

Measured vs. perceived financial knowledge of municipal board members

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Abstract

The purpose of this paper was to discuss the nature and significance of financial knowledge among the board members of municipal companies and enterprises. Quantitative material was derived from a survey administered for 354 water utility board members in Finland. Two objective measures and one subjective measure were developed for respectively financial expertise and financial literacy. The results indicate that the absolute majority of the board members lack financial expertise and almost half of them are financially illiterate, while their self-perceived levels of these qualities are very high. One explanation to this might be that board members interpret financial knowledge in terms of financial literacy and have loose criteria for how such knowledge accumulates.

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1. Introduction

After the corporate failures and scandals of the late 1990s and early 2000s, considerable attention has been paid to various mechanisms of corporate governance such as corporate codes of ethics, internal control systems and, perhaps most importantly, boards of directors. Widely disseminated good governance recommendations take issue with board characteristics such as board size, independence, the roles of CEO and Chair, as well as the expertise and skills of the board members. Regulatory efforts have focused on increasing board members' financial knowledge in the hope of improving internal control over financial reporting and thus protecting shareholders from managerial malpractice. This is especially the case in the United States where legislation requires all audit committee members to be financially literate, that is, capable of reading and understanding financial statements, and at least one member to be a financial expert in terms of relevant education or professional experience. In the United Kingdom, it is similarly recommended that at least one audit committee member should possess financial experience. Such massive and costly developments have quite naturally raised the curiosity of accounting and finance scholars, who have recently investigated the association between audit committee members' financial expertise and various aspects of financial reporting quality (e.g. Xie, Davidson & Wu, 2003; Zhang, Zhou &

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Zhou, 2007; Krishnan & Visvanathan, 2008; Hoitash, Hoitash & Bedard, 2009; Dhaliwal, Naiker & Navissi, 2010). A few studies have also examined the extent of financial literacy among various groups of people, (e.g. McDaniel, Martin & Maines, 2005) but the number of such studies is considerably smaller than that of studies on financial expertise.

Corporate governance mechanisms are also emerging in the “new” or “modernized” public sector characterized by managerialism, marketization and commercialization. As a result of municipalities’ attempts to simulate market conditions, public services are to an increasing degree produced by semi-autonomous public companies or enterprises, which are expected to provide affordable services while operating efficiently and economically. Such organizations are often governed by boards of directors but the logic of applying this corporate governance mechanism is less straightforward than in the private sector. This is because the combination of public sector ownership and private sector management style involves “a continuous search for the right balance of conflicting purposes and influences, the right balance of diverse interests and the right balance between control and autonomy” (Yeung, 2005: 568). These conflicts culminate in the difficulty of defining membership criteria for public boards: On the one hand, the boards are accountable to various stakeholder groups including the general public, which suggests the need to maintain democratic control over the enterprise or company through politically appointed board members. On the other hand, the boards are supposed to hold management accountable for the efficient use of funds, which implies that an equally important selection criterion would be the members’ financial and accounting knowledge. However, the exact nature and significance of such knowledge in a public sector context is as yet unclear since the concepts of financial expertise and financial literacy have been discussed specifically in the context of commercial organizations. Despite the increasing use of public sector boards as a corporate governance mechanism, the issue has remained relatively unexplored. Collier (2005) suggests in passing that public board members who do not possess accounting knowledge tend to rely on the financial information presented by management and adopt a social ethos instead of looking after financial aspects, thus trivializing the whole notion of holding management accountable. However, this conjecture has not been empirically confirmed, and thus we do not yet have sufficient knowledge of the implications of board members’ financial knowledge, or lack thereof, in the modernized public sector.

The purpose of this study is to address some of the gaps in extant research by exploring the financial knowledge of public sector boards. The aim of the research is to find answers to the following questions: How can we measure the financial knowledge of public board members? To what extent do board members’ own perceptions of their financial knowledge differ from their objectively measured knowledge level? How do the board members themselves perceive the significance of financial knowledge? Answers to these questions are sought by examining municipal water utility board members in Finland. The Finnish context allows us to study public company and enterprise boards in a legislative environment which places few regulatory demands on their composition. Since Finnish municipalities are free to decide who to appoint as board members of their enterprises or companies, be it political representatives, experts or ordinary citizens, it is possible to examine the importance assigned to each of the two accountability roles of the boards. In addition, the water sector offers an intriguing research context because of its technical character, the legislative demand for full cost recovery of services through customer charges and the associated implications for understanding water utilities’ financial management and reporting.

The research was conducted as a mixed-methods inquiry (Modell, 2005; 2009) in order to maximize data triangulation. The quantitative data of the research is derived from a survey that was administered to board members of Finnish municipal water utilities in December 2010-January 2011. Qualitative data was

obtained from both an open-ended survey question and semi-structured interviews conducted with the board members and the CEO of an anonymous case utility. The survey data were analyzed using the PASW 18 statistical program and the quantitative results are complemented with an analysis of the qualitative survey and interview material.

