

Boards of directors and performance in autonomous public sector entities

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ABSTRACT

The adoption of business-like boards of directors in the public sector has to be evaluated in terms of financial and non-financial outcomes. This paper investigates, using a structural equation model, the relationship of certain board characteristics with the performance of English NHS foundation trusts. Larger and more independent boards do not harm performance. Having a woman chairing the board is related to better service quality. Boards seem to be more concerned about service quality issues than about financial problems.

IMPACT

A stakeholder approach when adopting boards of directors in public sector entities does not harm performance. Our results provide a compelling rationale for the adoption of corporate governance mechanisms in the public sector and for improving the representativeness and status of women in the top positions of the governing bodies of public sector entities. Financial performance and service quality are not mutually exclusive in the healthcare sector. The manuscript provides insights to those public sector entities that have adopted, or are thinking about adopting, boards of directors to improve their governance and management.

Keywords: Board of directors; corporate governance; gender issues; NHS foundation trusts; performance; public sector

Introduction

The adoption of corporate governance mechanisms in the public sector requires the considerable diversity of objectives and management structures in this sector to be taken into account (Hodges et al., 1996). Boards of directors of public entities are subject to the achievement of wider and more diverse organizational goals than private corporations and both financial and non-financial performance need to be considered. However, the definition of output measures or result-oriented control mechanisms is problematic in the public sector. Therefore, assessing the achievements of public sector boards faces the challenge of defining performance indicators that properly capture organizational performance.

Public entities' boards of directors have largely been assessed from an accountability perspective (see, for example, Ellwood & Garcia-Lacalle, 2016; Garcia-Torea et al., 2016; Ntim et al., 2017). However, the performance perspective is much less developed, which is most likely due to the difficulties of assessing performance in this sector. This paper provides empirical evidence about the relationship between boards of directors' characteristics and the performance of public sector entities. Performance is assessed in terms of financial performance and service quality. Our research question is: How are the characteristics of the boards of directors related to organizational performance in a public sector setting? Our answer to this question will hopefully guide the adoption of boards of directors in the public sector.

Our focus is on English NHS foundation trusts (FTs). FTs provide over half of all NHS hospital, mental health and ambulance services in England. They are public benefit corporations, created to devolve decision-making on healthcare issues from central government to local communities and remain within the performance inspection

system of the NHS. FT boards must ‘comply or explain’, following the recommendations of a code of corporate governance, ‘the Code’, elaborated by Monitor, the independent regulator. The Code (Monitor, 2010) brings ‘together the best practice of public and private sector corporate governance’ (p. 4), and adopts the ‘comply-or-explain’ approach because it ‘has been in operation for at least the last fifteen years in the private sector and the flexibility it offers companies has been widely welcomed by boards’ (p. 7). Therefore, FTs provide a unique context to study corporate governance mechanisms in the public sector. Our findings provide insights about the usefulness of the recommendations about the composition and functioning of public sector boards of directors. Policy-makers in other countries or sectors can learn from the lessons provided by the way boards of directors have been implemented, operate, and contribute to performance achievements in NHS FTs.

The corporate governance and performance assessment context in the NHS foundation trusts

The NHS provides healthcare services free at the point of use for all UK residents and it is funded directly from taxation. The FTs authorized at the end of the 2012/13 financial year had almost 600,000 staff full-time equivalents (Monitor, 2013). The governance structure of the FTs involves members, governors and the board of directors (see Ellwood & Garcia-Lacalle, 2015). The membership, mainly drawn from the local community (the public, patients and staff) and stakeholder organizations (such as universities and city councils) nominate and elect governors. The board of governors appoints the chair and non-executive directors who, together, appoint the chief

executive. These members of the board appoint the rest of the executive members of the board of directors.

In corporate governance regimes, the board takes the strategic decisions, is held accountable for the entity's performance, and represents the interests of the diverse stakeholders of a public (healthcare) institution. The Code indicates that FTs are 'strongly encouraged to take full account of the best practice provisions described in this Code' (Monitor, 2010, p. 7). This instruction effectively made provisions more compulsory than voluntary (Ellwood & Garcia-Lacalle, 2016). Monitor's Code provides some recommendations about the composition and functioning of the board of directors. One key aspect emphasized in the Code is 'the unitary nature of the board of directors and the collective responsibility for all aspects of the performance of the foundation trust' (Monitor, 2010, p. 5).

