

# Perceived usability of local government financial statements by local councillors: Comparative study of Finland and Germany

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## Abstract

**Purpose** – This paper studies the usability of local government (LG) financial statements as perceived by local councillors. By drawing on a comparative view of two countries with different periods of accrual accounting use in the public sector, the authors investigate how local councillors assess the usability of LG financial statements in order to question accounting reform success. Determinants that influence the usability assessment are explored.

**Design/methodology/approach** – Exploratory design: data were collected from questionnaires with 24 local councillors from five Finnish LGs and 30 local councillors from six German LGs. An adjusted variant of the System Usability Scale was analysed with descriptive statistics and non-parametric group comparisons.

**Findings** – In both countries, the usability assessment of financial statements seems to be positive, indicating a successful reform process. In Finland, where the accrual government accounting reform has had a longer time to settle in, councillors seem to assess usability only partially better than German councillors. Several determinants of the usability assessment were detected, such as size and debt level of the LG as well as local councillors' gender, political orientation and education. Generally, councillors need more assistance and training in using financial statements.

**Originality/value** – The study is the first to conduct a quantitative assessment of the usability of LG financial statements as perceived by councillors. The System Usability Scale was adjusted to a public sector reporting context. The paper adopts a transnational comparative approach.

**Keywords:** usability; local governments; financial statements; politicians; local council; citizens

**Type:** Research paper

## 1. Introduction

What makes public sector reform successful is at least the perceived usability of new tools or interfaces by the intended users! Among the variety of reforms that were implemented in the wave of the New Public Management (NPM) paradigm, one of the most far-reaching reforms was the move from cash to accrual accounting, which has continued to be applied globally since the 1980s (Brusca *et al.*, 2015). Still, it is highly

debated whether accrual accounting is appropriate in the public sector and whether the intended aims can be achieved by accrual financial reporting (Ellwood and Newbury, 2006; Wynne, 2019). Most of the arguments expressed refer to questions related to accounting principles, specific standards or balance sheet items. A different stream of literature on the accrual accounting and financial reporting reform discusses the perspective of users and their needs (Pallot, 1992; Jones, 1992; Tagesson, 2014) and the usefulness of accrual financial reporting (Jones and Pendlebury, 2004; Adam *et al.*, 2011; Lampe *et al.*, 2015). As such, the evaluation of such a reform can take place from different perspectives.

In particular, the use of public sector accounting information by politicians is a highly relevant but still under-researched topic (van Helden, 2016). So far, prior research has primarily focussed on the extent of use of budgeting and accounting information by politicians (Yamamoto, 2008; Buylens and Christiaens, 2016). Interestingly, several studies have pointed out that politicians make limited use of financial information (ter Bogt, 2004; Askim, 2007; Liguori *et al.*, 2012).

Van Helden and Reichard (2019) stress that financial statements will only be used by politicians if they perceive the financial statements to be usable (and relevant) and call for further research. We aim to contribute to usability evaluations of financial statements by studying one of the main user groups, the politicians. We focus on local councillors, as the local councils play a key decision-making role in the LGs. Also, the local councillors are centrally placed in the accountability relations between the municipal administration and the citizens by relying on the LG financial statements and their principal components (income statement, balance sheet and funds flow statement, along with the notes to them) and, furthermore, on the budget realization statements. In this article, we concentrate on the general purpose accrual financial statements of local governments.

Coming back to the initial question about the success of the accrual accounting reforms, we need to consider that the reforms require a 'settling-in period' (Andriani *et al.*, 2010) to become successful, since, for example, significant time is needed for politicians to experience a learning curve (Ezzamel *et al.*, 2005). This study, therefore, compares perceptions of local councillors in countries (Finland and Germany) with different levels of maturity in their accrual accounting reforms to see whether usability assessments differ. Finland and Germany have been selected since they share similar accounting traditions with respect to private sector accounting (Nobes, 1998), which also transcend to public sector accounting. Similarities in accounting traditions are seen, for example, with respect to the application of the asymmetric prudence principle of

accounting (Mann *et al.*, 2018). In addition, in both countries, the accounting norms of the national private sector served as a basis of reference in the LGs' accrual accounting reforms. In Finland, the move to accrual accounting and double-entry bookkeeping had already taken place in 1997 for the entire governmental sector. In contrast, in Germany, LGs have only been using accrual accounting since 2009, and German federal and nearly all state governments are known to be reluctant to adopt accrual accounting (Rumney, 2017). Thus, when the data collection for this study took place in 2017/8, Finnish LGs looked back at an experience of 20 years with accrual accounting, whereas the German LGs had only had 8 years to become adjusted. Besides familiarity, other determinants that influence the usability assessment (van Helden and Reichard, 2019) might also exist, and we aim to explore them. In summary, we address the following research questions (RQs):

RQ 1: How do local councillors assess the usability of LG financial statements?

