



**The Role of Leadership-Member Exchange Relationships in  
the Implementation of the International Public Sector  
Accounting Standards by Greek Public Hospitals**

Journal:	<i>EuroMed Journal of Business</i>
Manuscript ID	EMJB-04-2021-0064.R3
Manuscript Type:	Empirical Research Paper
Keywords:	Public Hospitals, IPSAS, Leader-Member exchange, LMX, IPSAS implementation, IPSAS adoption

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**Abstract**

**Purpose**

This paper aims to examine the quality of relations within upper-level management in Greek public hospitals (GPHs), as well as to specify the extent to which these facilitate or hinder the forthcoming International Public Sector Accounting Standards (IPSAS) adoption and implementation.

**Design/methodology/approach**

A survey was conducted on a sample of 143 upper-management professionals drawn from across the 125 GPHs. A multivariate structural equation model is used to investigate the degree of interdependence of the level of convenience of implementation under the view of the leader-member exchange (*LMX*) scale.

**Findings**

The findings suggest that the established leader-member relations in the GPHs facilitate reforms. However, these relationships are of little benefit to IPSAS adoption and implementation, mainly due to the low degrees of competence and commitment to IPSAS. The passive adoption of IPSAS is the most likely outcome.

**Originality/value**

The study recontextualizes the LMX model to public sector research. The findings have value to hospital leadership and to policy makers, as well as to researchers studying the difficulties of IPSAS adoption and implementation.

**Keywords:** Public Hospitals, IPSAS, leader-member exchange, LMX, IPSAS implementation, IPSAS adoption

**Paper type:** Research paper

**Introduction**

The contemporary public sector is in need of reform worldwide, as it is expected to implement managerial and commercial characteristics (Jacobs, 2016). This cultural shift focuses on accounting and financial management means (Steccolini et al., 2020), which, in turn, has an effect on asset management, decision-making processes, and the activity of public organizations (Kaganova, 2012; Chan and Zhang, 2012). The International Public Sector Accounting Standards (IPSAS) subserve transparency, accountability, and efficiency in public finances (IPSASB, 2015), promote competitiveness and effectiveness (Heiling, 2016), enhance auditing (Sfakianakis *et al.*, 2020), and support the work of management and accountants (Kober *et al.*, 2013).

Internationally, the implementation of IPSAS reflects a field of diversity (Bruns *et al.*, 2020; Brusca *et al.*, 2018; Bellanca and Vandernoot, 2014; Heiling, 2016; IFAC, 2020), with many countries still being in an IPSAS-implementation phase (ACCA, 2017). Although, to support optimal management of fiscal issues, in the EU the IPSAS are being implemented at the national, regional, and public sectoral levels (Mnif and Gafsi, 2020), many member-states do not embrace IPSAS (Brusca *et al.*, 2018; Muller-Marques Berger and Heiling, 2015; PwC, 2014; Burth and Hilgers, 2017; Rossi *et al.*, 2016).

The effort to embrace new public financial management logics in Greek public hospitals (GPHs) essentially started in 2009 with the adoption of accrual-based accounting. During the 2010s, supply and service cost control became strictly regulated (Polyzos *et al.*, 2013). IPSAS are to be adopted in full by GPHs on 1/1/2023. This is a large-scale reform that requires the diffusion of knowledge on practical application to be supported by thorough research and study. The Greek public sector is characterized as complex and inefficient (Kounetas and Papathanassopoulos, 2012). There are still difficulties in the full implementation of accrual-based accounting (Christiaens *et al.*, 2015; Eriotis *et al.*, 2011), which often results in inaccurate costing of services and management control deficiency (Tsitsakis *et al.*, 2014). The GPHs are funded, staffed, regulated, and controlled by the Greek state. However, differences in the orientation of managers on accounting information influence the use and effectiveness of accounting systems in GPHs (Tsitsakis, 2009; 2012).

