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DOES GOOD AUDITING GENERATE QUALITY OF GOVERNMENT?

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ABSTRACT

Despite the large focus in research and practice on audit, inspections and oversight activities there has been few empirical studies showing the effects of auditing on public sector performance. Hence, we have little knowledge of whether auditing lead to positive, negative or no effects at all on the public sector. This paper argues that there is a need to connect empirical studies of auditing to an overall theoretical framework, defining what “good government auditing” consists of, in order to study if such auditing has positive effects on public sector performance. The paper presents a definition of good government auditing which builds on three core principles: independence, professionalism and recognizing the people as the principal, which is operationalized and tested empirically in the paper. Using data from a unique worldwide expert survey, covering 122 countries, the results clearly demonstrate that good government auditing has a distinct positive and statistically significant effect of the performance of the public sector. These findings indicate that merely conducting audits of the public sector is not sufficient, auditing also needs to be organized according to certain principles, in order to contribute to well-functioning public administrations.

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Introduction

In the recent decade a large focus among scholars and practitioners within public administration has been the grand shift in the governance and control of the public sector. From central regulation and detailed instructions to decentralization, market solutions and ex-post controls, all within the New Public Management (NPM) reform package. This change increased the demand for oversight, inspection and audit of the public sector; to the extent that Power (1999) claimed that we are facing an “audit society.” Power (1999) argued that this would have several undesirable consequences for society, and in line with him much of the literature has in general been focused on the harmful impact of inspection and audit activities. It has been argued that by making organizations auditable, the measurability of activities becomes more important than the kind of activities carried out in the organizations. This in turn has been argued to lead to lower levels of efficiency, de-professionalization and mistrust and resistance among public employees (Bevan and Hood 2006; Dahlström and Lapuente 2010; Levi 2005; Pentland 2000; Power 1996; 1999). Although many scholars have tended to highlight the negative effects, there have only been a limited number of empirical studies demonstrating the impact of oversight, inspections and audit on public sector performance (Andrews et al. 2008; Boyne 2003; Cabral and Lazzarini 2014; Walker, Boyne and Brewer 2010).

Existing empirical studies provide a mixed picture of how monitoring activities, such as auditing, impact the performance of public sector organizations. Some studies demonstrate positive correlations, other insignificant or negative correlations between auditing and better public sector performance (Bevan and Hood 2006; Boyne 2003; Carlson, Cowen and Fleming 2013; Rutherford 2014). The same kind of audit activity has also been demonstrated to impact performance in different ways in the same organization. In her study of underperforming schools, Rutherford (2014) finds that audit interventions in schools increased their performance on some indicators at the same time as there were no improvements on other performance indicators. Although Rutherford (2014) argues that monitoring can lead to improvements, a common counter argument in the literature is how performance improvements in some areas most likely has negative consequences in other areas, as a result of resources and focus primarily being directed to the areas being subject to audits (Bevan and Hood 2006).

Hence, auditing appears to impact public performance in different ways and as a part of the explanation of when it generates positive outcomes, a line of research has demonstrated that the manner by which auditing is organized may be significant. Mainly, these studies have been centered on how the communication of audit results can play an important role. Result of audits have proved to impact the performance in the organization positively when the results of the audits have been made public for citizens (Carlson, Cowen and Fleming 2013; Bevan and Hood 2006; Ferraz and Finan 2008). In particular, such information has proved to be significant in de-centralized public sectors with market solutions, where citizens are allowed to choose among various service providers. To be able to make a choice, citizens need information and public service providers need to perform well in published reports in order to attract citizens as “customers” (Carlson, Cowen and Fleming 2013). In addition, the source of performance information has also proved to be important. In comparison with performance information produced by the mass media, the public service provider itself or the local government, citizens are more likely to trust information produced by auditing bodies which are independent (James 2010). Additionally, the capacity of the auditing agency, in terms of expertise and skills among the auditors has been demonstrated to impact their possibility of fulfilling their assignment. In particular in poor countries, capacity constraints in terms of lack education and expertise among auditors put large limitations on how auditing agencies in these countries may operate (Gustavson 2014; Isaksson and Bigsten 2012).

Almost all countries around the world have an established national auditing agency, monitoring the performance of the entire public sector in their country. These national auditing agencies do however vary in several significant aspects, such as structure, degree of professionalism, degree of independence from the government and whether they communicate their results to the public. As demonstrated, previous research emphasize some of these characteristics to be important for generating better public sector performance. These characteristics are however not connected to an overall theoretical understanding of how auditing should be organized in order to generate better public sector performance, or empirically tested more systematically (c.f. Boyne, Day and Walker 2002; Cabral and Lazzarini 2014; Walker, Boyne and Brewer 2010). In addition, existing empirical research on the impact of auditing on public sector performance consists of studies of single public sectors organizations or single fields within the public sector, such as health care or schools, within the same country. This study aims to expand this field of research through examine how “good government auditing” impact public sector performance in a cross-national comparative study.