RQ 2: Are there differences in the usability assessment of local councillors regarding LG financial statements in terms of the time elapsed since accrual accounting implementation?

RQ 3: How do determinants of LGs affect the usability assessment?

RQ 4: How do determinants of local councillors affect the usability assessment?

The research design is quantitative, but exploratory in nature, so we do not strive for generalizations. In total, 54 local councillors of 11 LGs in the chosen countries completed the questionnaire. The LGs selected differ in size and debt level. The response from the German sample was obtained through 30 telephone interviews (5 local councillors in 6 LGs each) in the federal state of North Rhine-Westphalia. The Finnish sample reflects the views of 24 face-to-face interviews with local councillors in 5 LGs situated in different parts of the country.

The contribution of this study is fourfold. To the best of the authors' knowledge, a systematic assessment of usability in this specific context has not yet been completed. This is the first study of its kind to apply a usability score to public sector financial reporting. The comparative analysis highlights national differences regarding the usability assessment by councillors about financial statements. These differences can be partly traced back to the maturity of the accrual accounting reforms in Finland and Germany, revealing whether reform success becomes apparent over time. In addition, the paper sheds light on LG- and local councillor-related determinants of the usability assessment, contributing to the literature on the usability of public sector accounting information by one of the most important addressees – local councillors. This research

also has a practical contribution to offer since it provides insights on which parts of the usability assessment can be improved in order to make the reforms more successful.

The paper is organized as follows. In Chapter 2, the theoretical background is explained and in Chapter 3, the RQs are developed. This is followed by setting the scene regarding public sector accounting reforms in Finland and Germany. The research design, sample and variable measurement are laid out in Chapter 5. The findings are presented in Chapter 6, followed by a conclusion.

## **2. Theoretical background**

Assessing the success of the accrual accounting reforms in the public sector is particularly challenging. A study by the World Bank (Bunse and Fritz, 2012, p. 25) concludes that

introducing new reporting and accounting formats does not touch fundamental power interests or rent-seeking incentives directly. Hence the political sensitivity of such reform components is limited. At the same time, the incentives to really use these technical improvements for better management of public funds are frequently limited, and consequently hoped for wider improvements may not (fully) materialize.

This also applies in the context of accrual accounting adoption (Nasi and Steccolini, 2008), so that we sought for an alternative way to address its success. Based on a literature review assessing public sector reforms, Blackburn (2014) applies *inter alia* a perspective that goes beyond the public sector entity: customer utilization. If we apply this success criterion to the accrual accounting reforms, the ‘customer’ and the ‘utilisation’ needs to be defined. The latter might be ‘processing, digesting, and using’ (Heald, 2006, p. 35) the financial statements as the ultimate ‘output’ of accrual financial reporting. One of the primary user groups of financial statements (i.e. the customers), are the politicians (e.g. IPSAS Board 2019, CF 2.4). Despite its importance, research on politicians use of accounting information is still comparatively scarce (van Helden, 2016) and mainly addresses the extent of budgeting and accounting information use (Yamamoto, 2008; Buylen and Christiaens, 2016).

But usability of financial statements, i.e. that ‘users of the information in an accounting document potentially appreciate it for supporting their decision making or accountability’ (van Helden and Reichard, 2019, p. 488) conceptually precedes the actual use that has been addressed in research so far. Therefore, we focus on one of the