The results of this paper contribute to the literatures on financial expertise, and public governance. First of all, the study expands the research on financial expertise and financial literacy by suggesting how they may be measured in a public sector context. Secondly, the results contribute to the literature on public governance by exploring the application of a particular corporate governance mechanism in the public sector.

The rest of the paper proceeds as follows. The following section reviews extant literature on financial expertise and financial literacy. Subsequently, the third section concisely outlines the governance arrangements related to municipal water service organizations in Finland in order to set the study in its empirical context. The fourth section presents the operationalization of the concepts of financial expertise and financial literacy in this particular study as well as the research methodology and methods. The results of the study are laid out in the fifth section and the implications and contributions of the study in terms of prior literature are discussed in the final section together with the authors' conclusions.

2. Financial expertise and financial literacy

In extant corporate governance studies, financial expertise and financial literacy are mostly conceived of in terms of the recommendations and regulations issued in the United States and the United Kingdom. In the US, the stock exchanges first adopted the Blue Ribbon Committee's (1999) recommendation that large listed companies should have "an audit committee comprised of a minimum of three directors, each of whom is financially literate (...) or becomes financially literate within a reasonable period of time after his or her appointment to the audit committee, and further that at least one member of the audit committee have accounting or related financial management expertise" (p. 12). The Blue Ribbon Committee defined such expertise as "past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the individual's financial sophistication, including being or having been a CEO or other senior officer with financial oversight responsibilities" (ibid., p. 25). Financial literacy was viewed by the Committee in less detailed terms as being the ability to read and understand fundamental financial statements (ibid., p. 26). Following the corporate scandals that took place at the turn of the Millennium, the US Congress (2002) approved the Sarbanes–Oxley Act, which stipulates that the audit committee of a listed company should include at least one financial expert (Section 407). This concept was then defined by the Securities and Exchange Commission (SEC) in terms of the director's accounting-related experience with SEC financial reporting, which could be acquired by working as a public accountant, auditor, principal financial or accounting officer or controller (DeFond, Hann, & Hu, 2005, p. 154–155). The SEC later expanded this definition to include experience in supervising employees with financial reporting responsibilities, overseeing the performance of companies, and other relevant experience. Although the SEC refrained from naming any particular positions, this kind of experience was considered to include working as company president or CEO (Plitch and Ceron, 2003). In the UK, the Smith Committee (2003) report recommended that "at least one member of the audit committee should have significant, recent and relevant financial experience for example as an auditor or a finance director of a listed company." (§ 3.16). The Committee further stated that the need for

other board members to be financially literate depended on the business context but noted that “experience in corporate financial matters is normally required” (ibid.).

The results of empirical studies seem to support claims that financial expertise as defined in the US regulations is relevant in terms of improving companies’ financial reporting quality. A number of studies have found that audit committee members’ financial expertise reduces earnings restatements and earnings management while improving internal control and disclosure transparency (Abbott, Parker & Peters, 2004; Agrawal & Chadha, 2005; Bédard et al., 2004; Dhaliwal et al., 2010; Hoitash et al., 2009; Kelton & Yang, 2007; Krishnan, 2005; Xie et al., 2003; Zhang et al., 2007). Furthermore, studies have noted positive market reactions to the appointment of accounting financial experts, that is, those with professional experience from positions listed in the SEC’s first definition which excluded company presidents and CEOs (Davidson, Xie & Xu, 2004; DeFond et al., 2005).

Financial literacy, which is expected of all board members in the US, has been addressed in far fewer studies than financial expertise. This is most likely due to the lack of explicit regulatory criteria, which prevents the forming of a consensus among the accounting community as to what the term comprises. A common method of operationalizing financial literacy is to refer to the knowledge acquired during business studies (e.g. McDaniel, Martin & Maines, 2002; Coates, Marais & Weil, 2007; Giacomino et al., 2009). McDaniel et al. (2002) did not actually try to measure expertise or literacy but compare to groups’ views on financial reporting. They conducted an experiment with recent MBA graduates as representatives of financial literates, while financial experts were represented by experienced audit managers. They found that the two groups’ views on financial reporting differed to the extent that this could cause changes in audit committees’ work. Coates et al. (2007) as well as Giacomino et al. (2009) utilized a specific instrument, developed by Schipper & Weil (Morse, 2004), in order to test the financial literacy of respectively audit committee members and MBA students, and undergraduates. Coates et al. (2007) found both audit committee members and undergraduates to be financially illiterate and noted that improvements in audit committees’ financial literacy proved beneficial to companies in terms of abnormal returns. Giacomino et al. (2009) found undergraduates to be financially illiterate as well; however, they caution against making straightforward conclusions and suggest that the result may depend heavily on certain characteristics of the test instrument.