Theory: The organization of auditing and its impact on public sector performance

Oversight of the public sector is commonly described theoretically as following the logic of the principal-agent problem (Bendor, Glazer and Hammond 2001; McCubbins, Noll and Weingast 1987; Weingast 1984). As the principles – the political representatives and, ultimately, the people – delegate the execution of the public affairs to the agents – the public officials – the need to control their actions and performances raises. If there would be no oversight of public officials, there would be an impending risk of policy drift, shirking or corruption in the public sector organizations (McCubbins, Noll and Weingast 1987). This need for control is enforced by the asymmetric relationship in information between the principals and the agents. In particular, in modern societies with highly complex and specialized administrations, political representatives and ordinary citizens may have a difficult time in constituting a sufficient democratic control, merely through access and insight in the public sector organizations. This has given rise to the need for specific government agencies controlling other parts of the public sector, such as auditing or inspection agencies (O'Donnell 1999; Scott 2000). Apart from this overarching theoretical understanding of the need and purpose of auditing agencies in democracies, there is no established comprehensive theoretical framework to understand how the organization of such agencies affect the performance of the administration being audited (c.f. Boyne, Day and Walker 2002). However, various features are by different scholars emphasized as generating better outcomes of an audit process.

Principles of good government auditing¹

I argue that there are three main principles which in the literature are established, although separately, as principles of what may be considered essential elements in a definition of “good auditing” of the public sector. The first is the principle of *independence* (Flint 1988; Mautz and Sharaf 1961; Normanton 1966; Power 1999; 2005; Hollingsworth and White 1998). If we regard auditing as a mechanism for the principal to control the agent, the separation between the agent and the auditing agency becomes central. If there is no separation between the oversight mechanism and the public administration subjected to control, the oversight mechanism would rather work as a function for

¹ This section builds on Gustavson (forthcoming) *What is Good Government Auditing? Seeking the Democratic Foundations of a Horizontal Accountability Mechanism*

self-evaluation (Wildavsky 1979). Internal auditing serves as such mechanism, and operates as an internal control function for management to evaluate and control the organization. Although it may be a valuable instrument for management in the public sector, for politicians and the public to enhance efficiency and prevent policy drift, fraud and corruption in the administration relying on self-evaluative mechanisms have severe limitations. In order to present a successful picture of the organization, there is an immediate risk that self-estimations overvalue performance and downplay underperformance and other problems in the organization. The history of auditing in democracy theory also illustrates how independence has been an essential element in the relationship between the auditors and the public administration. In *The Politics* Aristotle regarded it as necessary that officials handling public money were controlled by other officials who were separated from them and had no other function: *But since some, not to say all, of these offices handle the public money, there must of necessity be another office which examines and audits them, and has no other function.* (Aristotle, *The Politics*, Book VI, 1322b5-15). Similar to Aristotle, John Stuart Mill clarifies the need to create systems of control of the administration and the necessity to separate “these offices of control and criticism” from the administration whose work they are to examine (Mill, (1861) 2001, p. 70). As independence is well established as a cornerstone in auditing, the issues discussed in the literature is not whether or not independence is necessary, but rather how various dimensions of independence can be guaranteed, such as financial independence, protection from interference in planning, selecting and executing audits and individual ethics among auditors (Antle, 1984; Bayou, Reinstein and Williams, 2011; Cullinan and Sutton, 2002; Gendron, Cooper and Townely 2000; Preston et al., 1995; Sikka and Willmott, 1995; INTOSAI 1998).

The second principle of “good government auditing” is *professionalism*. The creation of specific auditing agencies builds on the notion that officials working for these agencies have better possibilities than ordinary citizens and politicians to control financial transactions and performance of very complex organizations, as public administrations constitute in contemporary societies. Professionalism among officials conducting oversight activities is also argued by scholars to generate better outcomes in terms of improving performance of the auditee (Boyne, Day and Walker 2002; Gustavson 2014; Isaksson and Bigsten 2012). A lack of professional expertise creates more dependency to the auditee and more limited possibilities to take a critical stance to the information obtained in the audit process (Isaksson and Bigsten 2012) as well as it impacts the trustworthiness of their assessments, opinions and reports negatively (Flint 1988). In addition to the purpose of controlling the public sector, auditing also build on recommendations to the auditee with the aim to improve

its performance (Reichborn-Kjennerud 2013). If these recommendations actually should lead to improvements, the understanding of the area by the auditors must be greater than that of the public officials working in these organizations (c.f. Boyne, Day and Walker 2002, pp. 1199).