Local factors hinder IPSAS adoption. In public organizations this may lead to poor implementation (Steccolini *et al.*, 2020), or to passive compliance that does not meet the aims of reform (Mickeli and Pavlov, 2020), but merely delivers a ceremonial implementation (Burns and Scapens, 2000) of change to conform to institutional demands. Such an outcome would simply enhance bureaucracy without having any significant impact on management logics and organizational efficiency. Many of the deterrent factors (ACCA, 2017) refer to the intellectual capital of hospitals to implement IPSAS: compliance, competence, and commitment (Bellucci *et al.*, 2020; Clearly and Quinn, 2016; Martin-de Castro *et al.*, 2019; Murray *et al.*, 2016). Although IPSAS may reduce bureaucracy and promote effective management in GPHs (Cohen and Karatzimas, 2016) if properly embraced, it is uncertain whether sufficient competence and commitment exists to achieve this.

This paper utilizes the leader-member exchange (LMX) model (Audenaert *et al.*, 2016; Martin *et al.*, 2010) to explore the quality of relationships between staff and leaders within upper-level management in the GPHs, where such management has the authoritative power to support the IPSAS implementation. However, the normative and the actual relations

may differ (Makrygiannakis and Jack, 2016). The quality of their actual relations influences the utilization of competencies, enhances commitment, and supports change (Han *et al.*, 2020; Jensen *et al.*, 2019; Peng *et al.*, 2020), elements that are expected to benefit IPSAS implementation in GPHs.

Consequently, the following research questions are examined:

- a) To what extent will the levels of competence and commitment to IPSAS in GPHs facilitate or hinder the reform?
- b) To what extent will the quality of upper-management relationships in GPHs facilitate or hinder the implementation of IPSAS?

**Background**

**Deterrents of IPSAS implementation**

Attempted accounting reforms lead to poor IPSAS implementation (Steccolini *et al.*, 2020), as there are deterrent factors and local contingencies that hamper this effort. An Association of Chartered Certified Accountants report (ACCA, 2017) expounds these factors: insufficient IT support, deficient training of staff, limited awareness of IPSAS—especially on the accrual basis—and the limited involvement of upper-level management in the IPSAS implementation (see also PwC, 2015; Polzer *et al.*, 2019). In GPHs’ context, the limited evidence supports these findings (Christiaens *et al.*, 2015; Eriotis *et al.*, 2011).

Many of these deterrents refer to the intellectual capital of hospitals, and specifically to the compliance, competence, and commitment of leadership and staff to implement IPSAS (Clearly and Quinn, 2016; Martin-de Castro *et al.*, 2019; Murray *et al.*, 2016). Investing in staff-member learning and training creates “competence” and specialization, while “commitment” is related to motivation for work, creation, vision, and recognition of the staff member’s performance (Bellucci *et al.*, 2020). Regarding compliance, it is the staff member’s emotional and behavioral change caused by either a request or an order of their leader (APA, 2007). However, passive adoption for the sake of compliance has been noticed in accounting reforms (Mickeli and Pavlov, 2020), which does not align with the aims of IPSAS; namely, the infusion of managerial and commercial characteristics to GPHs and the efficient management of their resources and services. The forthcoming IPSAS adoption by GPHs raises issues of competence and commitment to the reform, as these elements will influence implementation and compliance and, in turn, the success of the reform.

## Relationships with upper management as reform mediators

The quality of relationships between leaders and staff members influences teamwork, group accountability, and role interchangeability (Carstens and Barnes, 2006), which are all traits that empirical research interrelates with business performance (Carson *et al.*, 2007). Effective leadership requires interacting with dedicated staff to provide support for the successful implementation of changes. The quality of this interaction affects motivation and commitment, which are necessary attributes for the introduction of complex projects (Han *et al.*, 2020; Jensen *et al.*, 2019; Peng *et al.*, 2020), such as IPSAS implementation.

The LMX theory (Audenaert *et al.*, 2016) allows the different kind of relationship between the leader and any staff member to be indicated through a series of dyadic labor transactions (Martin *et al.*, 2010; Graen and Uhl-Bien, 1995). Each relationship consists of three main dimensions: mutual respect for competence, trust in character, and benevolence toward each other (Graen and Schiemann, 2013).