During the 2012/13 financial year, Monitor evaluated the performance of the FTs using its Compliance Framework (CF). The CF was based on two core ratings: financial risk and governance risk, which mainly referred to service quality. If a FT consistently failed to meet national standards of care or was at financial risk, Monitor increased its level of scrutiny and required the FT to prepare a plan to return to compliance. If problems continued, Monitor could use its statutory powers of intervention, which included the possibility of removing all the members of the board of directors and appointing interim directors (Monitor, 2012).

Under the CF, Monitor assessed the financial risk rating (FRR) using a five-level scale ('1' highest risk and '5' lowest risk), which took into account different financial metrics, efficiency and liquidity, and the level of achievement of the FTs' annual plan. Service quality was measured using the governance risk rating (GRR), which included areas such as patient safety, clinical effectiveness, patient experience and compliance

with the delivery of mandatory services. The monitoring and assessment process was conducted by Monitor on a quarterly basis but, depending on the assessment, it could be changed to six-monthly or monthly monitoring. On 1 April 2016, Monitor became part of NHS Improvement, which is now responsible for overseeing FTs.

Theoretical framework and hypotheses

Theoretical framework

The stakeholder theory (Freeman, 1984), provides a theoretical explanation for the implementation and success of corporate governance mechanisms in the public and non-profit sectors (see, for example, Gazley et al., 2010; Ellwood & Garcia-Lacalle, 2015) because, in the absence of shareholders, other stakeholders influence managerial decisions. A fundamental thesis of stakeholder-based arguments is that organizations should be managed in the interests of all their constituents. Therefore, the role of the board is to understand and represent all stakeholders and to manage the complex trade-offs between them (Mannion et al., 2015). Gazley et al. (2010) argue that the board can be a tool to balance the diverse goals of stakeholders—so its composition is important to secure the different stakeholders' interests. In the public sector, corporate governance involves the inclusion and distribution of power between different stakeholders (Ryan & Ng, 2000). The way the board of directors is formed in FTs, which is strongly influenced by the board of governors and the recommendation of a significant presence of independent non-executive directors (at least 50%), as shown below, allows an appropriate representation of key stakeholders. The stakeholder approach could have consequences on the orientation of the boards towards their main objectives. Key stakeholders will be most likely concerned about service quality issues. However, in the actual context, the sustainability of public services not only depends on the good service

quality of public sector entities, but also requires using taxpayers' money efficiently. Therefore it is important to know how the characteristics of the boards of directors are related to these two performance dimensions.

Ellwood and Garcia-Lacalle (2015) use upper echelon theory (Hambrick & Mason, 1984) to explain the importance of the role of chairs, as well as chief executive officers (CEOs), on boards. This theory argues that those who hold the most important positions in an organization have a critical influence on its processes and outcomes. Chairpersons have a significant influence on a board because they shape the agenda and priorities of the board, determine the quality and quantity of the information provided to directors, and facilitate communication among board members (Balsam et al., 2016). Withers and Fitza (2017) found that board chair characteristics explained a significant proportion of the variance in a firm's performance, even larger than the variance explained by CEO characteristics.

Hypotheses

This section develops the hypotheses about the relationship between the characteristics of the boards of directors of the FTs and their performance, based on the existing literature, the theories previously presented and Monitor's Code. Our focus was on key board attributes: size, independence, diligence and gender diversity. These attributes have been widely analysed in the private sector, but are understudied in the public sector. Personal attributes of board members (for example education, background or age) are beyond the scope of this study. A hypothesis about the relationship between financial and non-financial performance (service quality) is also proposed, as more empirical evidence about the relationship between these two performance dimensions is needed in the public sector.

