm to decide whether IFRS for SMEs is the set of accounting standards that best fits its specific needs. This is particularly important within the heterogeneous group of private firms where cost-benefit trade-offs of applying international accounting standards are likely to differ across firms. Second, as a consequence, economic and political costs are likely to be lower when permitting rather than mandating IFRS for SMEs. Third, voluntary adoption would lead to a more balanced situation in the universe of accounting standards. Prior literature argues that competition among accounting standards gives standard setters incentives to develop accounting standards that can adequately reflect the changing economic environment (Sunder 2002, 2011, Ball 2006, Kothari *et al.* 2010, Kaya and Pillhofer 2013). However, an opposing argument is that under a voluntary regime, fewer firms will report under IFRS for SMEs, suggesting that a voluntary regime may have adverse effects on the comparability of financial statements. In addition, a single set of accounting standards is likely to create cost savings.

### 3. Theoretical framework and development of hypotheses

In this section, we draw on the large body of research into the regulation of accounting standards and financial reporting. We discuss the costs and benefits of adoption of IFRS for SMEs at country level. Finally, we develop our hypotheses once the conceptual underpinnings have been laid out.

#### 3.1. Economic theory of accounting regulation

In line with Leftwich (1980) and Kothari *et al.* (2010), we assume throughout the paper that jurisdictions want to maximise social welfare, and accounting standards serve as an important means



to facilitate the allocation of resources in an economy. The literature discusses several theories which aim to explain the existence and consequences of regulation of GAAP: (i) public interest theory of regulation and (ii) interest group and related capture theories of regulation. In line with recent literature in accounting (Bushman and Landsman 2010, Kothari *et al.* 2010, Leuz 2010), we argue that these theories provide a helpful framework for understanding why jurisdictions regulate GAAP and how regulators respond to market forces. In general, markets are not static mechanisms, suggesting considerable changes in the financial reporting and governance environment and the interplay between market and political forces are likely to influence regulatory actions (Ball 2009).

Under the public interest theory, regulation is a socially efficient response to market failures such as natural monopoly, externalities, information asymmetries, and excess competition (Breyer 1982). Kothari *et al.* (2010) argue that information asymmetries are particularly relevant to justify financial disclosure regulation, but less compelling in justifying regulation of GAAP. Leuz and Wysocki (2008) review at length literature on the economic consequences of financial reporting and disclosure regulation on capital markets. In line with Kothari *et al.* (2010), we therefore focus our discussion on externalities in the private market for accounting information. The accounting literature emphasises that accounting information has the feature of a public good. That is, private producers of accounting information cannot exclude non-paying consumers. This would lead to underproduction of information and deadweight losses attributable to externalities (Leftwich 1980). The pre-SEC (Securities and Exchange Commission) period in the USA is a prominent example of underproduction of accounting information in an unregulated environment. In our setting, some developing jurisdictions do not have their own local GAAP. Similar to the pre-SEC period, in these jurisdictions, simple bookkeeping rules might exist, or 'accounting standards' have emerged as best practices between firms and different contracting parties. In order to meet the informational demands of different parties, the government-regulated supply of accounting information has been deemed necessary, which is most likely to result in efficient contracting. Kothari *et al.* (2010, p. 269) argue that 'regulation of products with externalities is expected to set production to welfare maximising levels'. Thus, adopting a set of internationally acceptable accounting standards can serve the public interest by enhancing the credibility of accounting information to external parties and also internally to firms' managers.

Moreover, in practice, the free market solution is likely to lead to considerable costs when negotiating with different parties over the quality and quantity of information (Whittington 1993, Sunder 2002). Instead of preparing multiple sets of financial statements for the informational needs of different parties, a single set of accounting standards is likely to be the lowest cost solution (Sunder 2002, Kothari *et al.* 2010).

Under interest group and related capture theories of regulation, the regulator responds to the demand of specific groups. These groups exert political influence and lobby the regulator for favourable outcomes. Direct lobbying can be in the form of comment letters or commentaries. McLeay *et al.* (2000) examine lobbying activities of three representative organisations (preparers, auditors, and academic experts) on draft accounting legislation in Germany and provide evidence that the industry lobby group exerts the greatest influence on the regulator during the transformation of the EU Fourth Accounting Directive into German accounting law. Brown and Tarca (2001) show how different interest groups influence the Australian government during the Corporate Law Economic Reform Program (CLERP) and how the regulator balances the forces and the informational needs of interested parties as a key element of accounting standard setting. Moreover, in developed countries, we expect that the accounting and auditing profession may fear to lose power and control over standard setting to the IASB. A similar argument can be made with regard to regulators themselves, who seek to maximise their own utility and power.

### 3.2. Cost-benefit considerations at country level

If jurisdictions want to maximise social welfare, they must choose the set of accounting standards which leads to the most highly valued output (Leftwich 1980), given the specific costs and benefits of the government-regulated supply of and demand for accounting information. Thus, does a country benefit from adopting IFRS for SMEs? And, if yes, in what way?

Several initiatives, such as the World Bank Reports on the Observance of Standards and Codes (ROSC), the Financial Sector Assessment Program (FSAP), and the Financial Sector Reform and Strengthening Initiative (FIRST), emphasise the role of accounting standards as an important means of a country's overall development strategy in strengthening the international financial architecture and accountability. These initiatives suggest that a key long-term benefit resulting from countries' adoption of IFRS for SMEs includes better lending conditions by institutions such as the IMF and the World Bank (Tyrrall *et al.* 2007, Gordon *et al.* 2012).

Developing economies are dependent on receiving loans, and the support of lending institutions takes a variety of forms, including technical assistance, training programmes, or financing capacity (Hopper 2012). Although not directly tested in this study, we assume that developing countries find it beneficial to adopt IFRS for SMEs in order to attract external funds (Gordon *et al.* 2012). For instance, Tarca (2004) applies the signalling theory (Spence 1973) at firm level to examine the extent to which listed firms from five different countries use international accounting standards (US GAAP or IAS). She argues that firms that prepare accounting information based on international standards can signal their commitment to disclose more information to market participants. In our setting, the decision to adopt IFRS for SMEs sends a credible signal to lending institutions and international investors that developing economies are willing to introduce an internationally acceptable set of high quality accounting standards. In other words, this signalling mechanism enables adopting economies to credibly communicate their efforts.

Moreover, international organisations benchmark countries' existing financial reporting standards against international accounting standards (Hegarty *et al.* 2004). For example, the World Bank's A&A ROSC reports assess a country's accounting and auditing practices relative to IFRS, followed by the development and implementation of an action plan for a reform of a country's corporate financial reporting regime. Recent reports of Bosnia and Herzegovina, Mauritius, and Nigeria recommend adoption of IFRS for SMEs as a part of the action plan (World Bank 2013). Consistent with the bonding theory (Coffee 2002), adopting economies might have incentives to bond themselves to a reporting regime that provides more comparable and higher quality accounting information. Prior literature finds that the reporting requirements of the US SEC are likely to affect foreign US cross-listed firms' accounting standards choices, suggesting that the specific US economic setting results in US GAAP practices to attract market participants (Coffee 1999, 2002, Stulz 1999, Doidge *et al.* 2004, 2009, Kaya and Pillhofer 2013). Furthermore, Hope *et al.* (2006) argue that the costs arising from compliance with IFRS as well as staff training are mostly borne by the affected firms and, except for the enforcement and implementation, not by jurisdictions. Therefore, Hope *et al.* (2006, p. 4) note: 'While bonding can imply both more benefit and more cost, the former is likely to be the primary focus for a jurisdiction (firm) that bonds'.