In comparison with other oversight agencies, constituting a specific profession has implications for how the expertise among auditors is governed. A profession is defined by the claim for abstract knowledge and the application of such knowledge to particular cases (Abbott 1988, p. 8). In order to withhold the legitimacy for the profession, professional groups exercise authority and control of their members in several ways. The entrance to the profession is generally regulated through demands for specific education and exams, and, apart from national legal frameworks, the continuous work is internally regulated through requirements of following professional norms, such as specific standards and guidelines (Byington, Sutton and Munter 1990; Bédard 1989; Preston et al. 1995). A part of the trust in auditors' competence is also based on whether they follow the norms established by the profession for their work (Gustavson and Rothstein 2013). As a consequence of this, the auditing profession has handled external threats to their self-regulation and professional monopoly by an increased issuance of standards and guidelines (Power 2003). In particular in the aftermath of financial crisis and auditing scandals, the reassurance of auditing independence and ethics by the profession has been to emphasize the importance of following professional standards in the auditing work (Sikka 2009). Albeit standards are soft regulation and there is no legal obligation of compliance (Brunsson and Jacobsson 2000), their importance is demonstrated when assessments are made to determine whether the auditors have failed to properly execute her or his assignment. In court decisions on charges of professional negligence, the professional standards are used as indicators measuring whether appropriate and sufficient work has been carried out (Byington, Sutton and Munter 1990).

The third and last principle which I argue constitutes the foundation of good government auditing is *recognizing the people as the principal*. The organization of public administrations in democratic societies can be described as a chain of delegation. The people delegate authority to elected politicians who in turn delegate power to various public agencies, their management and the individual public officials. Who should be considered the principal in this vertical accountability framework then depends on where we focus in the chain of delegation (Brandsma and Schillemans 2012). Although delegation builds on a movement of who should be considered the principal, from a democratic perspective it can be argued that the main principle, whose will and power is delegated, ultimately

always is the people. The question then becomes how auditing can be organized to enable the people to become a true principal, towards whom auditing agencies hold the public sector organizations to account?

Auditors have been criticized for not acting in stakeholders, such as the citizens, interests, and for not being concerned about whether society holds other expectations on them than what they consider their responsibility (Cullinan and Sutton 2002; Larsson 2005; Sikka 2009, Öhman et al. 2006). An area where this gap of expectations between auditors and the general public becomes notable is in terms of whether it is the responsibility of auditors' to discover and report on fraud and corruption. Power (1999) claims that it has long been debated among scholars whether such malpractices should be a part of auditing, and according to him the debate come to a general agreement in the 1940s that it should not be a part of the audit objectives, even if it might have been a purpose when auditing was established. However, the general public still believes and expects that these malpractices are detected and reported upon by auditors, even if the auditing profession argues that this is a misunderstanding from the public side about the role and responsibility of auditors (Larsson 2005). Turning to the democratic origins of auditing, it becomes clear how the establishment of a public audit office in the democracy primarily was a matter of detecting maladministration such as embezzlement, bribes and other forms of corruption: *If they [the auditors] detect anyone who has been guilty of embezzlement, the jury condemns him for theft of the public money /.../ if they demonstrate that anyone has taken bribes /.../ If they condemn him for maladministration /.../* (Aristotle, *The Constitution of Athens* XLIX LIV2). It is evident that the audit assignments need to change when society is modernized and the audited administrations becomes more complex. It yet appears as if the auditing profession has altered their role and responsibility to the extent that their democratic purpose has been lost. If they are not to discover and prevent fraud and corruption in the public sector, then who is? In line with the third principle of recognizing the people as the principal, there is a need for auditing agencies to start acting in the interest of the principal, subsequently start fulfilling the people's expectations on their role and responsibility in society. To act in the interest of the principal also has implications of how to arrange the relationship between the people and the auditing agency. How audit reports and recommendations are taken into account by the administrative management and the political leadership vary, which in turn, of course, also has consequences on how auditing may impact the administrations (Freides 1992; Hanberger 2009; Andersson and Bergman 2009). If the people are to be regarded as the main principal, there should be little room for the variation of the impact of auditing to depend primarily on how findings and reports are handled by the administrative man-

agement and the political leadership. Especially, considering that a large majority of fraud and corruption problems tend to involve top management (Cullinan and Sutton 2002). To fulfill the third principle, auditing agencies need to have a higher ambition than merely report to management and politicians. They also have to reach out to the general public to bring attention to their findings. Naturally, there is no possibility to inform the general public of all audit findings, but auditing agencies need to seriously consider what would be the most fruitful way of handling audit findings, with regard to the public's interest. This includes communicating also audit results to the public, which are inconvenient for the government. As demonstrated by previous studies, result of audits have proved to impact the performance in the organization positively when the results of the audits have been made public for citizens (Carlson, Cowen and Fleming 2013; Bevan and Hood 2006; Ferraz and Finan 2008).