The quality of the dyadic relationship depends on how the two parts enact the types of the relationship, defined as “stranger,” “familiar,” and “partner,” (Graen and Uhl-Bien, 1995). In the “stranger” type, the two parts behave close to their roles, experiencing one-way influences and low-quality interactions. The “familiar” type describes medium-quality relationships. “Partner” is the optimal type, experiencing a high-degree of mutual trust, respect, and commitment, and their interactions expand beyond a work relationship by engaging in extra-role support (Omilion-Hodges and Baker, 2017; Omilion-Hodges *et al.*, 2015). Staff members in high-quality dyadic relations receive support, information, guidance, and opportunities for improvement and advancement, as well as enjoying greater degrees of power and decision-making authorization (Northouse, 2013; Scandura and Pellegrini, 2008). These relations enhance the utilization of competencies. They facilitate the distribution of responsibilities and the undertaking of new work-roles and tasks, which are elements that, in turn, are essential for the implementation of reforms and new projects. IPSAS adoption is a collective innovative effort, and its outcome will be partly dependent on the quality of LMX relations.

Empirical findings show that organizations with good working relationships and high LMX scores secure staff member motivation and commitment, which leads to more efficient performances and positive organizational results (e.g., Anand *et al.*, 2016; Hanasono, 2017).

Research that applies LMX either on the public sector (Audenaert et al., 2016; Han et al., 2020; Tummers and Knies, 2013) or on accounting (Gupta and Chadha, 2017; Leow and Khong, 2009) is scarce; however, the findings of these studies also suggest that high LMX scores enhance performance and organizational outcomes.

This study applies the LMX framework to evaluate relations established between leadership and managers at the three top administrative positions in GPHs. Their relationship quality, which is connected to degrees of commitment and motivation, will influence the IPSAS implementation. Innovations, even if institutionally imposed, encounter resistance due to change in routines or threatening the existing power balance (Broadbent *et al.*, 2001). The upper administrative levels of hospitals have the authoritative power to implement IPSAS, yet it is the quality of leadership-management relations that will either facilitate or hinder effective implementation.

### Research methods

The questionnaire used in this study includes the seven LMX-items (LMX-7) on a five-point Likert scale and four questions related to IPSAS implementation. It should be noted that question numbers do not follow a sequence, because they were part of a questionnaire including additional factors that are beyond the scope of this paper.

The LMX instrument, designed by Graen and Uhl-Bien (1995), is a seven-item questionnaire, accompanied with the respective scoring key for the result interpretation that evaluates the leadership-staff relationships through the subordinates' perspective.

The questionnaire's four questions are based on the ACCA's (2017) report.

Non-probability at convenience sampling was used to select the survey population, from which these three positions of upper-level management in GPHs were chosen:

- 1) The General Director/Commander
- 2) The Administrative Director
- 3) The Head of the Financial Department.

Therefore, the population is calculated by multiplying the number of executives by the number of GPHs, which returns 375 research subjects in total. The optimal sample should consist of 196 subjects/participants for a statistical error rate of 5% (Sandwell Research, 2009). However, 143 finally responded (response rate 73%: 39 General Directors, 53 Administrative Directors, 51 Finance Directors). The number of the responders was

considered as satisfactory, given that the Covid pandemic considerably added to the workload in hospitals.

The participants were informed in advance on the study's nature, objectives, and the type of questions, and assured about anonymity and confidentiality. Consent was obtained in three separate stages: The Ministry of Health (approval granted in October 2019), the seven Health Regions of Greece (approvals granted by March 2020), and from each GPH separately. The data collection period was completed by August 2020.

The next section presents the findings on a) the type of LMX relationships, b) the convenience of IPSAS implementation, and c) the (positive or negative) relationship between factors (a) and (b). Descriptive Statistical indicators per variable are used for (a) and (b), while the multivariate analysis (c) is evaluated through a structural equation model.

## Findings

### LMX factor

The LMX instrument has been validated in many studies. However, due to its translation into Greek it was tested for consistency. Cronbach's alpha consistency index of the scale was found to be 0.881, which is considered to be good.

Of the 143 participants, 11 (7.7%) did not answer at least one of the LMX-7 questions and were excluded from further analysis. The findings show that:

1. (Q-D1) The frequency of satisfaction of managers with the projects implemented is of the order of 72.6% (48.9%+23.7%).

2. (Q-D2) The predominant percentage in the understanding of work problems and needs was observed in the category "Moderately" (41.0%).

3. (Q-D3) Recognition of their potential by superiors (Fully + Considerably) amounts to 67.6%.