In addition, some accounting quality studies at firm level argue that IFRS removes allowable accounting choices, suggesting that IFRS provides more standardised disclosures that better reflect a firm's economic performance and thus is likely to increase accounting quality (e.g. Ding *et al.* 2007, Bae *et al.* 2008, Barth *et al.* 2008). For instance, Barth *et al.* (2008) find that firms which adopt IAS exhibit less earnings smoothing, less management of earnings towards targets, and more timely loss recognition. Furthermore, Ashbaugh and Pincus (2001) find that (i) analyst earnings forecast errors are positively associated with greater measurement



and disclosure differences in their sample countries' domestic GAAP relative to IAS and (ii) the switch to international accounting standards decreases the absolute value of analyst forecast errors. However, recent literature cautions against attributing the higher accounting quality for IFRS reporting firms solely to the switch in accounting standards. Other factors such as changes in enforcement and implementation may be attributable to the positive effects documented in prior studies at firm level (Barth and Israeli 2013, Christensen *et al.* 2013).

Another transitional benefit for developing countries considering adoption of IFRS for SMEs is that the development of accounting standards can be outsourced to a private standard setter (Pacter 2009). Chua and Taylor (2008, p. 462) note that 'outsourcing the manufacture of accounting standards to a single private agency appears to be a rational, lower cost option'. We expect that considerable savings of time and transitional costs are not likely to be trivial to less developed economies (Mir and Rahaman 2005).

We predict that further benefits are likely to result for countries that originally adopted full IFRS on a mandatory or voluntary basis (instead of using local GAAP) for both publicly and non-publicly accountable entities, and now aim to reduce the financial reporting complexity for non-publicly accountable entities. For instance, Paul Pacter, former IASB member, states (2009, p. 6) that 'another benefit will be to reduce the financial reporting burden on private entities in those jurisdictions where, at the moment, standards designed for reporting by participants in public capital markets have been pushed down to private entities'. This suggests that benefits of countries' adoption of IFRS for SMEs are closely linked to countries' costs, and sometimes, benefits conflate with costs of adoption of IFRS for SMEs at country level (Schipper 2010).

### 3.3. Development of hypotheses

#### 3.3.1. Availability of local GAAP

In most countries, non-publicly accountable entities have a legal obligation to prepare financial statements that conform to a required set of accounting principles that are generally accepted in the country (local GAAP). For instance, in all EU countries, firms are required by the Fourth Accounting Directive and its transposition into country law to prepare individual financial statements (single accounts). Moreover, in many jurisdictions, financial statements (individual accounts) are driven by regulatory requirements such as the determination of distributable income or the basis for taxation. Therefore, adoption of IFRS for SMEs in these countries inevitably requires a legislative change in law to adjust tax and company law to a new set of accounting standards (Bertoni and DeRosa 2010). Alternatively, firms have to prepare two sets of accounts, one for regulatory purposes (local GAAP) and the other for serving information needs of a broad group of company outsiders (IFRS for SMEs) (Zülch *et al.* 2011).<sup>6</sup>

Therefore, we predict that countries with their own local GAAP as the primary set of accounting standards are less likely to adopt IFRS for SMEs. In addition, we expect that influential lobbying groups like auditors and national standard setters will be likely to be biased against internationally developed standards because these institutions fear the loss of their influence over accounting standard setting to the IASB.

On the other hand, however, many jurisdictions such as Oman, Panama, or Barbados do not have own developed national accounting systems. Both full IFRS and IFRS for SMEs represent an international set of accounting standards, and it remains unclear whether these countries are capable of developing their own local GAAP that would provide equivalent accounting quality relative to the IASB's accounting standards. For instance, with respect to adoption of full IFRS, government representatives from Kazakhstan note that 'there was no reason for Kazakhstan

to independently develop what has already been developed elsewhere in the world' (Tyrrell *et al.* 2007, p. 92). As IFRS are seen as an international benchmark, developing economies in the past could achieve harmonisation of accounting standards in conformity with accounting standards (full IFRS) of developed countries. The comment letters on the Exposure Draft of IFRS for SMEs further provide anecdotal evidence for our conjecture that emergent countries perceive outsourcing the development of accounting standards to the IASB as beneficial due to a lack of their own capabilities (Chua and Taylor 2008, Stainbank 2011). For instance, the Institute of Chartered Accountants of Barbados (ICAB) notes: 'We do not have the capability to develop our own local standards and in any event, prefer to adopt internationally recognised financial reporting standards' (ICAB 2007). Accordingly, the costs of switching to IFRS for SMEs are likely to be relatively low in these countries. The arguments above lead to our first hypothesis:

H1: Countries with their own local GAAP as the primary set of accounting standards are less likely to adopt IFRS for SMEs.

### 3.3.2. *Application of full IFRS*

Several member countries of the Eastern, Central and Southern African Federation of Accountants (ECSAFA) have adopted full IFRS for all companies. Market participants argue, however, that full IFRS is too complicated and burdensome for non-publicly accountable entities and, thus, the benefits for these firms are offset by high transitional and implementation costs. The introduction of IFRS for SMEs by the IASB in 2009 was a welcome development as these countries aim to reduce the burden of compliance for their domestic SMEs. For example, the South African Institute of Chartered Accountants (SAICA) notes that 'the long awaited final accounting requirements for Small and Medium Entities (SMEs) has finally arrived' (SAICA 2010).

Therefore, we expect that the likelihood of adoption of IFRS for SMEs increases if a country already requires or permits (instead of local GAAP) private firms to report under full IFRS. Both full IFRS and IFRS for SMEs are principle-based standards issued by the IASB. Adoption of IFRS for SMEs is likely to reduce the compliance burden, as this new set of accounting standards is significantly less complex than full IFRS. In addition, due to enforcement and implementation experience with full IFRS at country level, we expect that transitional and ongoing costs for these countries are relatively low (Pope and McLeay 2011).

As a consequence of the implementation choices given by the IAS Regulation, some EU countries permit private firms to use full IFRS instead of local GAAP. In general, in these countries, regulatory forces between financial accounting and tax accounting are less prevalent. Based on the discussion in Section 2, we expect that some EU countries that do permit full IFRS instead of local GAAP either voluntarily adopt IFRS for SMEs with modifications in order to fully comply with the EU Accounting Directive or create a new accounting standard based on IFRS for SMEs. Our second hypothesis is:

H2: Countries that require or allow (instead of local GAAP) private firms to report under full IFRS are more likely to adopt IFRS for SMEs.

### 3.3.3. *Governance quality*

A growing body of literature provides evidence of the importance of countries' institutional features for reporting quality. Ball *et al.* (2000) find that firms from common law countries exhibit more timely loss recognition. Leuz *et al.* (2003) provide evidence that earnings management varies systematically across institutional clusters. That is, outsider economies with relatively

dispersed ownership, strong investor protection, and large stock markets exhibit lower levels of earnings management than insider countries. Recent studies also document that strict enforcement mechanisms are necessary to benefit from IFRS adoption (Daske *et al.* 2008, 2013, Leuz 2010, Barth *et al.* 2012). Thus, it is not clear that IFRS adoption per se increases accounting quality and comparability (Kaya and Pillhofer 2013). In addition, several studies show that in countries with low quality institutional governance, the benefits of IFRS adoption on foreign investment are less pronounced (Ball *et al.* 2000, Hail *et al.* 2010). Beneish *et al.* (2012) find increased foreign equity investment only for countries with high perceived governance quality prior to IFRS adoption.