Size: Stakeholder theory points to a positive link between board size and a firm's performance. Given the range and diversity of roles required in the boards of NHS organizations, they need to be of sufficient size (Mannion et al., 2015). Larger boards may be better able to protect the interests of different stakeholder groups (Gaur et al., 2015), as more diverse interests are represented in the decision-making processes, broadening the scope of the board beyond financial performance. In addition, larger boards have a positive influence on performance because they possess greater collective information (Guest, 2009). However, larger boards may have co-ordination and communication problems. The right number of directors is a trade-off between the benefits of having sufficient competencies represented and the cost of having 'free-riders' on a board (Bennedsen et al., 2008).

Very 'large' boards are discouraged by the Code: 'the board should not be so large as to be unwieldy' (Monitor, 2010, p.12). However, the Code does not set a range or optimal board size, which suggests that the regulator is aware of the need for a board to have members representing the full range of stakeholders. In the NHS context, Kirkpatrick et al. (2017) found that larger boards have a positive influence on the financial performance, whereas size does not have a significant influence on the quality dimension. Ellwood and Garcia-Lacalle (2015) did not find a significant relationship between board size and these two performance dimensions. Given the stakeholder approach of FT boards and previous findings in the FTs context, our first hypothesis is:

H1: Board size does not harm the performance of FTs.

Independence: Board independence reflects the proportion of independent directors of the board compared to the total number of members. According to stakeholder theory, independent members can reflect better the varying interests of the different groups of

the community. In addition, a high proportion of independent non-executive directors can provide better monitoring, as they are usually more efficient in controlling external contingencies (Fernández-Gago et al., 2016). It can also reflect better governance because independent directors have an interest in protecting their own reputation and avoiding potential financial losses that may result from litigation (Young, 2000). Independent directors have closer relations with stakeholders, have a better understanding of their expectations and are more likely to meet their demands.

For the FTs, the Code indicates that at least half of the members, excluding the chair, should be independent. Previous research in NHS trusts shows that non-executive and executive directors have different roles and types of interaction in board meetings (Sheaff et al., 2015). Executive directors intervene more often to discuss concrete, practical aspects of service provision and management, while non-executive directors give more weight to broader service outcomes (for example, patient feedback and complaints), relationships with stakeholders, clinical ethics and clinical outcomes. However, empirical NHS studies (Ellwood & Garcia-Lacalle, 2015; Kirkpatrick et al., 2017) have not found any significant relationships between board independence and performance. Therefore, given the stakeholder approach of FT boards and previous findings in the FTs context, our second hypothesis is:

H2: Board independence does not damage FT performance.

Diligence: The diligence of the members of a board includes the number of official board meetings and related activities, such as preparing those meetings. However, due to the difficulties of measuring these activities, the use of the number of meetings as a proxy for diligence is generally accepted (Ntim et al., 2017). Carcello et al. (2002) find that a high frequency of board meetings could indicate a higher level of control.

However, Vafeas (1999) and Adams and Mehran (2012) find a negative relationship between the number of board meetings and financial performance. The explanation is that the relation runs from poor performance to more frequent board activity and not vice versa, i.e. frequent board meetings are one way in which the board responds to difficulties. The Code does not recommend a minimum number of meetings per year but the board of directors should meet sufficiently regularly to discharge its duties effectively. From a stakeholder perspective, FT boards will act more diligently to problems when their members consider that their stakeholders' interests are in danger. Therefore, FT boards will act more diligently to address quality than financial issues. Therefore, our third hypothesis is:

H3: The number of meetings is negatively related to the performance of FTs.

Gender diversity: Previous research has adopted different approaches, and the most common conclusion is that female presence on a board has a positive influence on firm value and performance (Post & Byron, 2015; Byron & Post, 2016; Garcia-Torea et al., 2016). According to Johnston (2019), the lack of representation of women has a negative impact on public sector performance. Women are less hierarchical, more prone to facilitate communication and the participation of different stakeholders, and tend to give more importance to social aspects (Ellwood & Garcia-Lacalle, 2015; Post & Byron; 2015). However, the literature has shown that the mere presence of female board members may not be sufficient, and that a 'critical mass' of women is needed to be an influential factor (Konrad et al., 2008; Torchia et al., 2011). From a stakeholder perspective, women should be adequately represented on boards, regardless of their effect on performance.