dimensions of usability proposed by van Helden and Reichard (2019), namely understandability. In developing their theory of accounting information usefulness, Ouda and Klischewski (2019) draw on cognitive fit theory to illustrate how cognitive factors can facilitate mental representations in order to both produce and use accounting information. The suggested cognitive factors encompass: knowledge; perception of the decision situation faced; expectations about the content and awareness of the accounting information; beliefs and interpretation of events. In a similar vein, van Helden and Reichard (2019) acknowledge that there is a variety of antecedents of usability and use, which represents a research gap addressed here. In the present study, the assessment of the usability of the LG financial statements was captured by an adjusted version of the System Usability Scale (SUS) by Brooke (1996), because it is a low-cost usability scale used internationally. Since the scale was developed for usability analysis of systems, it is commonly applied in contexts such as hardware platforms and websites, but without any restrictions to the type of user interface analysed (Bangor et al., 2008). The LG financial statements represent a user interface through which the local councillor retrieves information about the financial situation of the LG. However, adjustments of the SUS were necessary (Bangor et al., 2008). As such, we formed an adjusted scale that we call Financial Statements Usability Scale (FSUS). It is not public sector-specific but potentially could also be applied in other reporting contexts. As to the conceptualization of usability of financial statements, the scale partly resembles the cognitive factors discussed by Ouda and Klischewski (2019), since it addresses the users' need to learn how to use the financial statements and to seek expert help (i.e. knowledge), the complexity and frequency of use (i.e. awareness of information), and cumbersome use or inconsistency in the documents (i.e. beliefs).

### **3. Development of research questions**

The LG financial statements are supposed to be one of the key instruments to discharge transparency regarding the financial situation of the LG and the performance of its operations. Still, their actual use lies below those of other information sources such as non-financial and budgeting information (Saliterer and Korac, 2013; Liguori *et al.*, 2014). Hence, it is questionable whether financial statements are perceived as being usable by local councillors, leading to the first research question (RQ):

RQ 1: How do local councillors assess the usability of LG financial statements?

In those LGs that had had a longer time after the accrual accounting reform, the users might be better acquainted with the system. This benefits the local councillors of those LGs since they might be better equipped with the information produced from the proven routines and practices of accrual accounting. Ezzamel *et al.* (2005) discuss this phenomenon in terms of a learning curve experienced by politicians in getting used to the new forms of information so that time is needed for exploiting the potential of reforms. Similarly in the context of public managers, Andriani *et al.* (2010) argue that the accrual accounting reforms require settling-in periods to allow for adjustments, so they studied a transition period of 7 years. Hence, our study compares the perceptions of Finnish with those of German local councillors, as the countries have 12 years of difference with respect to the maturity of their accrual accounting reforms:

RQ 2: Are there differences in the usability assessment of local councillors regarding LG financial statements in terms of the time elapsed since accrual accounting implementation?

Since the countries are comparable in their accounting traditions (Nobes, 1998) and principles (Mann *et al.*, 2019) it is presumed that a high usability assessment might indicate a reform success, and if so, that Finnish LG financial statements' usability could be rated higher.

Despite the differences in the time elapsed since accrual accounting implementation, determinants of the LG might also influence the usability assessment. For example, since larger LGs adopt reforms more easily (van Helden and Pieter Jansen, 2003), size could have an influence on the usability assessment of financial statements. Askim and Baldersheim (2012) argue that more financial information is required in larger LGs because of the larger span of control and more frequent exceptional situations. Buylen and Christiaens (2016) showed that councillors in larger LGs argue more about financial information in their budget debates. LG characteristics such as debt level (Saliterer and Korac, 2013) and deficit/surplus (Liguori *et al.*, 2014) can also play a role. Hence, we seek to explore determinants of the LG:

RQ 3: How do determinants of LGs affect the usability assessment?

Finally, several individual determinants of local councillors might affect the usability assessment, such as political orientation (Giacomini *et al.*, 2016) and gender. A study on differences between men and women enrolled in accounting courses reports that although the performance in exams did not significantly differ, men tended to see

themselves as ‘confident, assertive, and self-sufficient’ (Park and Hayes, 1994, p. 349). Also, the link between political orientation and government spending is well established. Parties on the right wing tend to decrease government spending when they are in power, and left-wing parties tend to increase it (Le Maux *et al.*, 2011). García-Sánchez *et al.* (2014) conclude that left-wing parties seem to rule more in LGs with worse financial health. This leads to the final RQ:

RQ 4: How do determinants of local councillors affect the usability assessment?