To summarize, research focusing on financial expertise and financial literacy in the context of commercial, mostly US-based organizations, suggests that both qualities are relevant in terms of boards discharging their accountability to monitor and control management on the behalf of shareholders. In particular, financial expertise and financial literacy enable board members to evaluate the quality of financial reporting as well as to understand the accounting judgments made by management (Morse, 2004). Such qualities are likely to be relevant also for public sector board members, especially in the case of public companies or enterprises which are not entitled to budgetary appropriations but are supposed to recover all costs through customer charges.

3. Governance of municipal companies and enterprises in Finland

As few regulations pertain to the organizational form of municipal water utilities in Finland, the result is a veritable smorgasbord with options ranging from municipal companies to departments embedded within the municipal organization. The forms most corresponding to commercial organizations, and therefore of

interest to this paper, are the municipal company and the municipal enterprise², both of which are governed by a board of directors. Municipal companies are to a large extent regulated by the Limited Liability Companies Act (624/2006) and are subject to the same accounting stipulations as private sector companies. The municipal companies' relationship to the municipal organization is analogous to that of subsidiaries' relationship to a parent company, and therefore municipalities can influence their companies' decisions in the role of shareholders and board members. Similarly to other Finnish companies, legislation requires municipal companies to appoint a board but the selection process of their board members is left for each municipality's own discretion. The board members of municipal companies are nominated each year by the Municipal Board and appointed by the shareholders' meeting. However, it is not unusual for the same members to be elected for two consecutive years constituting the term of office of a particular Municipal Board or for the four-year term of office of a Municipal Council. After a recommendation issued by the Association of Finnish Local and Regional Authorities (AFLRA) in 2005, several Finnish municipalities have issued corporate governance guidelines, which often adhere to the corresponding guidelines for unlisted companies issued by the Central Chamber of Commerce Finland in 2006. Accordingly, municipalities' corporate governance guidelines take issue with the characteristics of board members as exemplified by the requirements set by a large Finnish city:

"The board must have appropriate expertise as regards the business branch, the organizational operations as well as administration and management." (City of Tampere, 2010).

Municipal corporate governance guidelines pertain only to municipal companies, not enterprises, which prompts the tentative hypothesis that the board members of municipal companies would tend to possess more financial knowledge than those of municipal enterprises.

Municipal enterprises, in turn, are hybrids of municipal companies and municipal departments. They are regulated by public law, most notably by the Local Government Act, and they are subject to private sector accounting regulations when applicable as instructed by the Municipal Section of the National Accounting Board. In practice, this means that municipal enterprises apply a version of accrual accounting which differs in certain points from the accounting practiced by business companies (for more details, see Vinnari & Näsi, 2008). Although the revenues and expenses of a municipal enterprise are excluded from the municipal budget, it is still part of the municipal administration and its revenues, expenses, assets and liabilities are also those of the municipality. Furthermore, the Municipal Council is allowed to set financial and operational targets for an enterprise, whereas the same cannot be done in the case of a municipal company. Municipal enterprises are required to nominate boards of directors for the purpose of directing and supervising the operations of the enterprise, with the following more specific tasks (Local Government Act 365/1995, chapter 10a, 87c §): 1) to decide on the development of operations within the boundaries set by the Municipal Council as well as to monitor and report on the achievement of objectives; 2) to approve the financial plan and budget of the enterprise; 3) to choose and dismiss the chief executive officer; 4) to decide on investments and other expenses with long-term effects; 5) to decide on the signatory of the enterprise; and 6) to supervise the interest of the enterprise and, unless otherwise stated in an ordinance, to represent the municipality and utilize its right to speak in the task area of the

² In the public administration literature, the term "public enterprise" comprises various organizational forms but for the purposes of this paper, it is important to distinguish the more independent form (municipal company) from the less independent one (municipal enterprise).

enterprise. The Local Government Act adds that other duties may be specified in each municipality's own ordinances. In terms of the appointment of municipal enterprise boards, the Act only states that board members may be selected on the basis of criteria suggested by citizens, municipal personnel or service users, and that there is no need for the political power relations of the Municipal Council to be reflected in the board composition. However, despite the freedom of choice allowed by this stipulation, anecdotal evidence suggests that the majority of municipal enterprise (and company) board members in Finland are selected on a political mandate.

Regardless of organizational form, water utilities in Finland are subject to the stipulations of the Water Services Act, which state that water utilities' all costs should in the long run be recovered through customer charges. These costs may include a reasonable rate of return on the owner's (i.e. municipality's) capital investment. On the other hand, the customer charges should be reasonable and equitable across customer groups, which clearly presents some balancing issues for the board when it decides upon investments and the way they are to be financed.

4. Research methods

4.1 Survey design and administration

To examine the composition of water utility boards and their financial expertise, a survey was conducted in December 2010-January 2011. When designing the survey, Dillman's (2007) tailored design method was utilized in order to avoid sampling, coverage, measurement and non-response errors.