The Code does not make recommendations about female presence on boards. However, the NHS embraced the target of 50% women on its boards by 2020, and the proportion of female-held positions on boards averaged almost 45% that year (Sealy, 2020). NHS FTs also have a significant female presence on the two most prominent board positions, chair and CEO, with a significant increase during the five-year period from 2012/13 to 2017/18 (Ellwood et al., 2020).

The Code gives a prominent role to the chair, who ‘is responsible for leadership of the board of directors and the board of governors, ensuring their effectiveness and setting their agenda’ (Monitor, 2010, p. 11). Furthermore, on occasions where a decision is tied, the chair has a casting vote. Ellwood and Garcia-Lacalle (2015) find that having a female chair or a female CEO results in significant reductions in negative social outcomes (costs associated with medical errors) without harming financial management. Therefore our fourth hypothesis is:

H4: Female presence on boards and, particularly, a female chair, are positively related to the performance of FTs.

Financial performance–service quality relationship: The empirical evidence about this relationship is mixed. A greater focus on service quality may harm financial performance if there is a possible trade-off between these dimensions (Friesner & Roseman, 2005). However, some studies have found a positive relationship between economic and clinical performance (Clement et al., 2008; Dong, 2015). McKay and Deily (2008) suggest that hospital programmes focused on reducing inefficiencies are unlikely to be associated with worse hospital clinical quality. Whereas key stakeholders may be more concerned about service quality, the board must also achieve the financial targets. Therefore our fifth hypothesis is:

H5: Service quality and financial performance are positively related in the healthcare sector.

Data, model and research design

Sample, data collection and methodology

Analyses were conducted for 2012/13, which was the last financial year in which the CF was used. In 2013/14, the Risk Assessment Framework was introduced, which was replaced by the Single Oversight Framework in 2016. The CF quality rating scale provides a better service quality discrimination among FTs than the two subsequent quality ratings, which is why we selected 2012/13.

Our sample consisted of 130 FTs (90% of the total FT population in 2012/13) with complete data available. The data used for the analyses were obtained from FTs' annual reports and financial statements, available from either Monitor's or the FTs' websites.

Joint analysis of financial and quality performance requires the use of an adequate statistical approach. Structural equation model partial least squares (SEM-PLS, with SmartPLS 2.0 software) was used for the analysis. One main advantage of this technique for public sector studies is that it allows the inclusion of more than one dependent variable in the same model. While other approaches to SEM (such as covariance-based methods) have strong sample-size requirements, PLS restrictions are generally much smaller. The SEM-PLS model allowed us to include two dependent variables (the two performance dimensions) in the same model; to analyse how board characteristics and control variables relate to both of them; and test whether the two

performance dimensions are interrelated. Verbeeten (2008) used SEM-PLS to analyse the performance of public sector entities.

Measurement of variables

Dependent variables: Two constructs were created with the quarterly ratings to measure the two dependent variables, one for financial performance (*FP*), made up of the four FRR scores, and one for service quality (*SQ*), made up of the four GRR scores. Therefore, an annual measure was obtained for each of the two FT performance dimensions. This way of measuring performance respects the monitoring and assessment process used by Monitor and allowed us to better observe performance in these two different dimensions. The use of constructs was better than only using the fourth quarterly ratings or calculating an average rating for the year. *FP* was a construct made up by the FRRs for the four quarters (5 = best performance to 1 = lowest performance). *SQ* was a construct made up by the GRRs for the four quarters. For calculations, the colours of the GRR scale were transformed into numbers: green (best performance) = 4; amber–green = 3; amber–red = 2; and red (lowest performance) = 1. The higher the *FP* and *SQ* scores, the better that FT's performance. The definitions and main descriptive statistics of the variables included in the analyses are presented in Table 1.

Table 1 about here

Board-related variables (size, independence, diligence and gender diversity): *BDsize* captured the number of directors in the board, including the chair, and it was introduced into the analyses in its natural log form. *BDindep* represented the proportion of non-

executive directors over the total number of directors (chair excluded). As can be seen in Table 1, the variance in the values of *BDindep* was low. *BDdilig* was the number of meetings of the board in the financial year. These three variables were single-item indicators, whose use is not restricted in PLS (Hair et al., 2012).