#### **4. Context: Local government accounting reforms in Finland and Germany**

##### ***4.1. The Finnish case***

In 2020, there were in Finland 310 LGs in charge of most of the education, health, and social services. In addition, LGs provide local infrastructure, housing, and planning services. In practice, municipal cooperation has replaced the intermediate government tier and has made it possible for the small municipalities to exist.<sup>1</sup>

In Finland, the municipal budget and accrual accounting reform was implemented in 1997 due to the LG Act enacted in the year 1995. The law prescribed that LGs had to follow commercial accrual accounting rules and disclose accrual-based financial statements to ‘the appropriate extent’. Accrual accounting was reflected also in the budgetary closure that now included not only the current and capital parts but also a profit and loss and a funds flow part. This reform meant a larger reporting system, but also a more complex one. This places more challenges on politicians’ abilities to read reports and to sift out the most important information with an understanding of the relationships of different calculations and ratios embedded in different parts of reports (Näsi and Keurulainen, 1999).

##### ***4.2 The German case***

Around 11,000 LGs represent the local level of public administration in Germany, which is separated into federal, state and local government(s). In general, they are self-governing, but the legal framework including the budgeting and accounting system is set by one of the 16 states (13 area and 3 city states) in which the LGs are located.

Traditionally, a form of cash-based budgeting and accounting, – the so-called ‘cameral’ accounting – was used throughout the German governmental sector (Monsen, 2008). In 1998, a sub-committee of the ministries of the interior of the 16 states started

to develop a reformed budgeting and accounting system for the local level, which was passed in 2000 and authorized to varying degrees by each state until 2004.

## **5. Research methodology**

### ***5.1 Research design and sample composition***

In order to assess the usability of the LG financial statements, a quantitative approach was selected. The German questionnaires were completed during telephone interviews in the autumn of 2017, and the Finnish ones during face-to-face meetings in winter 2017–2018. Since this study is exploratory in nature, hypotheses were not developed beforehand. Due to the different accounting standards for LGs in each German state, we focus on one of the 16 states for this study in order to avoid any German results that could be traced back to differing accounting rules or transition periods. Therefore, we selected the North Rhine-Westphalia state, because it was a forerunner in adopting accrual accounting for its LGs. All LGs in North Rhine-Westphalia have published accrual budgets and financial reports from 2009 onwards.

The LGs were purposefully selected based on their population size (small, medium, large) and debt levels (see Table I): in each country, at least one LG was selected from one of the three categories based on the size of the groups and on per capita debt. The Finnish sample contains five LGs in which three to six councillors were surveyed. For the German sample, six LGs from North Rhine-Westphalia were selected with five interviewees each. In order to keep each of the LG cases anonymous, the debt and surplus/deficit levels per capita are only indicated within ranges and not exact numbers in Table I. The tests, however, are based on the real numbers.

*<Insert Table I about here.>*

In both countries, the councillors represented different party groups (i.e. different political orientations), gender, and experience levels in local politics. For the most part, their experiences cover more than one mandate period; also, a few newly elected councillors were included. The composition of the sample is shown in Table II.

*<Insert Table II about here.>*

### **5.2 Questionnaire design and measurement of independent variables**

In order to allow for a statistical analysis, the questionnaire contained closed questions structured into four sections: 1. Personal data; 2. Professional background; 3. Educational background; and 4. Usability assessment. In addition, further independent variables were directly taken from the data of the LGs. The independent variables and their composition into groups are shown in Table III.

<Insert Table III about here.>

### **5.3 Dependent variable: Adjustment of the System Usability Scale**

The assessment of the usability of the LG financial statements was captured by an adjusted version of the SUS by Brooke (1996) called the Financial Statement Usability Scale (FSUS) in the following. The formation of the FSUS took place during several rounds of discussions among the researchers and also through testing. Table IV shows the items of the FSUS. The FSUS consists of 10 items of which 5 contain positive and 5 negative claims about usability. Each item is measured on a 5-point scale of strength of agreement from 0 (strongly disagree) to 4 (strongly agree). The items with negative claims are reverse-coded. The scores of each claim are summed up and multiplied by 2.5. As a result, as with the SUS, the final FSUS score can range from 0 to 100, with a higher score indicating better usability (Brooke, 1996).

The conversion of the English FSUS into Finnish and German versions was conducted in a forward-backward translation process. In the findings section, besides the FSUS, the analysis was completed for each of the items separately, which is a common procedure in the SUS analysis (Bangor *et al.*, 2008).

To screen statistical properties of the FSUS, the construct is checked for reliability. For the data set of 54 completed questionnaires, the 10-item FSUS measure has a good internal consistency (Cronbach's alpha = 0.831).