The survey consisted of altogether 13 questions, six of which were related to board members' financial expertise/financial literacy. In order to establish a pre-understanding of the issues under study and to test the validity of the questions, a group interview related to the survey theme was conducted for a five-member water utility board. The survey questionnaire was subsequently modified and pilot tested among researcher colleagues before its implementation.

An invitation to participate in the survey was sent to 354 board members of Finnish municipal water services utilities. Since there was no pre-existing database of Finnish municipal water services enterprises and companies, much less their board members, the database for the research had to be constructed by the researchers. Municipalities with a population above 7,000 were included in the sample as it was known that enterprises and companies are the favoured organizational forms of large and mid-sized municipalities, while water services utilities in small municipalities tend to be organized as less independent municipal departments or private, user-owned cooperatives. The list thus obtained comprised 148 municipalities with a total population of 4.7 million people (89 % of the whole country's population), served by altogether 125 utilities. Based on information located on the respective municipalities' web pages, 67 utilities were identified as either a municipal enterprise or a municipal company, while the rest tended to be municipal departments. The names and contact details of the 67 utilities' board members were obtained from the municipalities' or the utilities' web pages or the National Address Service. Email addresses were available for 292 board members and postal addresses for 62 members. The survey was therefore conducted in a mixed-mode format (Dillman, 2007).

The online survey procedure consisted of the first author personally sending an email to the participants whose email address was available. The email contained an invitation to participate in the survey as well as a link to the survey webpage. The mail survey procedure correspondingly began by sending the survey instrument to those participants who had provided only their postal address. Two weeks later, a reminder email was sent or a new copy of the survey questionnaire was mailed to those who had not yet responded. Follow-up phone calls could not be made as board members' personal phone numbers are rarely publicly available in order to protect their privacy.

The responses of the online survey were received as an SPSS file and the responses of the mail survey were typed into the same file. The data was analyzed using the PASW18 statistical program. Due to the relatively small number of the sample and the non-random selection procedure, the analyses were conducted utilizing the non-parametric tests offered by the program.

4.2 Measuring financial expertise and financial literacy

4.2.1 Financial expertise

In the context of this research, board members' financial expertise was considered to entail the same characteristics as in prior studies situated in the private sector and therefore defined in terms of a respondent's education and professional expertise. A requisite education was seen to be a Master's degree in Business Economics or equivalent. Similarly to DeFond et al. (2005), we differentiate between accounting and non-accounting professional experience. Accounting financial expertise was considered to accrue from acting as accountant, auditor, chief financial officer, controller, chief accountant, researcher/lecturer in accounting, while non-accounting financial expertise was considered to accrue from acting as chief executive officer of a for-profit organization. Therefore two alternative expertise measures were developed. The measure "Financial expertise #1" was calculated for each board member as follows: appropriate education was awarded one point, professional experience (accounting and non-accounting financial expertise) two points, education together with experience three points, and no relevant education or experience zero points. "Financial expertise #2" was otherwise similar to #1 except that only accounting financial expertise was awarded two points, i.e. non-accounting expertise did not yield any points. The approach where professional expertise is given more weight is consistent with that of Jeanjean & Stolowy (2008) as well as Güner (2008).

In addition to the objective measures, board members' financial expertise was also gauged with the help of a measure involving self-perception. The respondents were asked to rank, using a seven-point Likert scale, their own expertise in accounting and finance. The scale involved two anchors: 1 = no expertise at all and 7 = very much expertise. The measure "Self-perceived Financial Expertise" is simply the ranking given by each respondent, yielding a range of 0-7. The respondents were also requested to rank their own expertise in four other areas: water services provision, human resources, construction, land use planning, and environmental issues. The other expertise areas were included because it was suspected that if asked to rank only their financial expertise respondents would tend to overrate it, whereas the provision of several fields could result in a more even distribution of expertise among the categories.

4.2.2 Financial literacy

As was noted earlier, the concept of financial literacy has no exact definition in prior literature and has mainly been measured with the help of a specifically developed test instrument. Such an approach was not considered suitable for this particular study since the water utility board members are located all over the country and their gathering in one place just for testing purposes would have been unfeasible. Therefore it was considered necessary to develop an objective measure of financial literacy defined simply as the ability to understand accounting reports. Since formal education and professional experience were already incorporated into the expertise measures, financial literacy was approximated with three other measures: participation in a short course on accounting and finance³; years served on the water utility board; and membership of other municipal enterprise boards. The measure "Financial literacy #1" was calculated by awarding one point for each of the following: at least eight years of service on the water utility board, serving or having served in at least 3 other municipal boards, and having participated in a short course dealing with accounting and finance (one point per course), yielding a range of 0-4. However, it is to some extent debatable whether or not financial literacy automatically follows from serving on boards; in fact serving on too many boards may be argued to actually hamper learning. Therefore a more strict measure, "Financial literacy #2", was calculated by awarding one point for each short course in which a respondent had participated, but no points for service on the water utility board or other municipal boards, thus yielding a range of 0-2.