In line with the ‘critical mass’ argument and the upper echelon theory, a study of gender diversity should consider several characteristics of female presence on boards: proportion of women on boards, total number of women and their positions and roles on boards. The dummy variable *Fchair* captured the gender of the chair, taking the value ‘1’ if the chair was a woman and ‘0’ otherwise. This gender attribute was included due to the special role that chairs play on boards, as argued by the upper echelon theory and the prominent role given to chairs by the Code. The other female presence indicators distinguished between executive and non-executive roles. In this way, we translated the different roles that executive and non-executive directors have on boards to the gender diversity issue. *BDexecWom* was a construct that captures gender diversity among executive directors, both in absolute and relative terms, and was made up of three variables: *Fexecdir*, *PercFexecdir* and *Fchiefexec*. *Fexecdir* captures the number of female executive directors. *PercFexecdir* captured the proportion of women executive directors over the total number of executive directors. The dummy variable *Fchiefexec* took the value ‘1’ when the chief executive was a woman because the CEO is the highest executive position. Similarly, for the non-executive role, *BDnonexecWom* was a construct made up of two variables, *Fnonexecdir* (number of female non-executive directors) and *PercFnonexecdir* (proportion of women non-executive directors over the total number of non-executive directors). The way these two constructs were created allowed us to take into account both the number and proportion of women, in line with the idea that a ‘critical mass’ of women is needed to be a differential factor.

Control variables: We included three control variables in the model—size, location, and complexity of the hospital—to account for the possible impact of organizational aspects on performance in agreement with previous literature (see for example Kirkpatrick et al., 2017; Ellwood & Garcia-Lacalle, 2015; Garcia-Lacalle et al., 2020). They were included as single-item variables for simplicity’s sake. *Size* was the book value of total assets (logged) at the end of the year. *Location* was a dummy variable: FTs located in London and the south east coast of England were given the value of 1 because these areas are characterized by higher operational costs (DoH, 2012) and have a greater concentration of hospitals. *Complexity* was defined as the proportion of the book value of fixed assets over the book value of total assets and captures greater hospital complexity and a lower degree of strategic flexibility (Newton, 2015).

Model

Figure 1 is a graphic representation of the variables and constructs in the model and the relationships tested. Ellipses represent ‘constructs’ made up of several items. Rectangles represent single-item constructs. *FP* and *SQ*, the dependent variables, are the constructs made up of the FRR (financial performance) and GRR (service quality) scores for the 4 quarters, respectively. Three variations were considered for the structural model: a model that does not analyse the *FP-SQ* relationship (Model 1); one that studies the influence of financial performance on quality (Model 2); and another that studies the influence of quality on financial performance (Model 3). The relationships between financial performance and quality were analysed independently because the results in the literature are inconclusive about how these two variables are related.

[Figure 1 about here]

Results

Descriptive analysis

The 130 FTs we analysed managed assets of £26 billion, with an average of £200 million per FT (see Table 1). Almost 20% of the FTs operated in the relatively small geographical areas of London and the south east coast of England, which suggests a high level of competition between them. Generally, FTs had an acceptable financial performance, with average quarterly FRRs of more than 3 and good GRRs (an average of 3, which is equivalent to an amber–green rating). However, the relatively high standard deviations of FRRs and GRRs in Table 1 indicate that some FTs were operating in a risky financial and quality context. For FT boards, the figures in Table 1 show that, on average, they had 12 members, ranging from nine to 17 members. On average, 49% of board members were independent. Boards met, on average, once a month. Women occupied almost 40% of board positions. Female presence was higher among executive directors (45%) than non-executive ones (32%). Women were more frequently chief executives (41%) than chairs (25%). The low standard deviations for some of the board-related variables show that, in general terms, boards were quite homogeneous in their size and independence, although some boards differed significantly from the average values, as shown above. FTs showed great diversity in the number of meetings held during the year (five to 25) and in the percentage of female executive and non-executive directors (14% to 86%/0 to 80%).