In sum, I have outlined three main principles of what may be considered good government auditing, from a democratic perspective, and I suggest the following definition: *Good government auditing is characterized by recognizing the people as the principal, independence to the auditee and professionalism in the exercise of the audit practice.* The overall theoretical understanding is thus that these principles together organize auditing in a way which generates a better performing public sector, i.e. in countries where national auditing agencies have high scores on these principles; they also have high scores on how well the public sector works. This leads to the following hypothesis:

H1: If the national auditing agency is characterized by good government auditing, it generates better public sector performance

Although the overall theoretical understanding of what characterizes good government auditing builds on the three principles in combination, it is reasonable to assume that each one of the principles have an independent effect on how well the auditing may generate a good performing public sector. That is, if the auditing agency is independent it will have greater possibilities to monitor the public sector in a manner which will lead to better performance. Likewise, if the auditors who work in the national auditing agencies have the appropriate skills and education, they will be able to conduct the audits in a way which produces better performance of the public sector, as well as if they communicate their results to the public regularly, it is likely that their results will lead to an impact which eventually generate a better public sector performance. This leads to the following three hypotheses:

H2: If the national auditing agency is independent from the government, it generates better public sector performance

H3: If the national auditing agency is professional, i.e. have the appropriate skills and education, it generates better public sector performance

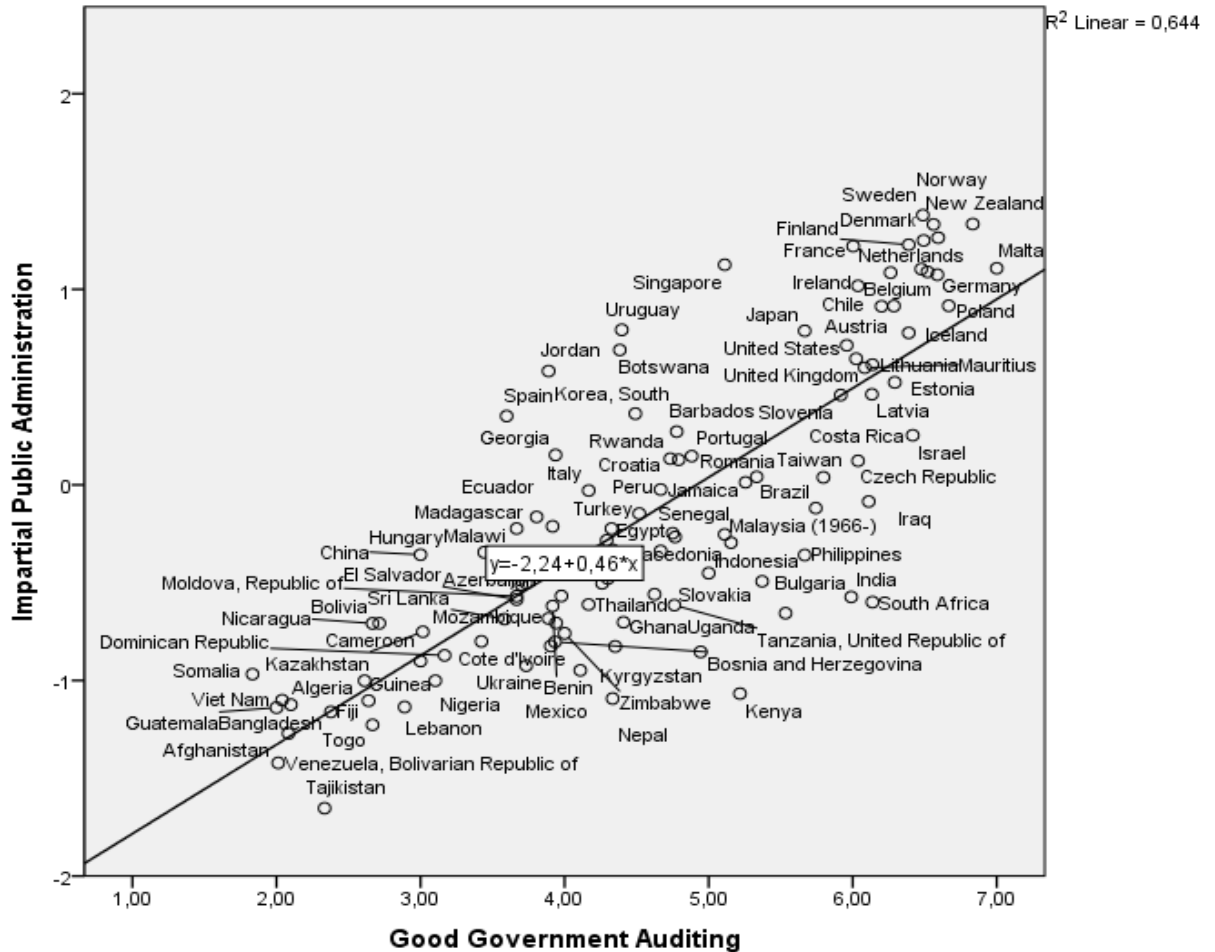
H4: If the national auditing agency regularly communicates their results to the public, it generates better public sector performance