Accounting standards are part of a complex system of governance institutions that include auditor training, auditing standards, enforcement, or the role of the press. Ramanna and Sletten (2009) argue that in countries where the quality of local governance institutions is relatively high, IFRS adoption is likely to be less attractive because institutions face high opportunity and switching costs. These countries have a stable regulatory environment with existing rules of law and a relatively high government effectiveness that is also likely to include accounting standards for private firms. In contrast, in countries where local governance institutions are not well developed, switching costs are likely to be low. Accordingly, we hypothesise:

H3: Countries with a relatively low quality of governance institutions are more likely to adopt IFRS for SMEs.

### 3.3.4. *Legal origin*

Nobes (1998) argues that a country's financing system determines its accounting system. Insider financing systems are dominated by credit-based financing, whereas outsider financing systems are characterised by the orientation towards the informational needs of equity investors on capital markets. In the absence of organised capital markets, this classification in insider and outsider financing systems is less compelling. Prior literature provides ample evidence that banks are the main external users of private firms' annual accounts across different countries (Fülbiér and Gassen 2010, Collis 2012, Dedman and Kausar 2012). Thus, the (debt) contracting role of financial accounting dominates in non-public settings (Nobes 1998, Sellhorn and Gornik-Tomaszewski 2006).

The distinction in private firms' set of accounts (single vs. group accounts) is likely to be important with respect to the legal origin of countries. The single accounts of private firms in code law countries are conceptually different from the principle-based IFRS for SMEs. Code law accounting systems are characterised by the emphasis on financial reporting conformity with tax regulations, conservatism, and the protection of creditors (Jermakowicz and Gornik-Tomaszewski 2006). Therefore, Nobes (2010, p. 216) predicts that

if taxable income and distributable income are closely linked to accounting profit in a particular country, such a transition to IFRS will be unacceptable to the regulators of that country, who would lose control of tax or distribution if they allowed the use of IFRS or SME-IFRS.

IFRS for SMEs is not designed to fulfil these regulatory functions because accounting standards that will be applied globally cannot deal with requirements that substantially differ across jurisdictions (Pacter 2009). The IASB's framework is more in line with the accounting systems of common law countries where no or little relation between financial accounting and tax accounting exists (Bertoni and DeRosa 2010). Accordingly, our fourth hypothesis is:

H4: Countries with a common law legal system are more likely to adopt IFRS for SMEs.

## 4. Research design

### 4.1. Dependent variable – identification strategy

A worldwide database regarding countries' adoption of IFRS for SMEs does not exist. Prior country level studies rely mainly on Deloitte's IASplus webpage (Hope *et al.* 2006, Judge *et al.* 2010) to identify countries which have adopted full IFRS for domestic listed firms. We note that information on the Deloitte website is not up-to-date for countries' adoption of IFRS for SMEs. To construct our database, we obtain the IFRS for SMEs adoption decision as the dependent variable from the IASB's website (IASB 2013a). The IASB's jurisdiction profiles provide a detailed summary of each jurisdiction's adoption status of IFRS for SMEs as well as other accounting regulation issues (e.g. adoption of full IFRS; regulation of local GAAP). In addition, the jurisdiction profiles provide information about the webpages of domestic standard setters and central banks as well as web links to important regulatory decisions. The IASB also issues the IFRS for SMEs update newsletters on its website, which includes a section called 'recent adoptions' (IASB 2013b).

In summary, our sample consists of 128 countries as of 2013. We classify our sample countries into three groups: (1) 'Non-Adopters'; (2) 'Voluntary-Adopters'; and (3) 'Mandatory-Adopters'. Non-Adopters are jurisdictions that prohibit SMEs to prepare financial statements according to IFRS for SMEs. Voluntary-Adopters are jurisdictions that allow SMEs to use IFRS for SMEs. For instance, some countries that do not have their own local GAAP allow private firms to use IFRS for SMEs. Finally, Mandatory-Adopters are jurisdictions that require SMEs to prepare financial statements in accordance with IFRS for SMEs.

Table 1 shows that out of 128 sample countries, 65 countries belong to the group of 'Non-Adopters' and 63 countries to the group of 'Adopters'. Within the group of 'Adopters', only six countries require the application of IFRS for SMEs (marked with \* superscript in Table 1). Thus, voluntary adoption of IFRS for SMEs dominates in comparison to mandatory adoption. Therefore, in line with Ramanna and Sletten (2009), we combine voluntary and mandatory adopters into the group 'Adopters' due to the very small number of jurisdictions that require IFRS for SMEs. For our logit regression analysis, we coded '0' for 'Non-Adopters', that is, if a country is part of group (1), and '1' for 'Adopters', that is, if a country belongs to either group (2) or group (3).

Turning towards a geographical perspective, Table 2 shows that the majority of adopters are from Latin America and the Caribbean (27 adopting jurisdictions), followed by Sub-Saharan Africa (14 adopting jurisdictions), Europe and Central Asia (seven adopting jurisdictions), and East Asia and Pacific (five adopting jurisdictions). Jurisdictions in North America and Oceania and Australia prefer to not adopt IFRS for SMEs. However, we note that the diffusion of IFRS for SMEs is an ongoing public policy debate and, therefore, changes may occur in the near future.

### 4.2. Regression model and variables

Logit regression models, popularised in the IFRS adoption literature at country level (Hope *et al.* 2006, Zeghal and Mhedhbi 2006, Judge *et al.* 2010), constitute the most obvious empirical approach to test our predictions. In particular, we treat IFRS adoption (dependent variable, IFRS\_SME) as a binary variable (Non-Adopters vs. Adopters). In additional analyses, we rerun the tests including other potential factors to see if the results are sensitive to possible alternative explanations. In sum, using different model specifications enables us to more rigorously evaluate the determinants of adoption of IFRS for SMEs.

Table 1. Countries' adoption status – Non-Adopters vs. Adopters.