Lewis and Sauro (2009) found that the original SUS scale might consist of two reliable factors that measure what they called 'learnability' (items n2 and n3) and 'usability' (the remaining items). Thus, additionally for the FSUS items, a principal component analysis (PCA) was conducted with orthogonal rotation (varimax). Factor loading values of 0.5 or higher were considered appropriate (Hair, 2010). The use of factor analysis is based upon the suggestion of MacCallum *et al.* (1999) that there are no definitive recommendations regarding sample size and that the minimum sample or

ratios of sample size (N) to number of variables (p) for meaningful factor analysis is invariant across studies. Although there are general reservations towards ‘reasonable guidelines’ (Costello and Osborne, 2005), MacCallum *et al.* (1999) advise not to go below a N:p-ratio of 5:1, which has been adhered to here. Given the exploratory nature of this study and that we do not aim to draw generalizations, we proceed with the analysis.

The 10 claims indeed load on two factors with eigenvalues greater than 1. However, these do not match the factors identified by Lewis and Sauro (2009). One factor emerged with the items p3 (Learn quickly), p4 (Numerous information well integrated), and p5 (User-friendly) (which we call the quick, integrated, user-friendly (QIU) subscale) and one factor with the remaining items (we call the Usability subscale). The factor loadings and Cronbach’s alpha are displayed in Table IV. Since the QIU subscale has only three items, its Cronbach’s alpha does not meet the required threshold of 0.7, but it is still acceptable. Since PCA is an exploratory factor analysis, which needs to be interpreted with caution, and since this is the first time the FSUS has been applied for public sector reporting, the subscales need to be further tested in future research.

*<Insert Table IV about here.>*

In the following, the analysis is conducted for the FSUS total scores, and in addition, with separate analyses for the Usability (7 items, theoretically ranging from 0 to 70) and the QIU subscales (3 items (p3 – p5) theoretically ranging from 0 to 30).

## **6. Analysis and findings**

### ***6.1 RQ 1: Perceived usability of financial statements***

RQ 1 refers to the self-assessment of local councillors in terms of the usability of the financial statements. The descriptive statistics for the sample are displayed in Table V with shortened item descriptions (for original claims see Table IV).

*<Insert Table V about here.>*

In the sample, the local councillors used the entire scales for the assessment of each of the items. However, the mean values of the individual claims differ quite a lot. The

ability to learn the handling of the financial statements quickly claim (n3, mean = 2.69) is ranked lowest and claim n5, indicating that local councillors do not perceive a lot of inconsistency is ranked highest (n5, mean = 7.18). The mean for the total FSUS scores is 54.95 with a median of 56.25 and a range of 7.5 to 90.

Most councillors (7) rate their LG's financial statements with a usability score of around 70, which is above average. The score ranges from 90 (German councillor, 48 years, male, councillor since 2009) to 7.5 (German councillor, 65 years, female, councillor since 2004). Interestingly, the mean of the Usability subscale (41.3) lies beyond the middle of its scale (35), whereas the mean of the QUI subscale (13.66) lies below the middle of its scale (15). Overall for RQ 1, on average, local councillors perceive the LG financial statements usable, indicating an LG accounting reform success. However, there is room for improvement since the assessments are lowest with respect to learning to use it (n3), the need for assistance (n2), and the perception of a cumbersome use (n1). In addition, user-friendliness should be questioned (p5) due to the low rating of the item.

Since the 54 local councillors use 11 different financial statements, it is possible that the contents, items included and/or qualitative characteristics of the financial information influence the usability assessment. To test for such differences, we pre-checked the documents and found that they are mainly stereotypical with respect to the components of the financial statements: no size-related disclosure or accounting requirements; the formatting of text and table headings; the indication of hyperlinks; the search possibility in the pdf-document; the existence of a list of contents and the number of pictures. Therefore, we performed only tests to see whether the remaining differences (the existence of a glossary and more than 9 figures/graphs) affect the usability assessment. No significant differences between the groups were detected when performing Mann–Whitney U tests ( $p < 0.005$ ) with respect to the FSUS score, subscales and items.

## ***6.2 RQ 2: Differences due to the time elapsed since accrual accounting implementation***

Finland and Germany were purposefully selected with regard to the maturity of the accrual accounting reforms. Based on 12 years of difference in the point of implementation of accrual accounting, we present the descriptive analysis in Table VI and discuss the results of the significance tests between the national samples below.