4. (Q-D4) The belief that the leader would use authority and status to help solve work problems amounts to 64.0%.

5. (Q-D5) The probability of the leader intervening to deflect criticism and protect staff from difficult situations is statistically divided between low, medium, and high (80.6%).

6. (QD-6) The number of subordinates with sufficient confidence in the leader’s abilities that they would defend and justify the leader’s decisions, even in his/her absence, is relatively high and amounts to 60.2%.

7. (QD-7) The characterization of the employment relationship with the boss, from above average and very effective, is reflected by 72.7%.

The findings for each question-parameter of the statistical indicators (Table 1, sorted in descending order of average value) show an average value above about 3.5, except for the fifth question, which is in the middle of the five-point Likert scale (score from one to five) and ranked as moderate.

The most positive attitude is shown by the first question (satisfaction with performance), with an average value of  $3.88 \pm 0.89$ , followed by the seventh question (efficiency of working relationship), with an average value of  $3.84 \pm 0.89$ .

**Table 1:** Statistical Indicators per Question

Source: Authors’ Survey

The overall evaluation of the participants' attitudes on the leader-subordinate relationship was calculated by summing all the answers in the five-point Likert scale of the questions. Therefore, a sum ranging from 7 (coding 1 for negative view) to 35 (coding 5 for very positive view) is expected with an average value of 21  $[(7+35)/2]$ . Central tendency and dispersion indicators are displayed, in the above table, per question. The analysis shows that both the overall mean ( $25.2 \pm 4.9$ ) and median (26) are greater than the average value of the cumulative scale (21). This is an indication that, on average, a positive attitude has been observed.

The findings show that for more than half of the participants (59.1%) the leader-subordinate relationship is at a high (40.9%) or very high (18.2%) level, and consequently in the “partner” phase. In the “familiar” phase the respective percentage is 27.3% (one in about four answers), while in the “stranger” phase it is 13.7% (2.3% Very Low+11.4% Low).

**Factor of convenience of IPSAS implementation**

The factor of convenience of IPSAS implementation was measured through a short questionnaire comprising four questions using a five-point Likert scale. The coding of the answers to all the questions was hierarchical, where 1 means a very positive attitude



concerning the issue involved in the question, while 5 means a negative attitude respectively. Cronbach's alpha consistency index of questions (measured from 133 full answers) for this factor was 0.744, which is considered to be acceptable.

**Table 2:** Statistical Indicators of the Implementation per Question  
Source: Authors' Survey

All scores on the degree of convenience of IPSAS implementation range from "Medium" and below with a percentage of over 50%, indicating the emerging difficulties of their implementation in the public sector (Table 2).

The total mean value of the IPSAS application factor amounts to 3.56, which signifies that, based on the current situation, application in the health units is toward the negative attitude. The worst score is attributed to the inappropriate training of staff and the smallest standard deviation indicates that most respondents agree with this.

### Relationship Between Implementation Phase and LMX

Multivariate analysis has been implemented to identify any underlying relations between latent-construct variables of implementation and LMX and the questions measured by them. The model applied was the structural equation model (SEM), which investigates the degree of interdependence of the two latent variables, that is, the degree of convenience of implementation under the view of the leadership's existing LMX scale. The analysis included sampling units that answered all questions (N=122). A 5% significance level is considered acceptable. An indication of the relationship strength (standardized b-values) among questions measuring a latent variable is presented nearby the relation arrows. The strength of the value corresponds to the strength of the relation of the question with the last variable. For example, training (Q-A10) is strongly associated (0.83) with the implementation. The results are presented diagrammatically in Figure 1.

### Figure 1: Results of the Application of the Structural Equation Model

The relationship between the two latent variables (convenience of implementation and the view of the leadership-member relationship) shows a statistically positive significant relationship ( $b=0.22$ , 95% Confidence Interval= $0.02-0.42$ ,  $z=2.12$ ,  $p=0.034<0.05$ ), although

not very strong, but indicative that the positivity of existing leadership-staff relationships correlates with the ease of implementing IPSAS in GPHs.

The findings also highlight the need for a regular “measurement” of the internal environment of each organization concerning the existing LMX relationships for the assessment of implementation problems, and the design of intervention strategies and tactical methods for successful implementation.