Non-Adopters IFRS for SMEs prohibited				Adopters IFRS for SMEs optional or required (*) for SMEs		
<i>N</i> = 65				<i>N</i> = 63		
Albania	Greece	Netherlands	Uruguay	Anguilla	Georgia	Rwanda*
Australia	Guinea-Bissau	New Zealand	Uzbekistan	Antigua & Barbuda	Ghana	Serbia*
Austria	Hungary	Niger		Argentina	Grenada	Sierra Leone
Belarus	Iceland	Nigeria		Azerbaijan	Guatemala	Singapore
Belgium	India	Norway		Bahamas	Honduras	South Africa
Bhutan	Indonesia	Oman		Bahrain	Hong-Kong	Sri Lanka
Bolivia	Ireland	Pakistan		Bangladesh	Iraq	St. Kitts & Nevis
Brunei Darussalam	Italy	Poland		Barbados	Israel	St. Lucia
Bulgaria	Japan	Portugal		Bermuda	Jamaica	St. Vincent & the Grenadines
Canada	Korea, Dem. Rep. (South Korea)	Romania		Bosnia and Herzegovina	Jordan	Suriname
China	Kosovo	Russia		Botswana	Kenya	Swaziland
Colombia	Latvia	Saudi Arabia		Brazil	Lesotho	Tanzania
Croatia	Liechtenstein	Slovakia		Cambodia	Macedonia*	Trinidad & Tobago
Cyprus	Lithuania	Slovenia		Cayman Islands	Madagascar	Turkey
Czech Republic	Luxemburg	Spain		Chile*	Maldives	Uganda
Denmark	Macao	Sweden		Costa Rica	Mauritius	Ukraine
Egypt	Malaysia	Switzerland		Dom. Republic	Myanmar	United Arab Emirates
Estonia	Malta	Taiwan (Rep. China)		Dominica	Nepal	Venezuela*
Finland	Mexico	Thailand		Ecuador	Nicaragua	Yemen
France	Moldova	UK		El Salvador	Panama	Zambia
Germany	Mongolia	USA		Fiji*	Paraguay	Zimbabwe

Notes: The sample is based on the list of jurisdictions on the IASB's website as of 2013. We exclude Montserrat due to missing data on important variables. The 128 sample countries are coded as 'Non-Adopters' and 'Adopters', respectively. 'Non-Adopters' are jurisdictions where IFRS for SMEs is prohibited for statutory annual accounts. 'Adopters' are jurisdictions that either require (these countries are marked with \*) or allow IFRS for SMEs.

Table 2. Adoption status by geographical regions.

Region	Total <i>N</i>	Non-Adopters		Adopters	
		<i>N</i>	Percentage	<i>N</i>	Percentage
East Asia and Pacific	14	9	64.3	5	35.7
Europe and Central Asia	45	38	84.4	7	15.6
Latin America and Caribbean	31	4	12.9	27	87.1
Middle East and North Africa	11	5	45.5	6	54.5
South Asia	6	2	33.3	4	66.7
Sub-Saharan Africa	17	3	17.6	14	82.4
North America	2	2	100.0	0	0.0
Oceania and Australia	2	2	100.0	0	0.0
Total Sample	128	65	50.8	63	49.2

Notes: Adoption status of IFRS for SMEs by geographical regions. The regions are defined by the World Bank for analytical and operational purposes. The regions 'Oceania and Australia' and 'North America' have been added manually.

We use the following logit model to test our hypotheses:

$$\begin{aligned}
 \text{Prob(IFRS\_SME} = 1) &= \alpha + \beta_1 \text{NATGAAP} + \beta_2 \text{FULLIFRS} + \beta_3 \text{GOVQUALITY} + \beta_4 \text{LAW} \\
 &+ \beta_5 \text{LogAREA} + \beta_6 \text{LogGDP} + \varepsilon
 \end{aligned} \tag{1}$$

#### 4.3. Description of variables

NATGAAP – we code '1' if a country has its own local GAAP (e.g. the Member States of the EU), and '0' if a country has not developed national accounting standards. FULLIFRS – binary variable that takes the value of '1' if full IFRS is required or optional (instead of local GAAP) for SMEs, and '0' if full IFRS is prohibited. Following Beneish *et al.* (2012) and Fülbiér and Gassen (2010), GOVQUALITY is the average of six aggregate indicators (voice and accountability, political stability, governance effectiveness, regulatory quality, rule of law, and control of corruption) from the World Bank's Worldwide Governance Indicators (WGI) project (Kaufmann *et al.* 2009, 2011). LAW – binary variable that takes the value of '1' if a country has a common law legal system and '0' otherwise. Based on previous research (Hope *et al.* 2006, Ramanna and Sletten 2009, Judge *et al.* 2010), we include the natural logarithm of the following two control variables: AREA and GDP (Gross Domestic Product) as proxies for a jurisdiction's international political and economic power. (Table 3)

## 5. Statistical evidence

### 5.1. Univariate results

Table 4 presents descriptive statistics of IFRS adoption status and independent variables for our sample countries. A *t*-test of difference in means across Adopters and Non-Adopters rejects the null of no difference at the 1% level (two-tailed). The mean of availability of NATGAAP is higher for Non-Adopters than for Adopters. Moreover, the mean of the independent variable GOVQUALITY is positive for Non-Adopters (0.522), indicating higher governance quality. Table 4 shows that Adopters have more experience with FULLIFRS. That is, the mean value of our independent variable FULLIFRS is higher for Adopters (0.904) than for Non-Adopters (0.400).



Table 3. Variable definition.

Variables	Definition	Source and year
<i>Dependent variable</i>		
IFRS_SME	Binary variable that takes the value ‘1’ if IFRS for SMEs are either optional or required and ‘0’ otherwise	IASB (2013a)
<i>Independent variables</i>		
<i>Main analyses</i>		
NATGAAP	Binary variable that takes the value of ‘1’ if a country has its own local GAAP and ‘0’ if a country has not developed local GAAP	IASB (2013a)
FULLIFRS	Binary variable that takes the value of ‘1’ if full IFRS are required or are optional for all SMEs and ‘0’ if full IFRS are prohibited	IASB (2013a)
GOVQUALITY	Yearly average of six governance indicators that capture different dimensions of governance: voice and accountability, political stability, governance effectiveness, regulatory quality, rule of law, and control of corruption. The index ranges from $-2.5$ (weak) to $+2.5$ (strong)	The World Bank, WGI, Average 2005–2009
LAW	Binary variable that takes the value of ‘1’ if a jurisdiction has a common law legal system and ‘0’ otherwise	World Fact Book, 2013
<i>Additional analyses</i>		
BOOKTAX	Binary variable that takes the value of ‘1’ if taxable profit is based on the legal entity statutory accounts and ‘0’ if there is little or no relationship between taxation and statutory accounts in a country	PwC (2011)
TAXREVENUE	Tax revenue (% of GDP) refers to compulsory transfers to the central government	The World Bank, Average 2005–2009
ACCESSLOANS	Ease of access to loans reflects perceptions of the ease of level to obtain a bank loan in a country with only a good business plan and no collateral. The index ranges from 1 (very difficult) to 7 (very easy)	The Global Competitiveness Report, Average 2008–2009
STRENGTHAaR	Strength of auditing and reporting standards reflects perceptions of the quality of financial auditing and reporting standards regarding company financial performance. The index ranges from 1 (very weak) to 7 (very strong)	The Global Competitiveness Report, Average 2008–2009
DOINGBUSINESS	Index ranks countries on their ease of doing business from 1 (high ranking) to 185 (low ranking). For each economy, the ranking is calculated as the average of the percentile rankings on each of the following 10 topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency	The World Bank, Doing Business, 2011

(Continued)

Table 3. Continued.

Variables	Definition	Source and year
Alternative explanations		
FOREIGNAID	Net official development assistance (ODA) consists of disbursements of loans made on terms and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients. It includes loans with a grant element of at least 25% (calculated at a rate of discount of 10%)	The World Bank, Average 2005–2009
IMPORTPENETRATION	Imports of goods and services represent the value of all goods and other market services received from the rest of the world (expressed as % of GDP)	The World Bank, Average 2005–2009
EDUCATIONALLEVEL	Gross enrolment ratio. Total is the total enrolment in tertiary education, regardless of age, expressed as a % of the total population of the five-year age group following on from secondary school leaving	The World Bank, Average 2005–2009
Control variables		
LogAREA	A country's area size in square km (log-transformation is taken)	Worldatlas.com, 2013
LogGDP	GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy (log-transformation is taken)	The World Bank, Average 2005–2009

Table 4. Descriptive statistics by adoption status.