*<Insert Table VI about here.>*

In both cases, the councillors' answers varied quite a lot on the scale. However, it seems that Finnish councillors are quite confident in their reading skills and also relatively positive toward the financial reporting modes. More or less half of the respondents are of the opinion that the information in the LG financial statements is well integrated (p4). They are confident in using financial statements (p1). In general, the average assessment of the German councillors lies below those of their Finnish colleagues. However, Germans could imagine using the financial statements more frequently. This could be an indication that currently the financial statements are not used often. The highest difference between the perceptions of Finnish and German councillors appears in the perception that using their LG's financial statements is pretty cumbersome (n1), albeit at a low level.

Despite this generally positive attitude among councillors, less than half of the respondents in both groups perceive the LG financial statements as user-friendly (p5). Many answered that they would need to learn a lot in order to cope with the financial statements and that the financial statements are unnecessarily complex (n3, n4). However, whereas Finnish councillors believe that they do not need expert assistance to use the financial statements (n2), this is not the case for the German sample. Also, Finnish councillors seldom answered that the financial statements of the municipality contain inconsistencies (n5).

In order to provide an answer to RQ 2, we conducted statistical non-parametric Mann-Whitney U tests for pair-wise comparisons to detect differences between the groups. There were significant results for only two of these variables, indicating that the usability assessment significantly differs for cumbersome use (n1) between Finnish (mean rank = 34.3) and German (mean rank = 22.1) local councillors ( $U = 198.0$ ,  $p = 0.004$ ) and for Expert assistance needed (n2) between the Finnish (mean rank = 32.3) and German (mean rank = 23.6) councillors ( $U = 244$ ,  $p = 0.038$ ).

With respect to RQ 2 against the background of 12 years of difference between the sample countries in the adoption of the accrual accounting reform, it seems that the German councillors do struggle more with using the financial statements since they require expert help and find the information presented somewhat cumbersome. So possibly they have not yet achieved the same learning curves as the Finnish councillors regarding the use of financial statements, indicating only a slightly higher success of the LG accounting reform in Finland.

### **6.3 RQ 3: Determinants of LG**

In this section, we aim to explore which of the LG-related characteristics of the sample influence the usability assessment. Therefore, we classify the LGs by population size, information load (number of pages) and financial situation in two groups each by using the respective mean values. Only the significant results of the Mann–Whitney U tests ( $p < 0.05$ ) are displayed in Table VII.

*<Insert Table VII about here.>*

We compared the usability assessment of 39 local councillors from 8 small LGs with 15 local councillors from 3 large LGs using a cut-off value of 100,000 inhabitants. Accordingly, local councillors in larger LGs find it more difficult to learn how to use the financial statements (p3), seem to have a stronger tendency for needing expert assistance (n2), and find the information to be less integrated and user-friendly (QIU subscale). So, local councillors in larger LGs may rely more on financial information. But it also needs to be taken into account that, for most of the LGs, the number of pages in the financial statements increases with their size. The same results also appear with respect to the number of pages again, because claim p3 (learn quickly) and the QIU subscale show significant group differences if we split the groups at 175 pages. Report length can be interpreted as a measure of information load. An excessive report length can negatively impact the capacity of decision-makers to process information (Morunga and Bradbury, 2012).<sup>ii</sup> With respect to the geographical area, we compared the groups of 25 local councillors from 5 urban LGs with the 29 local councillors from 6 rural LGs, but no significant differences appeared.

The financial situation of the LGs impacts the use of financial statements (Buylen and Christiaens, 2016). First, we analysed the debt per capita of the LGs with the respective federal/national mean (Finland: €2,933 /capita and North Rhine-Westphalia: €3,537 /capita) as the cut-off value, and second, the mean annual surplus/deficit per capita of the sample.<sup>iii</sup> In both cases, two significant differences (cumbersome use (n1) and (expert assistance needed) n2) were found in the groups of 36 local councillors from 7 LGs with a more detrimental, and 18 local councillors from 4 LGs with a better, financial situation. So, local councillors from an LG with either high debt or a surplus/deficit below the mean of all LGs, assess that using the financial statements is cumbersome and think that they require expert help. Several explanations are possible here. On the one hand, the financial pressure that these LGs are in might

negatively affect the usability assessment by the councillors. On the other hand, it could be that in these LGs more attention is paid to the financial statements and more debates arise together with the perception that these are difficult to understand.