Data and methods

To capture the performance of the public sector cross-nationally, this paper uses the definition and measure of quality of government established by Rothstein and Teorell (2008), who define quality of government as *impartiality* in the exercise of public authority. Impartiality is a more inclusive definition of the quality of the administration than just the absence of corruption. For public officials to be impartial it also means that apart from corruption they can neither be involved in related practices such as nepotism, patronage or discrimination. It is also a more precise definition than the World Bank's definition of good governance, as the latter include all kinds of institutions through which public authority is exercised, which range from the formulation of sound policies to social norms among people (Kaufmann, Kraay and Mastruzzi 2009). To measure impartiality this paper uses original data from the Quality of Government Expert Survey 2015. The survey is based on 1294 country experts, covering 122 countries. Each country is represented by three or more experts (Dahlström et al. 2015a). The paper uses an index of impartiality which builds on five questions in the survey. Each measure was weighted by factor loading from a principal component factor analysis and added to the index. Aggregation to country level was then made through using the mean value of all experts per country. The index is constructed so that high values on the index represent high levels of impartiality. The following five items from the survey was included in the index: 1) Whether some groups in society are treated unfairly when policies are implemented in individual cases; 2) If strong personal contacts are favored when public officials grant licenses to start up private firm; 3) To what extent public sector employees act impartially when deciding on implementing a policy in an individual case; 4) If firms that provide the most favorable kickbacks to senior officials are awarded public procurement contracts in favor of firms making the lowest bid; 5) How large percentage of the money directed to the needy poor will actually reach the needy poor (Dahlström et al. 2015b).

To measure the independent variable, I follow my proposed definition of what constitutes good government auditing. Three specific questions capturing each one of the three principles was posed in the above described Quality of Government Expert Survey. The questions were asked the following way: To what extent would you say the following applies today to the country for which you have chosen to submit your answers? 1) The National Audit Office is independent from the government. 2) Auditors at the National Audit Office have the appropriate education and qualifications. 3) The National Audit Office regularly communicates their results, including results that may be inconvenient for the government, to the general public. Apart from a “no answer” option, the answer options range from 1 to 7, where 1 represent “not at all” and 7 “to a very large extent.” The answers were aggregated to country level by taking the mean of all experts per country. The good government auditing index was then created through taking the mean of the values for the three questions (Cronbach’s Alpha = 0.939). Figure 1 demonstrates the bivariate relationship between the good government auditing index and the quality of the bureaucracy.

FIGURE 1, BIVARIATE RELATIONSHIP, GOOD GOVERNMENT AUDITING AND THE QUALITY OF THE PUBLIC ADMINISTRATION



As we see there is a fairly strong bivariate correlation between how well the national auditing agency is experienced to function and the quality of the public administration ($R^2 = 0.644$). As expected, the Nordic countries are found at the right top corner, together with countries like New Zealand, the Netherlands, Germany and France, with a good government auditing and well working public administrations. The fact that countries representing different kinds of auditing systems, i.e. the parliamentary system (the Nordic countries, New Zealand and Germany) and the juridical system (France and the Netherlands), are found in the top indicates that it may not matter what kind of

audit system is established in the country as long as it is an independent professional auditing agency which communicate with the general public. At the bottom left corner we find countries such as Afghanistan, Venezuela, Tajikistan and Bangladesh, countries where the quality of the public sector is experienced as being very low, these countries are also distinguished by not having a well working national auditing agency.