Primary Effect	Variable	Non-Adopters		Adopters		
		N	Mean	N	Mean	t-stats
<i>Independent variables</i>	NATGAAP	65	0.923	63	0.428	7.012***
	FULLIFRS	65	0.400	63	0.904	−6.988***
	GOVQUALITY	65	0.522	63	−0.054	3.778***
	LAW	65	0.230	63	0.555	−3.961***
<i>Control variables</i>	LogArea	65	11.949	63	10.509	3.016***
	LogGDP	65	25.546	63	23.395	6.071***

Notes: Descriptive statistics of the factors that potentially influence adoption of IFRS for SMEs. A *t*-test of difference in means across 'Non-Adopters' and 'Adopters' rejects the null of no difference at the 1% level (two-tailed) for all variables.

\*\*\* indicates statistical significance at the 1% level.

\*\* indicates statistical significance at the 5% level.

\* indicates statistical significance at the 10% level.

Table 5 reports Pearson correlations in the lower half and Spearman correlations in the upper half for our variables and their two-sided significance levels. Pearson correlations are consistent in signs with Spearman correlations for the relation between the dependent variable IFRS\_SME and

Table 5. Pearson and Spearman correlations.

<i>N</i>	IFRS_SME 128	NATGAAP 128	FULLIFRS 128	GOVQUALITY 128	LAW 128	LogAREA 128	LogGDP 128
IFRS_SME	<b>1</b>	−0.529 (0.000)	0.528 (0.000)	−0.311 (0.000)	0.332 (0.000)	−0.223 (0.011)	−0.477 (0.000)
NATGAAP	−0.529 (0.000)	<b>1</b>	−0.400 (0.000)	0.054 (0.543)	−0.411 (0.000)	0.406 (0.000)	0.558 (0.000)
FULLIFRS	0.528 (0.000)	−0.400 (0.000)	<b>1</b>	0.074 (0.405)	0.287 (0.001)	−0.289 (0.000)	−0.319 (0.000)
GOVQUALITY	−0.319 (0.000)	0.064 (0.470)	0.072 (0.413)	<b>1</b>	0.039 (0.655)	−0.331 (0.000)	0.239 (0.006)
LAW	0.332 (0.000)	−0.411 (0.000)	0.287 (0.001)	0.037 (0.676)	<b>1</b>	−0.185 (0.036)	−0.277 (0.001)
LogAREA	−0.259 (0.003)	0.420 (0.000)	−0.268 (0.002)	−0.330 (0.000)	−0.244 (0.005)	<b>1</b>	0.563 (0.000)
LogGDP	−0.475 (0.000)	0.558 (0.000)	−0.327 (0.000)	0.237 (0.007)	−0.267 (0.002)	0.601 (0.000)	<b>1</b>

Notes: The correlations of key variables employed in our analysis. Pearson correlation coefficients are shown below the diagonal, while Spearman correlation coefficients are shown above the diagonal. Two-tailed *p*-values are presented in parentheses.

the independent variables. All correlations between independent variables and the IFRS for SMEs variable are statistically significant (1% and 5% level, respectively) and in the correct directions. As predicted, the independent variable NATGAAP is highly negatively correlated with the dependent variable IFRS\_SME at the 1% level. The other independent variables LAW and FULLIFRS are highly positively correlated with IFRS\_SME, suggesting that IFRS for SMEs is mainly adopted by countries that have a common law legal system and experience with full IFRS application for their non-publicly accountable entities. Although many of these pairwise correlations are statistically significant, all of the correlations are considerably below 0.80, which indicates no serious collinearity problem.

## 5.2. Regression results

In order to validate our hypotheses and our univariate findings, we apply logit regression models for our primary tests to assess the likelihood of adoption of IFRS for SMEs. Our results in Model 2 in Table 6 show that the likelihood of adoption of IFRS for SMEs decreases if countries already have a local GAAP (NATGAAP), suggesting that transitional costs are relatively high in order to change the current accounting rules for SMEs; the coefficients of NATGAAP ( $p < 0.05$ ) as well as GOVQUALITY ( $p < 0.01$ ) are negative and statistically significant. In line with our hypotheses, coefficients of the explanatory variables FULLIFRS application ( $p < 0.01$ ) for SMEs as well as LAW ( $p < 0.1$ ) are positive and statistically significant. Thus, the likelihood of IFRS adoption increases if countries already require or allow non-publicly accountable entities to report under full IFRS, and if countries have a common law system. Interestingly, while prior literature which examined countries' adoption of full IFRS for consolidated accounts of domestic

Table 6. Logit regression results of IFRS for SMEs adoption.

Variable		Model 1 Coefficient (z-stats)	Model 2 Coefficient (z-stats)	VIF
<i>Independent variables</i>	Exp. sign			
NATGAAP	–	–2.027 (–3.14)***	–1.529 (–2.09)**	2.13
FULLIFRS	+	3.053 (4.52)***	2.975 (4.38)***	1.85
GOVQUALITY	–	–1.578 (–4.15)***	–1.702 (–3.68)***	1.59
LAW	+	1.110 (1.83)*	1.045 (1.70)*	1.26
<i>Control variables</i>				
LogGDP	+/–		–0.047 (–0.25)	2.76
LogAREA	+/–		–0.170 (–1.13)	2.58
Intercept		–0.753 (–0.93)*	2.080 (0.56)	
OBSERVATIONS		128	128	
LR $\chi^2$		85.64***	88.25***	
Pseudo $R^2$		0.483	0.497	

Notes: Logit regression coefficients of influencing factors on the decision to adopt IFRS for SMEs. z-Statistics are presented in parentheses. The right column shows VIF estimates for collinearity diagnostics.

\*\*\* indicates statistical significance at the 1% level.

\*\* indicates statistical significance at the 5% level.

\* indicates statistical significance at the 10% level.

listed firms did not find a statistically significant association between legal origin and adoption of full IFRS (Hope *et al.* 2006, Johnson 2011), we find statistically significant results, suggesting that regulatory forces are more prevalent in the private firm setting. We also calculate the variance inflation factors (VIFs) to address the issue of multicollinearity. All VIFs for our main independent variables are lower than 3.0, indicating that collinearity between the independent variables does not distort our regression results. The pseudo  $R^2$  of Model 2 in Table 6 including control variables is 0.497.

### 5.3. Additional analyses

In this section, we examine tax considerations as potential determinants of countries' adoption of IFRS for SMEs. Further, while we use in our main regression analyses an aggregated measure for governance quality, we replace this variable by using single measures as alternative proxies for governance quality. We also test whether alternative explanations (e.g. social legitimisation pressures) drive our results. Thus, contrary to prior studies at country level (Hope *et al.* 2006, Zeghal and Mhedhbi 2006, Judge *et al.* 2010), our study uses a more extensive set of explanatory variables and hence, we are able to reduce concerns about potential omitted variable problems as one source of endogeneity bias.