#### **6.4 RQ 4: Determinants of local councillors**

In this section, specific variables that relate to the local councillors are analysed, for instance gender, age, political orientation, and education (see Table III). Only the significant results of the Mann–Whitney U tests ( $p < 0.05$ ) are displayed in Table VIII.

*<Insert Table VIII about here.>*

There seems to be a difference in the usability perceptions between the 21 female and 33 male local councillors interviewed. Across each of the significant results, men seem to assess the usability of LG financial statements higher. Men are more confident in using financial statements and also think that they could learn to work with them quickly. This observation is also in line with gender studies in accounting (Park and Hayes, 1994). There are even significant differences for the total FSUS scale and the QIU subscale, so that in developing the financial statements, the perspective of women should be given more attention. However, these findings might partly be caused by the composition of the sample: only 37.5% of the men have no economics/business education context and 28.2% no university degree, in contrast to 52.4% and 61.9% of the women, respectively. Further tests showed that only for those councillors without economics/business education context, the gender differences remain. These women claim p1 and p3, but also all (sub)scales (FSUS, Usability and QIU) significantly lower than men. For other group compositions (economics/business education context, with/without university degree) no differences between the genders became apparent, which, however could also be caused by the small group sizes. Future research could analyse these variables in more detail.

Of the tests for relevance of political orientation, there are three significant differences between the 28 left-wing and 23 right-wing local councillors ( $N = 51$ ). Right-wing local councillors assess the usability of financial statements better, at least with respect to learning its handling (p3) and its use (n1). Also, differences appear for the QIU subscale, so that left-wing politicians find the information in the financial statements less well integrated and also not so user-friendly.

With respect to the education of the local councillors, we tested the variables ‘university degree’ and ‘economics/business education context’ (i.e. whether

councillors have been educated in economics or business). With regard to the university degree, there are significant differences only for inconsistency (n5), but for the economics/business education context, there are three findings. The 26 councillors with an economics/business education assess several items and also the Usability subscale better than those 24 councillors without, which might be explained by their higher degree of familiarization with accrual accounting (Cohen et al., 2013).

Other potential councillor-related determinants did not reveal any significant group differences. For instance, age, the length of the term of office as local councillor or the affiliation to a finance-related committee did not seem to play a role in our sample.

## 7. Discussion and conclusions

In this study, by adjusting a commonly applied usability assessment to financial reporting, we aimed to assess the usability of LG financial statements in two different countries, which had different time spans in becoming adjusted to accrual reporting.

With respect to RQ 1, i.e. how local councillors assess the usability of LG financial statements, it can be stated on average that the LG financial statements were rated higher than the middle value of the usability scale, overall a highly relevant precondition of an LG accounting reform success. The usability assessment is even quite positive, despite some outliers to the values below scores of 30. Nevertheless, it appears that local councillors need more support in actual use, because the assessments are lowest with the claims that refer to learning to use it, the need for assistance, and the perception of a cumbersome use. In addition, user-friendliness can be improved.

Commented [A1]: 'the system'

For RQ 2, we asked about the differences in the usability assessment of LG financial statements considering the time elapsed since accrual accounting implementation. The descriptive statistics reveal that, indeed, the Finnish councillors seem to be more positive overall about the usability of the LG financial statements. By contrast, German councillors are intending to use the LG financial statements more often, which might also be a sign of infrequent use. However, there were only significant differences between the samples with respect to two claims, so the sample reveals an only moderately higher LG accounting reform success in Finland compared to Germany. Still, it is interesting to note that the German councillors, whose LGs had less time to develop proven routines and practices of accrual accounting, find using the LG financial statements more cumbersome and ask for more assistance from experts compared to the Finnish sample. This shows that the Finnish councillors might indeed have become more acquainted with the new style of reporting.