To ensure that the correlations not merely reflects general levels of economic development and to capture other alternative explanations, the model presented in Table 1 includes several control variables which in cross country comparative studies are regarded as factors creating quality of the public administrations. To control for economic development I use the *gross domestic product (GDP) per capita* in current prices by Gleditsch (2010) International integration has proved to be a significant factor affecting the levels of corruption in a country (Sandholtz and Gray 2003). In the models international integration is specified through using three different measures. The first is *trade openness* in the country, which is measured by the sum of exports and imports divided by GDP (World Bank Development Indicators 2010). The second and third are two indices from Axel Dreher's globalization indices (2010). *Political globalization* is an index of the number of high commissions and embassies in the country, the number of international organizations the country is member of, the number of UN peace missions the country has participated in and the number of international treaties the country has signed since 1945. The *social globalization* index is constructed by three categories of indicators. The first indicator is personal contacts and includes measures on as telephone traffic, transfers (percent of GDP) international tourism, foreign population (percent of total population) and international letters per capita. The second indicator is data on information flows, which includes number of internet and television users (per 1000 people) and trade in newspapers (percent of GDP). Data on cultural proximity constitutes the third category of indicators, and it consists of the number of McDonald's restaurants and number of Ikea (both per capita) as well as trade in books (percent of GDP). I also include a dummy variable for whether or not the country has been a British colony (from Hadenius and Teorell 2007), as several scholars have argued that the British left norms and legal structures in their colonies which after independence made these countries perform comparatively better than other former colonies, in terms of having administrations based on the rule of law (Bäck and Hadenius 2008; Charron and Lapuente 2010; La Porta et al. 1999; Treisman 2000). A part of good government auditing is the communication of audit findings to the general public, hence, to ensure that the relevance of auditing agencies on the quality of the administration is not instead capturing levels of press freedom in the country, a measure of

Freedom of the Press (from Freedom House, 2010) is added as a control variable into the models. The variable was reversed so that high scores indicate high levels of press freedom.

Results

Table 1 presents seven empirical models where the hypotheses in the paper are tested. Model 1 – 5 uses the impartiality index as the dependent variable. The first and most restrictive model tests the first hypothesis that good government auditing lead to a better performing public administration but includes only the control variables which are the most established in research on what may determine the quality of the bureaucracy cross-nationally. That is, GDP per capita, trade openness and being a former British colony (Bäck and Handenius 2008; Charron and Lapuente 2010; Dahlström, Lapuente and Teorell 2012; La Porta et al. 1999; Treisman 2000). We see that the index of good government auditing has a relatively strong effect, with a coefficient of .298, significant at the 0.01 level, despite adding these controls. As expected GDP per capita has an independent significant effect. More surprisingly, neither trade openness nor being a former British colony have significant effects in the analysis. In model 2, the first hypothesis is tested in an extended model, in which political and social globalization as well as press freedom are added as control variables. As the results demonstrate, the impact of good government auditing drops only a little bit and it stays significant at the .01 level. Freedom of the press has only a marginal significant effect and the three variables controlling for internationalization dimension, trade openness, political and social globalization show no significant impact. The clear and statistically significant impact of good government auditing on public sector performance despite controlling for these factors is a bit unexpected, but it reveals the importance of how auditing is organized for its possibility to have a positive impact on the public sector, a neglected dimension in previous research. In accordance with the theory, the three principles of good government auditing are also expected to have independent effects on public sector performance. Hence, in model 3 the second hypothesis is tested: If the national auditing agency is independent from the government, it generates better public sector performance. Model 4 investigates hypothesis three: If the national auditing agency is professional, i.e. have the appropriate skills and education, it generates better public sector performance, and model 5 tests hypothesis four: If the national auditing agency regularly communicates their results to the public it generates better public sector performance. To run the full extended regression model with each of the

TABLE 1

Good Government Auditing and Public Sector Performance

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Auditing variables							
Good Gov Auditing Index	0.345*** (0.038)	0.298***				0.191*** (0.046)	0.318** (0.132)
Audit independence			0.199*** (0.038)				
Audit professionalism				0.328*** (0.048)			
Audit communication					0.236*** (0.040)		
Control variables							
GDP/Capita	0.209*** (0.044)	0.132* (0.069)	0.168** (0.073)	0.133* (0.069)	0.140* (0.071)	0.215*** (0.072)	0.463** (0.202)
Trade openness	0.065 (0.091)	0.005 (0.107)	-0.002 (0.115)	0.007 (0.107)	0.031 (0.111)	-0.005 (0.107)	-0.134 (0.300)
Political globalization		-0.002 (0.003)	0.000 (0.004)	-0.005 (0.003)	0.000 (0.003)	0.001 (0.003)	-0.004 (0.009)
Social globalization		0.004 (0.005)	0.004 (0.005)	0.005 (0.005)	0.004 (0.005)	0.013*** (0.005)	0.026* (0.013)
Former British colony	-0.113 (0.100)	-0.087 (0.101)	-0.016 (0.107)	-0.135 (0.102)	-0.095 (0.105)	0.137 (0.104)	0.360 (0.298)
Freedom of the press		0.005* (0.003)	0.007** (0.003)	0.008*** (0.003)	0.006** (0.003)	0.011*** (0.003)	0.032*** (0.009)
Number of countries	105	105	106	106	105	106	105
Constant	-3.878*** (0.444)	-3.106*** (0.749)	-3.097*** (0.038)	-3.380*** (0.746)	-3.127*** (0.778)	-4.037*** (0.730)	-3.592* (2.051)
Adjusted R ²	0.710	0.736	0.682	0.724	0.695	0.812	0.705