As a subjective measure of financial literacy, respondents were asked to evaluate statements regarding the financial calculations devised to support their decision-making on a seven-point Likert scale with two anchors: 1 = completely disagree; 7 = completely agree. The claims to be evaluated were:

"It is easy to understand how the numbers in the calculations have been derived."

"The terminology used in connection with the calculations is understandable."

The measure "Self-perceived Financial Literacy" was calculated by adding together the ranking given to the two claims, thus yielding a range of 0-14.

Respondents were also asked whether or not in the future they would like to receive training in accounting and finance. Since willingness to receive more training cannot be directly equated with lack of financial literacy, the responses to this question were not calculated into either literacy measure but are reported as such.

4.2.3 Semi-structured interviews

In order to confirm the validity of the survey questions and gain a deeper view of the issue under study, a group interview and a personal interview were held with respectively the board and the CEO of a municipal water utility. The interviews were conducted utilizing semi-structured interview guides. The interviews, which lasted for one hour and 1.5 hours, were tape-recorded and typed verbatim afterwards.

³ Such short courses are arranged by some municipalities for newly elected board members and also by organizations such as Chamber of Commerce.

5. Research results

5.1 Survey response rate and non-response analysis

Altogether 182 responses were received for the survey, yielding a response rate of 52 percent. Half (51 %) of the respondents were over 55 years of age. The respondents' age distribution is reflected in their present employment statuses since almost a third (30 %) of them were retired. Education-wise, well over a third (38 %) had obtained a degree from a higher education institution, while 45 % had received vocational training and 17 % had only primary or secondary education. With regard to the organizational form of the utilities, 69 percent of the respondents served on the boards of municipal enterprises while 31 percent served on the boards of municipal companies. As regards political orientation, 80 percent of the respondents were members of a political party, ten percent informed they were independent and another ten percent did not wish to answer the question.

A non-response analysis comparing the descriptive statistics of the sample and the respondents indicates that females were slightly more eager to respond than males. In addition, people living in mid-sized municipalities (in the Finnish perspective) were less eager to respond than those living in the second smallest or largest municipalities. However, these differences were not statistically significant, thus suggesting the absence of non-response bias.

5.2 Financial knowledge of water utility board members

5.2.1 Financial expertise scores

The scores for Financial Expertise #1, Financial Expertise #2 and Self-perceived Financial Expertise are presented in Table 1. Regarding Financial Expertise #1, the average score for all respondents was 0.78 out of 3. Of all respondents, 64 percent did not possess financial expertise in terms of either education or professional experience (accounting or non-accounting). None had only relevant educational expertise, while 29 percent possessed only financial experience and seven percent possessed both education and experience. The differences between various groups in terms of background variables were not statistically significant for Financial Expertise #1.

Regarding Financial Expertise #2, that is, when non-accounting financial expertise was omitted, the average score for all respondents was 0.33 out of 3. Of all respondents, 87 per cent did not have any kind of financial expertise, again none had only education, six per cent had only experience and seven per cent had both education and experience. In the case of Financial Expertise #2, the organizational form is a statistically significant explanatory variable on the 10 per cent level, tentatively suggesting that municipal company board members would possess more accounting financial expertise than enterprise board members. No significant differences could be found between the averages of the other background variables.

Table 1. Objective and subjective financial expertise scores

	Financial Expertise #1 (range: 0-3)		Financial Expertise #2 (0-3)		Self-perceived Financial Expertise (0-7)	
	Mean	St.dev	Mean	St.dev	Mean	St.dev
All	0.78	1.080	0.33	0.876	4.73	1.522
Gender						
Male	0.81	1.057	0.30	0.808	4.73	1.456
Female	0.69	1.103	0.41	0.979	4.78	1.638
Age group						
26-35	0.92	1.379	0.75	1.357	4.50	1.508
36-45	0.83	1.129	0.42	0.974	5.04	1.654
46-55	0.90	1.118	0.39	0.940	4.71	1.551
56-65	0.76	1.051	0.76	0.761	4.79	1.416
66-	0.55	0.910	0.55	0.620	4.69	1.650
Size of municipality						
4,000-7,999	1.00	1.183	0.45	1.036	4.00	2.145
8,000-29,999	0.76	1.031	0.30	0.792	4.83	1.351
30,000-79,999	0.71	1.054	0.29	0.825	4.86	1.400
80,000-	0.83	1.234	0.50	1.137	4.61	1.892
Political partisanship						
Independent	1.11	1.183	0.56	1.097	4.67	1.815
Party member	0.81	1.089	0.36	0.901	4.77	1.505
Organizational form						
Enterprise BMs	0.71	1.036	0.25*	0.773	4.55**	1.582
Company BMs	0.95	1.161	0.51*	1.052	5.11**	1.315

* statistically significant difference on the 10 % level

** statistically significant difference on the 5 % level

The respondents ranked their own financial expertise above average (4.73 out of 7). In this case, organizational form was a statistically significant explanatory variable on the five percent level with municipal company board members giving themselves a higher rating than the board members of municipal enterprises. No other background variables proved significant in this respect.