Results of the structural model

The PLS analysis was developed in two independent stages: the measurement model analysis and the structural model analysis. The measurement model assessment involved

the examination of the adequacy of the measurement scales. We estimated the measurement model with PLS in order to analyse internal consistency. This process involved three stages (Roldán & Sánchez-Franco, 2012). First, the uni-dimensionality of the indicators was evaluated to determine whether each indicator was highly correlated with the characteristic that it was meant to capture. Second, reliability was assessed in terms of whether or not the set of variables was consistent with what we wanted to measure. Third, validity was assessed by using convergent validity and discriminant validity. Convergent validity evaluates the degree to which the indicators represent the construct. Discriminant validity indicates whether each construct in the model is significantly different from the others.

Having confirmed the adequacy of the measurement scales for the constructs included in the model, the structural model was estimated¹. The analysis of the structural model focused on testing the causal paths between the constructs (and variables) that compose the theoretical model (see Table 2).

[Table 2 about here]

A bootstrapping procedure with 5000 subsamples was used to assess the significance of the path coefficients. As regards R^2 , Model 1 explains 34% of the financial performance and 27% of service quality. R^2 significantly increased for service quality (Model 2) and for financial performance (Model 3) when the relationships between them were included. All the control variables considered were significant. Size and complexity related to financial performance. Location and complexity related to quality performance.

¹ The results of the measurement model are not included in the paper because of space limits, but are available from the authors upon request.

The structural model showed that there were no significant relationships between the size and independence of the board with the performance of the FTs. Therefore our first and second hypotheses were supported—larger boards and greater board independence do not harm performance. The similarity of these two characteristics across boards, shown by the low standard deviation of these variables (Table 1), might have affected these results. The relationship between board diligence and service quality was negative and significant at the 10% level in Model 1 and at the 5% level for Models 2 and 3, partly supporting H3. No significant relationship was found between board diligence and financial performance. Finally, the study of the relationship between gender diversity and performance partly confirmed H4. The constructs measuring the ‘critical mass’ argument were not significant, but the female chair variable was. This confirms that, in a context of relatively high female presence on boards (both in the executive and non-executive roles), only prominent board positions influence performance (Ellwood & Garcia-Lacalle, 2015). More specifically, having a female chair was significantly and positively related to quality, whereas no significant relationship with financial performance was found.

Finally, it is important to highlight that the results demonstrated a strong positive relationship between financial performance and service quality—improvements in one of the dimensions resulting in improvements in the other—supporting H5. The most influential ‘independent’ variable in Model 2 was *FP* (β path coefficient = 0.633) and its inclusion increased R^2 from 0.268 in Model 1 to 0.533. In Model 3, the most influential ‘independent’ variable was *SQ* (β path coefficient = 0.573) increasing the R^2 from 0.341 in Model 1 to 0.577.

Discussion

Our results suggest that complying with Monitor’s recommendations is important for FTs, more so in terms of size and independence, than in diligence and the presence of women. FT boards are large which means they can represent a large number of different stakeholders. The size and independence of boards do not harm performance. From a stakeholder approach, these results suggest that:

- Enlarging the board, which may allow the inclusion of more stakeholders, does not harm performance. (Future research should explore whether there is an optimal size, or a range of sizes, for not harming performance in public sector boards.)
- A greater presence of non-executive directors, who are on the board representing key stakeholders, does not harm performance either. The presence of non-executive directors can be perceived as important for the well-being of the local community, which is translated into high levels of commitment.

In terms of diligence, Monitor does not set a specific number of board meetings, but FT boards meet quite frequently—on average, almost once per month. This great ‘diligence’ may be due to the wide organizational goals and the stakeholder orientation of FTs. As regards the relationship between diligence and organizational performance, board diligence was negatively related to service quality. This result is in line with the argument that frequent board meetings are a response to difficulties. This result also supports the idea that FT boards are more focused on quality than on financial aspects because there is no statistically significant relationship between board diligence and financial performance—despite evidence that some FTs are financially distressed. Consistently with stakeholder theory, boards seem to react more ‘diligently’ when quality difficulties arise than when financial difficulties arise. In this context, service

quality is supposed to be more important than financial performance for most stakeholders and the wider community.