In addition, with respect to the question of whether there are determinants of LGs that affect the usability assessment (RQ 3), we found four potential determinants: population size; volume of the financial statements; level of debt per capita; and the level of annual surplus or deficit per capita. Implications of the differences found – especially with an assessment that usability is lower in large and more financially strained LGs and related to more extensive financial statements – a more user-oriented compilation of the financial statements seems advisable. This could, for example, include providing more user guidance (glossaries, tables, and figures) as well as training for councillors, especially in those LGs with more usability problems. Concerning RQ 4 (How do determinants of local councillors affect the usability assessment?), some of the individual characteristics of local councillors also seem to impact usability evaluation i.e. gender, political orientation, university degree, and an education with an economics/business context. Of these determinants, gender takes an outstanding position. It was significant not only for two claims (namely, confidence in using, and ability to learn the handling very quickly) but also for the total usability scale and the subscale representing quick use, integrated information and user-friendliness. In each of these assessments, women rated the usability of the LG financial statements lower than men.

So, can these analyses provide a success story for public sector accrual accounting and financial reporting reforms? The results are somewhat mixed, especially since most items for RQ 2 were not significant. However, in this paper, we showed that, overall, the usability assessment achieves more than the average scale and that there are differences in samples with different accrual accounting reform maturity. Overall, we conclude that this is indeed a success story. The LG financial statements were assessed to be useful and the assessments were higher in Finland, where the settling-in period of the reform was longer. So, what needs to be considered is that these reforms take time for the politicians to familiarize themselves with them. Realistically, there are frictions with respect to getting acquainted to accrual accounting information, as is also partly represented by the factors identified.

It seems important to take a closer look at those persons who perceive low usability of the LG financial statements. Here, the idea of van Helden and Reichard (2019) seems worthwhile, which is to co-develop the LG financial statement presentation together with users to find the best and most usable form of reporting. This result is also worthwhile considering for the development of European Public Sector Accounting Standards. Now it is time for both researchers and practitioners to improve the reports and thus improve usability. There is also a need to train councillors to be

better able to cope with financial reports. Our research showed that there is a willingness to learn amongst politicians.

The results of this paper can only be regarded with the limitations of the study design. The usability scale and the determinants addressed here only partly resembled the antecedents of usability and its concept proposed by van Helden and Reichard (2019) and the cognitive factors listed by Ouda and Klischweski (2019). Still, this study revealed that user expertise is a relevant variable and that ‘understandability, clearness and “digestability”’ seem to play an important role, as warned by van Helden and Reichard (2019, p. 490). Further limitations are represented by different methods of data collection in two languages, which we tried to account for through double-blind translations. By analysing five Finnish and six German municipalities, this research project also respected the fact that there might be differences among municipalities contingent on factors such as size and indebtedness.

This study is exploratory in nature so that we do not draw any generalizations also given its small sample size. However, this study is one of the few that studies the usability of LG financial statements by separately collecting quantitative assessments from the councillors. This study is also the first to introduce an LG financial statement usability scale, which needs to be tested on a larger scale in future research. However, even with its limitations, our study shows that accrual accounting and financial reporting reforms might become a success story from the usability viewpoint of local politicians, and that settling-in periods required for this could be shorter than a decade. However, one precondition for usability is avoiding overly complex accrual statements and too high costs of learning financial statements. This would maintain the willingness to learn amongst politicians, **one** elementary conclusion of our research.

**Commented [A2]:** ‘which is one’?

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<sup>i</sup>However, the ongoing health and social services reform would transfer the organization of health and social services from municipalities to newly established counties from 2023 onwards, thus reintroducing a second sub-national level.

<sup>ii</sup>It needs to be stressed that the cut-off value of 175 pages is a statistical value only, but we are not aware of literature theoretically elaborating on the ideal or maximum number of pages of financial statements from the perspective of users. Still, this value seems in line with other studies; for example, Bradbury et al. (2020) report an average number of pages of 185 of the IFRS financial statements of 66 New Zealand local governments studied.

<sup>iii</sup> Since there are no legal thresholds for a maximum or ‘ideal’ indebtedness available, either in Germany or Finland, we follow the advice of Junkernheinrich and Micosatt (2007) to rely on comparative values. We draw on the federal/national average debt per capita in the year 2016 (see for North Rhine-Westphalia: <https://www.it.nrw/nrw-kommunen-waren-ende-2016-mit-632r-milliarden-euro-verschuldet-11988> and for Finland: <https://www.kuntaliitto.fi/talous/kuntatalouden-tilastot/kuntien-tilinpaatokset/taloudellisia-tunnuslukuja>). For the mean annual surplus/deficit per capita, we had to rely on the sample average, since this key figure is not available for either North Rhine-Westphalia or for Germany.