In the other areas in which the respondents were asked to rank their own expertise, the lowest ranking was given to water services technology (3.6) followed, in an ascending order, by construction (3.9), land use planning (4.5), environmental issues (4.8) and human resources (5.2).

5.2.2 Financial literacy scores

Regarding Financial Literacy #1, 37 percent of all respondents received a score of zero; 41 percent a score of 1; 15 percent a score of 2; and seven percent of score of 3. Only one person received the maximum score of 4. The average score of all respondents was 0.93. The differences in means were significant in the case of age cohort and organizational form with older people and municipal company board members being more financially literate than respectively younger people and enterprise board members. The first correlation follows naturally as an older person is more likely to have served in several municipal positions than a younger person. The significant difference in the financial literacy of enterprise vs. company board

members is not due to age since the average age of the former group does not significantly differ from that of the latter.

Table 2. Objective and subjective financial literacy scores

	Financial Literacy #1 (range: 0-4)		Financial Literacy #2 (0-2)		Self-perceived Financial Literacy (0-14)	
	Mean	Stdev	Mean	Stdev	Mean	Stdev
All	0.93	0.903	0.66	0.646	10.42	2.519
Gender						
Male	1.02	0.961	0.70	0.664	10.46	2.327
Female	0.81	0.799	0.60	0.620	10.31	2.826
Age group						
26-35	0.33***	0.492	0.33	2.137	9.25	2.137
36-45	0.79***	0.658	0.58	1.621	11.09	1.621
46-55	0.73***	0.660	0.62	2.907	10.10	2.907
56-65	1.03***	0.958	0.65	2.223	10.73	2.223
66-	1.45***	1.183	0.93	2.972	10.24	2.972
Size of municipality						
4,000-7,999	1.00	1.00	0.64	0.674	10.82	2.892
8,000-29,999	0.98	0.950	0.61	0.641	10.40	2.730
30,000-79,999	0.87	0.900	0.68	0.673	10.17	2.149
80,000-	0.97	0.752	0.77	0.617	10.45	2.406
Partisanship						
Independent	0.83	0.924	0.56	0.616	9.83	2.854
Party member	0.94	0.893	0.67	0.651	10.39	2.361
Organizational form						
Enterprise BMs	0.75***	0.796	0.58	0.601	9.98	2.065***
Company BMs	1.28***	0.998	0.76	0.719	11.18	2.644***

*** statistically significant difference on the 1 % level

As concerns Financial Literacy #2, 43 percent of all respondents had not participated in a short course, 25 percent had participated in a course arranged by the municipality, 19 percent in a course arranged by another organization and 13 percent in both types of courses. The average score of all respondents was 0.66 out of 2. There were no significant differences in the average scores of the various groups.

With regard to Self-perceived Financial Literacy, the average of all respondents was 10.41 out of 14, indicating that respondents perceive themselves as capable of understanding financial and accounting calculations and terminology. Company board members' score was significantly higher than that of enterprise board members.

When asked whether or not they wished to receive additional training in finance and accounting, 65 percent answered affirmatively.

5.3 Board members' reflections on financial knowledge

The survey results show a considerable difference between board members' measured and perceived levels of financial knowledge. These differences were kept in mind when analyzing the qualitative research material since it was considered possible that this phenomenon might be related to board members' conceptions of what financial knowledge is and how it may be accumulated.

The following quote raises four issues that were characteristic of several board members' responses:

"What the board does is approve the budget and sign the financial statement, they're the basic numbers [that are important], it's pretty much what's in the income statement, balance sheet and cash flow statement. But when you think that these operations are quite stable, it's basically the same amounts of water that flow and what you can do is charge a little bit more and make minor adjustments when things become more expensive. Even salaries go up because of decisions made by others, municipal collective bargaining contracts, so what the board actually decides are fairly small things. But in terms of [financial statements] becoming understandable, it is the doing that is important. And it's good that the entire board does not change but people are for four years and then perhaps for another four years, then you learn to see that okay, investments go here and something else goes there, and you understand them." (Chair of the board, no financial expertise)

The first issue in which there was agreement among board members was that in terms of the four main tasks outlined for municipal enterprise boards in the Local Government Act, the most important one requiring financial knowledge seemed to relate to the budget and its comparison to actualized figures, while investments were mentioned as a secondary but nonetheless important issue:

"Once a year we look at the cash flow statement, find out how it's going and make the budget. In every meeting we look at sales, how much we've taken wastewater in and how much we've produced drinking water. So we monitor that and the cost structure, have those thoughts that we had when making the budget, how have they turned out, hiring substitutes, purchases, whatever these is. We monitor them all the time, in every meeting. I think they are the most important things throughout the year because they make up the balance sheet [sic]." (Board member #3, no financial expertise)

"It's probably those figures that we follow, comparing with the budget...But in addition I've found investments important, sort of as renovation percentages. In other words, if we think that the work of the board is strategic management, then we follow how many meters, as percent per year, are renovated...So it should be that charges are not kept too low, or the municipality is not paid too much as compensation for invested capital, at the expense of maintaining infrastructure, and this kind of thing is not visible in either income statement or balance sheet." (Chair of the Board)

Secondly, financial knowledge was mainly understood in terms of financial literacy, that is, financial statement information becoming understandable:

“The CEO always brings these basic figures up in our meetings; they are easy to follow, at least for me, fairly easy. Of course every now and then I wonder what some [numbers] are based on but that’s natural, it’s not always possible to go through everything, but I understand the whole of it fairly well.” (Board member #2, educated in Business Economics)

“When you think that this is my first term [in the board], if we consider these [finance and accounting] issues, I have to say that they’ve been fairly easy for me to understand although I don’t know anything about water services. But when [the CEO] provides the financial summary every month, it doesn’t take long before you start understanding things.” (Board member #4, no financial expertise)

Thirdly, financial knowledge was seen to accumulate from a number of professional or non-professional tasks in which board members have come across financial figures and accounting concepts, and not only those included in the formal definition of accounting and non-accounting expertise:

“ I’ve been in many different duties with budgetary and other responsibilities during my lifetime and I’ve grown used to following variable costs and balance sheets and budgets and stuff like that, they are in no way unfamiliar to me.” (Board member #5, no financial expertise)

“Myself, I’ve encountered these things in the context of being involved in various associations. As a teenager I did some bookkeeping for my Scout troop, I learned the basic things then, I’ve never received any formal accounting training. It’s just that when you’ve done things, you’ve learned, and then you can draw from that.” (Chair of the board, no financial expertise)

“I would just add that quite a few [board members] sit in many places, committees or boards. The same kind of figures just change but it’s the same way that [they are looked at]. That’s how they are probably familiar to a lot of people, from many different contexts.” (Board member #2, no financial expertise)

Fourthly, boards are considered to have only a small influence on the utilities’ finances since revenues from water services provision are more or less stable and the majority of costs are perceived as being determined by factors external to the utility. In addition, it was considered that the main responsibility for the financial issues associated with water services lies with the utility management:

“Regarding your first question if board members should be water services professionals, I would say no. Because professionals have been chosen to the positions of those who have officials’ responsibility for their actions, they follow what happens in the world and it is their duty to bring up what needs be developed and how much it will cost, can we afford it and so forth. Then the board will look into the matter and decide on the direction.” (Board member #3, no financial expertise)

“The most important thing is the executive management and that the board members can trust what the management presents.” (Party member, non-accounting financial expert)

Especially the CEO was mentioned as a key person in terms of board members receiving and understanding financial and accounting information:

“The responsibility of the CEO, at least how I feel it, is to present the issues and how he brings up the financial [figures], I think he has the key position there, in principle you have to trust him. Particularly on the cost side, investments are divided on a long stretch, so how they go and the compensation to the municipality, turnover and so forth, you really have to trust the CEO in these...Pretty much I get the feeling that you have to surrender yourself to the CEO. You can’t, and there’s probably no need, to question all the numbers that he presents, or even his policy definitions in some small matters; it’s more like we stand behind the CEO in those things.” (Board member #1, no financial expertise)

“I agree with [Board member #1] here, the CEO has the key role, he distributes actually all of the information that we need and we need to trust that and what he tells about all the negotiations in which he’s been and how they affect everything.” (Board member #2, no financial expertise)

In addition to board members feeling that their role in decision-making is minor and therefore does not require much financial expertise, it would also seem that utility management’s expectations from the board are fairly low. This sentiment is conveyed in some board members’ responses:

“I feel that issues are represented to the board “too well-grounded”. Maybe there’s something good in it but it’s difficult to see the other side (which there always is) when one version is presented as a perfect option.” (Party member, no financial expertise)

“ I think the CEO does not need to make a draft resolution for each issue. This way we would get the opportunity to discuss the issues on the agenda, which would encourage the more quite ones to participate.” (Party member, non-accounting financial expert)

Similar notions emerged when the CEO of the case water utility was asked which kind of knowledge would be useful for board members to possess:

“Well, let’s say the basic things about finance, that they can tell the difference between costs and revenues. I can’t really say more, they don’t have to be professionals in order to be and act in a board like this. When you’re equipped with some common sense you’ll do fine. It’s more important to understand the role of the board, that it’s not operative management but looking at the bigger picture and concentrating on that and taking care that the big picture is more or less clear.”