The boards of directors of NHS FTs are characterized by a relatively high female presence. Women are represented in the boards and they occupy the most prominent positions, CEO and chair, in an important number of cases. The chair is the position least frequently occupied by women in FTs, around 25%. In this context, variations in gender diversity are not related to performance, except when a woman chairs the board, which is positively related to service quality. The lack of significance of the other constructs measuring gender diversity may be due to the fact that a 'critical mass' of women exists across FTs' boards. As female presence is a common feature in these organizations, it is not helpful in explaining the differences in performance. The positive relationship we found between female chairs and service quality is in line with Byron and Post (2016) who indicate that social performance aligns more closely with the qualities women bring to boards. Upper echelon theory helps us to explain this result because of the influence that chairs have on boards. In this sense, our results are in line with studies of gender diversity in public sector management that have found that women take a different approach to public sector management (Ellwood & Garcia-Lacalle, 2015; Post & Byron; 2015). Women's less hierarchical, more open and participatory approach to public sector management, along with differences in ethical attitudes, values and interests, improve service quality without harming financial performance. The lack of a significant relationship between the characteristics of the boards of directors and financial performance may be due to the greater focus that FT boards are expected to have on service quality, which, as stated above, is consistent with stakeholder theory.

There was a positive and statistically significant relationship between financial and non-financial performance, which is consistent with findings for the private sector (Garcia-Torea et al., 2016) indicating that boards that are effective in protecting shareholder value are also effective in responding to the interests of stakeholders. In the healthcare sector, focusing on financial issues may help to improve procedures and reduce negative outcomes, such as readmissions or hospital infections, which are very costly, i.e. there will be a positive effect on quality.

This paper makes several contributions to research and practice in corporate governance in the public sector. First, the methodology has proved to be useful to properly analyse the relationships between boards of directors' characteristics, control variables and different performance dimensions. Second, larger and more independent boards do not result in a worse performance and allow a better stakeholder representation which may help to align organizational and stakeholders' interests and goals. Third, our results confirm that female chairs promote service quality performance to a greater extent, which provides a compelling rationale for continuing to work at improving the representativeness and status of women in the top positions of the governing bodies of public sector entities. Fourth, the positive relationship between financial performance and service quality demonstrates that boards focusing on financial aspects help to enhance quality ratings, and vice versa.

The British experience of having boards of directors in public sector entities provides lessons to those countries that are rethinking corporate governance mechanisms in response to the challenge of providing high-quality public services while adhering to financial, social and governance sustainability criteria. However, boards do have some limitations. First, the use of the number of meetings as a proxy for diligence represents a limitation. However, this variable is widely used due to the difficulty of

finding a better proxy that captures the concept of diligence. Second, the nature of FT boards leads us to assume that enlarging the board and including more independent directors will result in broader stakeholder representation, but this may not be true in all cases. Finally, future studies should include additional attributes for boards and board members.

Conclusions

This paper provides important empirical evidence about the adoption of corporate governance in the public sector, in particular, about the relationship between board characteristics and performance. It also provides insights about the implementation of corporate governance codes in the public sector. Larger boards have traditionally been blamed for causing communication and co-ordination problems but, in a public sector setting, enlarging the board allows a significant presence of non-executive directors who represent the community. ‘Optimal’ size has still to be explored. However, very probably there will not be a universal rule and it will depend on the type of entities. The balance between executive and non-executive directors helps to maintain the focus of the boards on service quality (essential for public hospitals) without harming financial sustainability.

As regards gender diversity, we found that FTs were characterized by a relatively high female presence across boards, but having a female chair related to better service quality. This confirms that female chairs help to orientate boards towards their main organizational goal, service quality.

Our results also support the idea that boards react to difficulties by increasing the number of meetings, particularly when these difficulties relate to service quality. This suggests that boards are more concerned about service quality issues than about financial

problems. This way of responding to difficulties is in line with the stakeholder approach of the boards analysed, where service quality is supposed to be the main concern of their members. Financial performance and service quality are not mutually exclusive, at least in the public healthcare sector. Indeed, our findings demonstrate that boards focusing on financial aspects can enhance quality ratings, and vice versa.

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Table 1. Definition of variables and main descriptive statistics ($N = 130$).