Note : All estimates are unstandardized regression coefficients, with standardized errors in parentheses. For model 1-5, the dependent variable is the "impartiality index" from the Quality of Government Expert Survey, 2015. The dependent variable for model 6 is the World Bank indicator "government effectiveness" from 2010 and for model 7, Transparency International's "corruption perception index" year 2012. *p < 0.10; **p < 0.05; ***p < 0.01.

three parts in the good government auditing index also makes it possible to see if any of the parts in the index is more important than others, and perhaps driving the results for the whole index. Model 3- 5 illustrates how each of the principles of good government auditing has a clear impact on the quality of the bureaucracy, significant at the .01 level. In the light of the literature on auditing which primarily emphasize the importance of independence; it is somewhat surprising to see how the principle of independence demonstrates the weakest effect of the three principles, with a coefficient of .199. The strongest effect is found on professionalism (.328) while communication places itself in the middle, with an effect of .236. As we see, there is no large difference between the three principles, however. In model 5, it is interesting to note how communicating audit results to the public remains significant with a relatively high impact on the dependent variable, even when freedom of the press is controlled for. Although these results are in line with previous studies demonstrating how people trust performance information from independent auditing agencies more than media in general (James 2010), for a broader audience, freedom of the press would likely be regarded as more important to sustain a well performing bureaucracy, as several studies have demonstrated how press freedom has a significant impact on levels of corruption (e.g. Brunetti and Weder 2003). Similar to model 2, GDP per capita and freedom of the press remain significant in all three regressions while the other control variables show no significant impact.

In model 6 and 7 the robustness of the results are tested by changing the dependent variable, in model 6 to government effectiveness (World Bank Governance Indicators, 2010) and in model 7 to levels of corruption (Transparency International, Corruption Perception Index, 2012). The scale for the corruption perception index is arranged so that higher values indicate lower levels of corruption. The coefficient for good government auditing drops slightly in model 6 but it still has a clear impact and remains significant at a .01 level. Changing the dependent variable to government effectiveness made social globalization become significant at a .01 level, although its effect is rather limited with an estimated effect of .013. Using perceptions of corruption as the dependent variable in model 7, the effect of good government auditing increases but its significance levels drops a little to the .05 level. A similar change is noted for GDP per capita (an increase in the effect but a drop in the significance level), while the effect press freedom increases and remains significant at the .01 level. As the principle of having professional auditors demonstrated the strongest effect of the part of good government auditing, the robustness of the results is also tested by controlling for multicollinearity with professionalization of the bureaucracy in general. Previous research has shown

how meritocratic recruitment of public officials has a strong and significant effect on levels of corruption (Dahlström, Lapuente and Teorell 2012), hence there could be a risk that this part of the index instead captures professionalization in general. To control for this, the index of professionalization in the Quality of Government Expert Survey 2015 is used, which measures to what extent the public administration is professional rather than politicized. Higher values indicate a more professional administration (Dahlström et al. 2015b). As expected the correlation between the professionalization index and audit professionalism is high (Pearson correlation = .691) and significant at the .01 level, however the values are not as high as signaling problems of multicollinearity. To further control for multicollinearity I run a regression model with impartiality if the public administration as the dependent variable and the professionalism index and audit professionalism as independent variables. For this model, the collinearity diagnostics shows a VIF value of 1.880, thus, not indicating any problems with multicollinearity between the variables. To make additional tests of the robustness of the results I run two regression models including the professionalization index as a control variable.

TABEL 2

Robustness Test Good Government Auditing

	Model 1	Model 2
Good Gov Auditing Index	0.195*** (0.039)	
Audit professionalism		0.210*** (0.045)
Professional PA	0.315*** (0.049)	0.310*** (0.050)
Number of countries	103	104
Constant	-3.091 (0.605)	-3.218 (0.613)
Adjusted R ²	0.818	0.817

Note : The estimates are unstandardized regression coefficients with standardized errors in parentheses. For both models the dependent variable is the "impartiality index" from the QoG Survey 2015. The models include the same control variables as model 2 in Tabel 1; GDP/Capita, Trade openness, political and social globalization, former British colony and Freedom of the Press. *p < 0.10; **p < 0.05; ***p < 0.01