In contrast to the many things in which board members shared similar views, the question of whether or not to appoint board members on the basis of financial or other expertise turned out to raise the most disagreement. The proponents of the current system maintained that it functions well and suggested that appointing water services professionals might even lead to disputes within the boards:

“I tend to shun the idea that different sectors would be taken over by professionals of that field. Then you get a situation that the debates which are now in the newspapers, take for example the

wastewater project in [name of municipality] or this drinking water thing [artificial groundwater production considered by some municipalities] , then we have professionals giving statements that are complete opposites. So how would this system work then, if professionals have completely different views?" (Board member #3, no financial expertise)

However, there were also several respondents who thought that the present system of appointing politicians prevents the boards from working efficiently:

"The motivation and know-how of board members elected on party-political principles are not often adequate for board work. They do not bring added value or help or support the CEO in decision-making. The [political] parties divide board seats based on status and exercise of power." (Non-party member, accounting financial expert)

Although opinions such as the above were especially prevalent among non-party members, some of those elected on a political mandate also advocated the selection of experts on boards:

"The members of municipal company boards should be selected based on their expertise, not merely on a party-political basis. The members should represent different fields of expertise. Now the board seats are 'prize seats', which party members occupy for years." (Party member, accounting financial expert)

The different fields of expertise required of water utility board members were suggested to include, besides financial knowledge, expertise in water services and environmental issues.

The above quotes illustrate the divided views on the nature and significance of financial knowledge required of municipal board members. Those who are satisfied with the current system, where board members are selected on a political basis and the utility management is the key actor in financial issues, do not feel that board members should be financially very knowledgeable. On the other hand, critics of the current system view it as political parties' internal incentive mechanism and advocate the appointment of experts on boards in order to make board work more efficient.

6. Conclusions

The purpose of this paper was to discuss the nature and significance of financial knowledge among the board members of municipal companies and enterprises. Similarly to extant regulations pertaining to commercial organizations, financial knowledge was considered consist of financial expertise and financial literacy. Two objective measures and one self-perceived measure were developed for both types of financial knowledge. The survey results show that 80 per cent of the board members were affiliated to a political party, meaning that appointments are made on a political basis despite legislation allowing otherwise. The results also indicate that financial expertise is rare among the board members of municipal water companies and enterprises with a notable majority of the respondents having neither appropriate

education nor professional experience and the average expertise scores being very low. As hypothesized, municipal company board members seem to possess significantly more accounting financial expertise than the board members of municipal enterprises. Regarding the other four expertise areas associated with water utility operations, respondents ranked their expertise in water services provision lowest. Financial literacy lacks from a third to almost a half of the respondents, depending on the measure. The respondents' self-perceived financial expertise and financial literacy scores, on the other hand, were very high, with municipal company board members' scores being significantly higher than those of enterprise board members. However, 65 per cent of the respondents indicated their willingness to receive more training in accounting and finance.

Findings from the qualitative research material suggest that board members view financial knowledge primarily as financial literacy, that is, the capability to understand financial statements and budget numbers. They considered this kind of knowledge to incur from a variety of professional and non-professional tasks where people are confronted with accounting concepts and figures, rather than from relevant education or additional training. These views may be considered as one explanation to the considerable differences between the respondents' measured and perceived levels of financial knowledge.

The board members also indicated that the duties of municipal board members in terms of finance and accounting are rather insignificant in comparison to the work done by utility management. The CEO was especially mentioned as the key person in terms of the board members' having access to and understanding financial information; therefore trusting the CEO was considered constitute a fundamental element of board work. This notion offers support to Collier's (2005) suggestion that lack of accounting knowledge leads board members to rely heavily on the information provided by the management, which in turn might hamper appropriate corporate governance.

The appointment of municipal board members based on financial or other expertise divided views. On the one hand, several respondents, including those who were themselves politically elected, were critical of the present system and were in favour of appointing board members based on their financial and substance expertise in order to improve board work. On the other hand, political appointments were perceived as the appropriate way to exercise democratic control and some even suggested that appointing experts might lead to conflicts of opinion within the boards. However, these views constituted a minority in the responses obtained.

The results of the study lead one to question the significance of municipal company and enterprise boards. If the overwhelming majority of board members lack financial expertise and almost half are financially illiterate, how are they capable of overseeing that funds are used in the most appropriate way in order to maximize the quality of service provided to the citizens?

In terms of the study's limitations, since very little prior research on the topic has been conducted, it is necessarily exploratory in nature. More research is suggested on how to measure financial knowledge in various public sector contexts as well as on how board members perceive the importance of such knowledge.

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