Variable	Definition	Mean	Min.	Max.	SD
Size *	Total assets (£000)	197,149	11,454	858,653	135,585
Location **	Dummy variable: '1' if located in the London or in the south east coast area	24 (18%)			
Complexity	Fixed assets/total assets (%)	0.74	0.28	0.95	0.105
BDsize *	Total number of members, chair included	12.48	9	17	1.615
BDindep	Non-executive directors of the board over the total number of directors (chair excluded) (%)	0.49	0.36	0.58	0.040
BDdilig	Board meetings during the financial year	11	5	25	2.420
Fchair **	Dummy variable: '1' if chair is a woman	32 (25%)			
Fchiefexec **	Dummy variable: '1' if chief executive is a woman	53 (41%)			
FexecDir	Number of female executive directors	2.62	1	6	1.136
PercFexecDir	Female executive directors over total executive directors (%)	0.45	0.14	0.86	0.179
FNonexecDir	Number of female non-executive directors	1.78	0.00	4.00	0.856
PercFNonexecDir	Female non-executive directors over total non-executive directors (%)	0.32	0.00	0.80	0.149
FRR Q1 ***	Financial Risk Rating (FRR) for Q1 of 2012/13	3.18	1	5	0.879
FRR Q2	FRR for Q2 of 2012/13	3.25	1	5	0.872
FRR Q3	FRR for Q3 of 2012/13	3.31	1	5	0.955
FRR Q4	FRR for Q4 of 2012/13	3.41	1	5	0.962
GRR Q1 ***	Governance Risk Rating (GRR) for Q1 of 2012/13	3.15	1	4	1.103
GRR Q2	GRR for Q2 of 2012/13	3.22	1	4	1.093
GRR Q3	GRR for Q3 of 2012/13	3.06	1	4	1.173
GRR Q4	GRR for Q4 of 2012/13	2.95	1	4	1.143

Notes: * Included in its natural log form in the analysis. ** Number of FTs with '1' (and % of '1' over total). *** The 4 FRR ratings form the *FP* construct and the 4 GRR ratings form the *SQ* construct.

Table 2. Results of the structural model ($N = 130$).

	Model 1		Model 2 FP -> SQ		Model 3 SQ -> FP	
	β	<i>t-value</i>	β	<i>t-value</i>	β	<i>t-value</i>
BDsize -> FP	-0.0212	0.230	-0.0212	0.229	-0.0108	0.135
BDsize -> SQ	-0.0172	0.190	-0.0049	0.059	-0.0182	0.204
BDindep -> FP	0.0359	0.426	0.036	0.417	-0.0031	0.041
BDindep -> SQ	0.0671	0.814	0.0456	0.625	0.0681	0.810
BDdilig -> FP	-0.0152	0.221	-0.0138	0.201	0.0693	1.096
BDdilig -> SQ	-0.1453	1.954*	-0.1358	2.001**	-0.1448	1.997**
Fchair -> FP	0.1093	1.549	0.1095	1.561	-0.0132	0.214
Fchair -> SQ	0.2143	2.703***	0.1446	2.057**	0.214	2.720***
BDexecWom -> FP	-0.105	1.314	-0.1037	1.285	-0.0704	1.123
BDexecWom -> SQ	-0.058	0.635	0.0076	0.105	-0.0582	0.641
BDnonexecWom -> FP	0.0041	0.045	0.0056	0.061	0.0258	0.360
BDnonexecWom-> SQ	-0.0348	0.380	-0.0388	0.551	-0.0351	0.386
Complexity -> FP	-0.5642	8.092***	-0.5599	7.793***	-0.3609	5.107***
Complexity -> SQ	-0.3474	4.238***	0.0079	0.095	-0.3469	4.234***
Location -> FP	0.112	1.458	0.113	1.503	0.0014	0.021
Location -> SQ	0.1956	3.042***	0.1231	2.140**	0.1948	3.014***
Size -> FP	0.1594	1.431	0.1544	1.415	0.1599	2.083**
Size -> SQ	-0.0109	0.103	-0.1078	1.514	-0.0101	0.096
FP-> SQ			0.6333	8.30 ***		
FP-> SQ					0.5731	8.47 ***
R ² FP	0.341		0.337			0.577
R ² SQ	0.268		0.533			0.267

Note: ***Significant at the 1% level. **Significant at the 5% level. *Significant at the 10% level.