#### 5.3.1. Tax considerations

In additional analyses, we include two variables in our regression analysis as proxies for tax considerations:

- (1) As an explicit measure of the relation between financial accounting and tax accounting, we install a 'tax link' variable in our model. BOOKTAX is a dichotomous variable that takes the value of '1' if taxable profit is based on the legal entity statutory account (dependent tax regime) and '0' if there is little or no relationship between taxation and statutory accounts in a country (independent tax regime). Data are obtained from PricewaterhouseCoopers' (PwC) survey 'IFRS adoption by country' (PwC 2011). We expect that dependent tax regimes are less likely to adopt IFRS for SMEs.
- (2) Adoption of IFRS for SMEs is likely to increase political and transitional costs in countries where taxation revenues are of great importance. Following Ramanna and Sletten (2009), we expect that in these jurisdictions, governments tend to have greater control over managing the resources of their country, suggesting that adoption is less likely. In addition, where tax revenues are of great magnitude, jurisdictions tend to have on average more stable financial environments. Thus, political costs in negotiating a new accounting standard are likely to be higher. On the other hand, in jurisdictions with low tax revenues, high quality accounting standards might help strengthen the financial sector of countries. In summary, we predict that in countries with a high amount of tax revenues, adoption of IFRS for SMEs is less likely. We measure this effect using data of the World Bank. Tax revenue is defined as compulsory transfers to the central government for public purposes (per cent of GDP); it is computed as the average during the period from 2005 to 2009 and labelled as TAXREVENUE.

Model 3 in Table 7 shows that the coefficient of the dummy variable BOOKTAX is positive and not statistically significant; the results which have already been discussed remain for the most part unchanged, but NATGAAP is less statistically significant at the 10% level.<sup>7</sup> As predicted, the coefficient of TAXREVENUE is negative and statistically significant at the 5% level (Model 4 in Table 7). Thus, countries with high levels of taxation revenues are consequently less likely to

Table 7. Logit regression results of IFRS for SMEs adoption – additional analyses.

Variable		Model 3 Coefficient (z-stats)	Model 4 Coefficient (z-stats)	Model 5 Coefficient (z-stats)	Model 6 Coefficient (z-stats)	Model 7 Coefficient (z-stats)
<i>Independent variables</i>						
NATGAAP	Exp. sign –	–1.955 (–1.84)*	–1.668 (–1.85)*	–1.564 (–2.12)**	–1.415 (–1.93)*	–1.275 (–1.91)*
FULLIFRS	+	3.819 (4.03)***	4.069 (4.34)***	1.784 (2.74)***	2.348 (3.17)***	2.951 (4.01)***
GOVQUALITY	–	–1.407 (–2.93)***	–1.426 (–2.76)***			
LAW	+	1.900 (2.42)**	1.662 (2.30)**	0.708 (1.22)	1.202 (1.87)*	0.861 (1.50)
BOOKTAX	–	0.185 (0.21)				
TAXREVENUE	–		–0.078 (–1.99)**			
ACCESSLOANS	–			–0.939 (–2.13)**		
STRENGTHAaR	–				–1.569 (–3.15)***	
DOINGBUSINESS	+					0.023 (3.23)***
<i>Control variables</i>						
LogGDP	+/–	–0.026 (–0.12)	–0.024 (–0.11)	–0.308 (–1.59)	–0.138 (–0.65)	–0.072 (–0.40)
LogAREA	+/–	–0.019 (–0.14)	–0.022 (–0.13)	0.005 (0.04)	–0.115 (–0.70)	–0.076 (–0.54)
Intercept		–1.139 (–0.25)	0.245 (0.05)	10.159 (2.55)	11.209 (2.61)***	–0.671 (–0.17)
OBSERVATIONS		102	104	101	101	120
LR $\chi^2$		69.82***	71.30***	49.75***	57.05***	71.83***
Pseudo $R^2$		0.511	0.503	0.358	0.411	0.431

Notes: Estimates of several logit regression models of influencing factors on the decision to adopt IFRS for SMEs. We proxy for tax considerations (BOOKTAX and TAXREVENUE) and use alternative proxies for governance quality (ACCESSLOANS, STRENGTHAaR, and DOINGBUSINESS). z-Statistics are presented in parentheses.

\*\*\* indicates statistical significance at the 1% level.

\*\* indicates statistical significance at the 5% level.

\* indicates statistical significance at the 10% level.

adopt IFRS for SMEs. The negative coefficient of TAXREVENUE confirms the concern by national regulators about political costs that prevent adoption of IFRS for SMEs.

### 5.3.2. Additional governance quality proxies

In the main tests reported so far, we follow recent literature in accounting and rely on a variable (GOVQUALITY) that captures typical dimensions of governance institutions in order to proxy for the quality of governance structures. In additional tests, we replace GOVQUALITY with alternative proxies that can help validate the hypothesis on governance quality.

Therefore, we repeat our main regression analysis from Table 6, including (1) a variable that captures the ‘ease of access to loans’ (ACCESSLOANS), (2) a proxy measuring the ‘strength of



auditing and reporting standards' (STRENGTHAaR), and (3) an index assessing the 'ease of doing business' (DOINGBUSINESS). These variables have not been used much in accounting studies so far.

'Ease of access to loans' reflects perceptions of the level of simplicity for obtaining a bank loan in a country with only a good business plan and no collateral. 'Strength of auditing and reporting standards' shows perceptions of the quality of financial auditing and reporting standards regarding company financial performance within a country. Data for both variables are obtained from the Global Competitiveness Report. The indexes range from 1 to 7, with higher scores indicating better developed finance environments and stronger auditing and reporting standards, respectively; both variables are the average value during the period from 2008 to 2009.

The 'ease of doing business index' (DOINGBUSINESS) ranks economies from 1 to 185, with *smaller* numbers indicating *better* business conditions. For each country, the ranking is calculated as the simple average of the percentile rankings on each of the 10 topics included in the index on doing business.<sup>8</sup> Data are obtained from the World Bank.<sup>9</sup>

We expect that ACCESSLOANS as well as STRENGTHAaR are negatively associated with the dependent variable. IFRS for SMEs offers relatively low incentives to countries where good financing environments and strong auditing and reporting systems already exist. Further, we expect that countries with a high index number for the 'ease of doing business index' are more likely to adopt IFRS for SMEs.

Model 5 in Table 7 shows that the coefficient of the variable ACCESSLOANS is negative and statistically significant at the 5% level, while Model 6 reports that the coefficient of STRENGTHAaR is negative and statistically significant at the 1% level. As predicted, the coefficient of the variable DOINGBUSINESS is positive and significant at the 1% level (Model 7 in Table 7). Taken together, these alternative proxies for governance quality provide consistent and robust evidence for our predictions that countries with limited financing possibilities, with weak auditing and financial reporting environments, and weak business conditions are more likely to adopt IFRS for SMEs. The signs and significance of the coefficients of our main variables are not altered significantly.

#### 5.4. *Alternative explanations – social legitimisation pressures*

Empirical evidence to date on possible determinants of countries' adoption of full IFRS for consolidated accounts incorporates a broader social perspective in understanding the diffusion of IFRS around the world. For instance, Judge *et al.* (2010) argue that IFRS adoption at country level is driven more by social legitimisation pressures than it is by economic logic. They use DiMaggio and Powell's (1983) institutional theory of isomorphism that differentiates between coercive, mimetic, and normative isomorphism.<sup>10</sup> They find that all three forms of isomorphism are predictive of the degree to which IFRS are adopted. Therefore, we rerun the regressions explaining the likelihood of IFRS for SMEs adoption with proxies for social legitimisation pressures.