The results are presented in Table 2. As we see in model 1, the effects of good government auditing drops from .298 (model 2, Table 1) to .195, when general professionalization of the public administration is added to the model. It remains however to have a clear impact which is significant at the .01 level. Similarly, the effect of audit professionalism, drops from .328 (model 4, Table1) to .210 in model 2 (Table 2), but it remains significant at the .01 level. As expected, the general professionalism index have higher impact on the quality of the publicly administration than the good government auditing index and audit professionalism, with coefficient values of .315 (model 1) and .310 (model 2) which are significant at the .01 level. Although the effects of auditing drops to some ex-

tent when general professionalism is added to the models, the effect of good government auditing on the quality of the public administration remains clear and statistically significant, which adds robust support to the initial findings.

Concluding discussion

To verify and control how resources are used when they are handled by others than the original owner is a normative procedure which has a long history in different kinds of societies around the globe, in autocracies as well as in democracies. In our contemporary world almost all countries have a national auditing office, to monitor and evaluate the finances and the performance of the public administration in order to ensure that the public resources are used correctly and in an efficient manner. Nonetheless, if auditing actually leads to a well performing public administration is a question which has not been answered properly in previous research. Several scholars have raised the fear that auditing has a negative impact on the organizations being subjects to audit, leading to mistrust, de-professionalization and a bias for activities being measurable instead of focusing on the substance of the activities. The empirical studies on the impact of auditing on public sector performance have been limited and in general focused on single organizations or single fields within the public sector, in the same country. Research on auditing and inspection activities on organizations have also demonstrated mixed results, where some studies show a positive impact and others a negative or no impact at all. A reason for the mixed results as well as the fears scholars have risen about auditing could be the lack of an overall theoretical framework, establishing what may constitute “good auditing” of the public sector. In a similar manner as it is not certain that merely “governance” will lead to any positive outcomes in a country, to simply have “auditing” does not ensure that the administration is monitored in a way which is beneficiary for how it operates. Scholars have defined and debated what constitutes “good governance” or “quality of government” as having this in a country have proved to lead to several positive outcomes, such as less poverty, lower child mortality, better health among the citizens (Azfar and Gurgur 2005; Gupta, Davoodi and Alonso-Terme 2002, Holmberg, Rothstein and Nasiritousi 2009) and. I have argued that there are three core principles upon which a definition of “good government auditing” should be built and in this paper these principles have been operationalized and tested empirically.

The results evidently demonstrate that if auditing is organized according to these principles it has a distinct and statistically significant positive influence on the performance of public sector, even

when controlling for several alternative explanations and altering the measures of a well performing public administration. Auditing independence demonstrates the weakest effect of the three principles when they are tested separately, which, in the light of the literature is fairly surprising, as independence is regarded as the cornerstone in auditing. Instead, audit professionalism demonstrates the most positive impact on public sector performance. These results are in line with previous research illustrating how a high degree of knowledge in the area being monitored by the people conducting controls is highly significant for the possibilities to have a positive impact of the control (c.f. Boyne, Day and Walker 2002). In particular, in poor countries, which also tend to have the largest problems with malfunctioning public sectors, to have auditors with appropriate skills and education have in previous studies also been demonstrated to be crucial for the auditing agency to fulfill its assignment (Gustavson 2014; Isaksson and Bigsten 2012). Although audit professionalism demonstrates the strongest effect, the differences between effects of the “good government auditing” index and each of the three principles are not very large. This indicates that each part of good government auditing is central in order to create a public sector of high quality.

The main policy implication of these findings is to continue to support national auditing agencies in development countries through various development cooperation programs, as it proves to be an important factor contributing to better functioning public sectors. A high quality public administration has in turn been demonstrated to generate several good outcomes in society, such as lower child mortality, less poverty, better health among the population. Hence, as auditing, according to the results in this paper, appears indirectly to contribute to such desired outcomes, promoting auditing agencies in poor countries ought to be a prioritized area within development aid. The independent significant effects of the three principles of good government auditing indicate that these three areas could be a productive focus of such programs. If independence and communicating, also inconvenient, results to the public are difficult to promote due to political constraints, directing resources to build knowledge, skills and expertise among the public auditors is a constructive way forward to generate better quality of the public sector.

Finally, if there would be no control and monitoring of the public officials, there is an impending risk that fraud, corruption and other mismanagement would increase (McCubbins, Noll and Weingast 1987). However, a quick empirical lookout in the world tells us that to merely have a national audit office conducting audits of the public sector does not produce the desired effect to curb such malpractices. In this paper I have demonstrated how auditing actually can play an essen-

tial role in creating well working public sectors, it yet requires that it is organized according to the appropriate principles, i.e. the principles of good government auditing.

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