In line with Judge *et al.* (2010), we use FOREIGNAID as proxy for coercive isomorphism, FOREIGNDIRECTINVESTMENT (FDI) (average inflows of foreign direct investments, expressed as a percentage of GDP) as proxy for mimetic isomorphism, and EDUCATIONALLEVEL as proxy for normative isomorphism. For instance, if we examine coercive isomorphism as proxied by FOREIGNAID, the coefficients of NATGAAP as well as GOVQUALITY are negative and statistically significant at the 5% and 1% significance levels, respectively (untabulated results). Compared to our main analysis in Table 6, the coefficient of the variable LAW is positive, but less significant (10% level). However, we cannot provide evidence that social legitimisation pressures are associated with the likelihood of adoption of IFRS for SMEs at country level. The results for our proxies for social legitimisation pressures are inconclusive and statistically not significant.

## 5.5. Robustness analyses

### 5.5.1. Sample splitting

Following prior literature (La Porta *et al.* 1998, Francis *et al.* 2008), we next partition our sample of 128 countries based on governance quality scores (GOVQUALITY) to examine the relative importance of our independent variables in jurisdictions with strong and weak governance structures. The logit regressions are estimated separately for these two groups. In the group of developed countries, Model 8 in Table 8 shows that the coefficients have the correct signs and are statistically significant. In the group of less developed countries, coefficients of the variables NATGAAP, FULLIFRS, and LAW show the predicted signs and remain statistically significant. Interestingly, the coefficient of GOVQUALITY is negative, but no longer statistically significant.

One explanation for this result is that the most poorly governed countries are less responsive to international accounting standards (Ramanna and Sletten 2009), suggesting that some of these countries suffer from corrupt, slow-moving, and ineffective governments that are unwilling or unable to introduce international accounting standards (La Porta *et al.* 1999). Ramanna and Sletten (2009) call these countries ‘failed states’ where adoption of IFRS for SMEs is not of any interest.

### 5.5.2. Multinomial logit

In line with Judge *et al.* (2010) and Ramanna and Sletten (2011), we also apply a multinomial logit regression analysis based on our full sample. The dependent variable (IFRS\_SME) describes countries’ adoption decisions regarding IFRS for SMEs pursuant to the statutory accounting laws

Table 8. Logit regression results of sample partitioning.

Variable		Model 8 High gov. quality Coefficient (z-stats)	Model 9 Low gov. quality Coefficient (z-stats)
<i>Independent variables</i>	Exp. sign		
NATGAAP	–	–2.555 (–1.90)*	–1.897 (–2.12)**
FULLIFRS	+	3.655 (3.17)***	5.481 (3.30)***
GOVQUALITY	–	–2.935 (–3.12)***	–1.163 (–0.77)
LAW	+	1.738 (1.99)**	4.578 (2.14)**
<i>Control variables</i>			
LogGDP	+/–	0.358 (1.24)	–0.604 (–1.45)
LogAREA	+/–	–0.152 (–0.88)	0.821* (1.75)
Intercept		–7.099 (–1.20)	1.835 (0.23)
OBSERVATIONS		64	64
LR $\chi^2$		40.33***	58.56***
Pseudo $R^2$		0.489	0.561

Notes: Logit regression coefficients of influencing factors on the decision to adopt IFRS for SMEs. The sample is partitioned into high and low governance quality countries. z-Statistics are presented in parentheses.

\*\*\* indicates statistical significance at the 1% level.

\*\* indicates statistical significance at the 5% level.

\* indicates statistical significance at the 10% level.

and takes three different values (0 = ‘prohibited’, 1 = ‘optional’, and 2 = ‘required’). The multinomial logit model does not assume any ordering among the adoption levels. Instead, it compares the voluntary adoption and mandatory adoption categories to the baseline decision, that is, non-adoption. Our inferences remain unchanged. The results (untabulated) show that the coefficients of our independent variables from the binary logit model in Table 6 remain statistically significant with the expected signs for the group of Voluntary-Adopters and Mandatory-Adopters. However, note that this regression analysis should be interpreted with caution, since the category Mandatory-Adopters (required adoption) only contains six countries.

### 5.5.3. Multi-period logit

Next, we use a multi-period logit model instead of a single-period logit model. Note that the majority of our independent variables in our main model do not change over time since we use binary variables (NATGAAP, FULLIFRS, and LAW). Therefore, we use a multi-period random effects model that is able to estimate the effects of time invariant variables.<sup>11</sup> We obtain data on the year of IFRS for SMEs application from the IASB’s jurisdiction profiles. Further, we use country-specific webpages, included in the jurisdiction profiles, to collect the relevant information.

Our multi-period logit model incorporates each country-year as a separate observation, where countries can adopt IFRS for SMEs. Adopters are coded ‘0’ in the years before adoption and ‘1’ in the year when IFRS for SMEs is optional or required the first time; Non-Adopters are coded ‘0’

Table 9. Multi-period logit regression results of IFRS for SMEs adoption.

Variable		Model 10 Coefficient (z-stats)	Model 11 Coefficient (z-stats)	Model 12 Coefficient (z-stats)	Model 13 Coefficient (z-stats)
<i>Independent variables</i>	Exp. sign				
NATGAAP	–	–3.464 (–4.09)***	–2.841 (–2.88)***	–14.729 (–5.32)***	–13.861 (–7.22)***
FULLIFRS	+	4.844 (4.66)***	4.743 (4.49)***	17.419 (5.99)***	14.869 (6.64)***
GOVQUALITY	–	–1.581 (–3.62)***	–2.024 (–3.59)***	–6.790 (–6.01)***	–5.800 (–5.45)***
LAW	+	1.230 (1.60)	1.054 (1.36)	3.044 (1.22)	4.390 (2.83)***
<i>Control variables</i>					
LogGDP	+/–		0.087 (0.33)		–0.948 (–2.07)**
LogAREA	+/–		–0.359 (–1.72)*		–0.634 (–1.81)*
Intercept		–2.810 (–2.45)**	–1.152 (–0.21)	–17.638 (–5.87)***	13.428 (1.55)
Time Dummies		–	–	included	included
OBSERVATIONS		640	640	640	640
Wald $\chi^2$		47.72***	47.33***	77.83***	139.30***

Notes: Estimates of multi-period random effects logit models for the likelihood of adopting IFRS for SMEs. z-Statistics are presented in parentheses.

\*\*\* indicates statistical significance at the 1% level.

\*\* indicates statistical significance at the 5% level.

\* indicates statistical significance at the 10% level.

every year they are in the sample (Ramanna and Sletten 2009, Bassemir 2012). This approach results in 640 country-year observations for 128 sample countries over the sample period 2009–2013. Moreover, we use lagged values ( $t-1$ ) for the continuous independent variables. In addition, we rerun our analysis including year-dummies to examine whether IFRS adoption does depend on time.

Model 13 in Table 9 shows that NATGAAP, FULLIFRS, GOVQUALITY as well as LAW are statistically significant at the 1% level including time dummies. Furthermore, there is evidence that larger economies measured by the variables LogAREA and LogGDP are less likely to adopt IFRS for SMEs. The estimated values of the year dummies become larger over time, suggesting that the probability of IFRS adoption is increasing over time. Taken together, the coefficients of the multi-period random effects model are larger in magnitude than the single-period logit coefficients.

## 6. Conclusions

Based on a unique sample of 128 countries, we find that countries that do not have capabilities to develop their own local GAAP are more likely to adopt IFRS for SMEs. In addition, we provide evidence that in jurisdictions where previously private firms were required or allowed (instead of local GAAP) to report under full IFRS, the likelihood of adoption of IFRS for SMEs increases. In line with prior studies, we also show that lower governance quality is positively associated with countries' adoption of IFRS for SMEs, suggesting that developing economies can enhance their financial architecture and accountability by adopting IFRS for SMEs. More broadly, then, our evidence suggests that a country's switch to IFRS for SMEs can facilitate the contracting environment such as a country's ability to attract loans from international organisations like the World Bank and the IMF.

Although we use several country level control variables and subject our results to additional robustness analyses, we acknowledge that macroeconomic variables (e.g. governance quality) are a complex outcome of different endogenous political and institutional factors. Therefore, we cannot rule out the possibility of model misstatement due to endogeneity bias.

Overall, this study is helpful in understanding the worldwide diffusion of IFRS for SMEs and, therefore, may be of interest to regulators and the IASB for at least two reasons. First, contrary to full IFRS, our findings show that IFRS for SMEs is mainly applied in developing non-EU countries, suggesting that the demand for IFRS for SMEs might be lower in developed countries compared to developing countries. Furthermore, within the group of adopters of IFRS for SMEs, the proportion of countries permitting IFRS for SMEs (57 countries) is much higher than the proportion of countries requiring the use of IFRS for SMEs (six countries). Voluntary adoption leaves the decision to the individual firm whether IFRS for SMEs is the set of accounting standards that best fits its specific needs. This seems to be important within the heterogeneous group of private firms, where cost-benefit trade-offs of applying international accounting standards are likely to differ across firms.

Second, while the majority of non-EU countries adopt IFRS for SMEs without any modifications, our discussion shows that supranational forces in the EU limit EU Member States' ability to adopt IFRS for SMEs *as issued* by the IASB. Recently, the EC rejected the option to adopt IFRS for SMEs at supranational level due to concerns about overly burdening private firms. Consequently, we expect that EU countries will either not adopt IFRS for SMEs (e.g. Germany and France) or will implement IFRS for SMEs with great modifications to fully comply with the requirements of the EU Accounting Directive (e.g. the UK and Ireland). The impact of this is that the IASB's overall objective to develop and promote *globally* accepted accounting standards is not met entirely.

Our study is subject to the following limitations. We note that the diffusion of IFRS for SMEs is an ongoing policy debate and, therefore, it might be too early to draw definitive conclusions. Since the group of adopting countries is likely to increase in the next few years, the results documented in our study may change. Further, to construct our database we rely on the IASB webpage. The IASB's jurisdiction profiles provide a wide range of information about countries' adoption status. However, information about how the IASB collects relevant country data is scarce. Hence, we are not able to check whether data errors in the jurisdiction profiles bias our classification of countries in adopting and non-adopting jurisdictions. While we find relatively robust empirical findings, future studies might consider alternative data sources such as the PwC webpage to validate the findings of this study.

The harmonisation of accounting standards for private firms leaves room for future research. First, future studies could examine macroeconomic effects of adoption of IFRS for SMEs. For instance, researchers could examine whether adoption of IFRS for SMEs results in increased FDI or whether jurisdictions gain from better lending conditions. Research at firm level shows that IFRS adoption provides equity and debt market benefits to adopting firms (DeFond *et al.* 2011). Second, while our study solely focuses on countries' application of IFRS for SMEs, little is known about how jurisdictions enforce and implement IFRS for SMEs at country level. Prior literature argues that strong enforcement and regulatory mechanisms are necessary to benefit from IFRS adoption (Ball 2006, Daske *et al.* 2008, 2013, Christensen *et al.* 2013). More research in the private firm setting is needed and future studies can help improve our understanding of the adoption process. Finally, in countries where private firms are required to disclose financial statements in accordance with IFRS for SMEs, researchers can analyse the determinants and economic consequences of adoption at firm level. There is still limited empirical evidence on the cross-country variation of harmonisation of accounting standards for private firms, and IFRS for SMEs offers a fruitful area for further research.

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## Notes

1. For the purpose of this paper, we define SMEs as entities that are eligible to use the IFRS for SMEs and use the term 'non-publicly accountable entities' or 'private firms' as synonyms.
2. The EC (2013):

Nevertheless, Member States are able to permit or require the IFRS for SMEs as their accounting standard for all or some of their unlisted companies provided that the Directive is fully implemented and the standard is modified to comply with any accounting requirement of the Directive that departs from the IFRS for SMEs. In order to comply with the simpler regime introduced by this Directive, IFRS for SMEs may be available only as a voluntary option for small companies in jurisdictions where the standard is used.

3. Article 5b of the IAS Regulation (No. 1606/2002) gives EU member countries the option to permit or mandate full IFRS for individual accounts of non-listed firms.

4. Note that domestic standards are dynamic, suggesting that they are changing over time to reflect the economic environment. For instance, the German Accounting Law Modernisation Act (Bilanzrechtsmodernisierungsgesetz, BilMoG) of 2009 is a major reform of local GAAP.
5. The FRC documents on eight pages significant differences between FRS 102 and IFRS for SMEs. See <https://www.frc.org.uk/Our-Work/Publications/Accounting-and-Reporting-Policy/FRS-102-The-Financial-Reporting-Standard-applicabl.aspx>.
6. For instance, according to Article 5b of the IAS Regulation, Germany allows private firms to prepare individual accounts based on full IFRS for information purposes, but local GAAP remains mandatory for regulatory purposes and is therefore the primary set of accounts. Other countries such as Austria or France even prohibit the use of full IFRS for private firms' individual accounts. For the group of countries permitting the use of full IFRS instead of local GAAP we refer to the development of Hypothesis 2.
7. Results of Model 3 hold if we estimate BOOKTAX as an ordinal variable (coded as '2' if the tax regime is dependent, as '1' if the tax regime is quasi-dependent, and as '0' if the tax regime is independent) instead of the binary coding (BOOKTAX).
8. The 10 topics are: starting a business, dealing with construction permits, obtaining electricity, registering property, obtaining credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency.
9. While 'ease of access to loans' and 'strength of auditing and reporting standards' are single measures, the 'ease of doing business' index (like GOVQUALITY) is a measure combining different dimensions of governance institutions.
10. Coercive isomorphism stems from resource dependence and legitimacy concerns. Nations as well as organisations could be forced to conform to international standards due to coercive institutions outside the economy. The theory of mimetic isomorphism refers to the tendency of social actors to imitate other social actors who are regarded as successful and legitimate, i.e. to imitate their 'best practice'. Normative isomorphism refers to collective values that bring about conformity of thought and deed within institutional environments.
11. As the xtlogit-command automatically clusters by the panel identifier, standard errors are clustered by country-ID (Torres-Reyna 2013).

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