### Implications and Conclusions

The LMX model is used to identify the quality of leadership-staff relationships in the GPHs, to evaluate the influence of their extant relationships on the effective IPSAS implementation. In addition, elements of competence and commitment to the implementation project are explored, and along with those relationships are discussed in relation to one another.

In this study, almost 60% of the participants state that they have developed partner relationships of mutual trust, support, and respect with their leader. However, a considerable 27.3% are merely acquaintances, and 13.7% claim that their relationship with their leader is at the stage of “strangers,” in that they have not established any sound ground to identify a common spirit of cooperation and support.

This is partly justified by the recent appointment of the new Greek government, followed by new appointments of governors and deputy governors at the Health Regions of Greece and the GPHs. The latter took place between December 2019 and February 2020. The data of this study were collected during the summer of 2020, thus, in many instances, there was probably insufficient time to develop high-quality relationships. Therefore, the quality of the relationships is expected to improve.

Regarding the degree of convenience of IPSAS implementation, the results reveal a rather unfavorable situation for the GPHs as the overall level was low. Specifically, the degree of appropriate training provided to staff to complete IPSAS implementation has been rated by most of the participants (69.5%) as either low or very low. Moreover, the degree of knowledge on the standards and requirements of the staff involved in IPSAS implementation has also been rated by most of the respondents (67.2%) either as low or very low. Finally, the answers on the involvement of the GPHs management in IPSAS implementation (51.5% low and very low) raise some skepticism concerning the obstacles that must be overcome.

Moreover, almost half of the respondents (48.5%) believe that IPSAS will not lead to the identification of unexploited resources (29.1% and 19.4% rate their expectations as low to very low respectively), while more than a third of them (38.8%) have medium expectations. This point deserves attention, for it implies that at least some of the normative projections of accounting academics and professional bodies are not shared by the upper-level management of hospitals. This suggests, at least, that the local managers, contrary to the dominant dispositions in private sectors on IFRS (Mantzari and Georgiou, 2019), are not convinced on the superiority of IPSAS compared to the current standards. Training (Lois *et al.*, 2016) and communication could change the dispositions of managers toward IPSAS, but this requires central planning and preparation of human resources before, or at the early stages of, IPSAS implementation.

However, the significant positive association between the LMX level and the IPSAS implementation indicates that high LMX rates can compensate for unfavorable conditions underlining IPSAS implementation, as leadership and staff are confident enough for undertaking extra-role assignments and managing change.

The conclusions concern the 125 GPHs. The IPSAS implementation will probably proceed in differently paced phases, with the ensuing diversity in the quality of accounting information creating management difficulties for public economics.

Considering the intellectual capital as a reflection of the competence-commitment multiplication, we are leading on to a null formula result, if one of the factors is zero (Murray *et al.*, 2016; Clearly and Quinn, 2016). The findings show low-degree IPSAS awareness even in those who are responsible for the implementation, which suggests low-degree competence, and reveal a rather unfavorable ‘environment’ for IPSAS implementation in the GPHs. Moreover, upper-level managers rate their expectations for effective identification of unused resources through IPSAS as medium or low, which suggests low-degree commitment on their behalf. Transformational leadership requires leaders to work closely with their staff for effective change implementation (Han *et al.*, 2020; Jensen *et al.*, 2019; Peng *et al.*, 2020); however, this is unlikely to occur in the case of IPSAS adoption in GPHs. Therefore, the most probable outcome is their passive adoption (Mickeli and Pavlov, 2020), without cultural shift (Jacobs, 2016; Steccolini *et al.*, 2020) or improvement on the efficiency of operations.

Using the LMX model re-contextualization (Petre and Rugg, 2010), which is usually applied in private sectors, for GPHs, confirms its applicability and potential in public sector research. In this study it was realized that high-quality relationships lead managers to be more

optimistic for, and more receptive to, the implementation of new projects and the forthcoming IPSAS implementation. However, low-level competence and commitment suggest that IPSAS implementation in GPHs has little support.

Policy makers should consider that future-oriented and centrally planned training for accounting information users, and communication strategies to secure higher-level commitment, should precede any adoption efforts. Upper-level leadership in public hospitals cannot reject the implementation of government-planned reforms. However, their lack of commitment to changes can lead to passive compliance. This point also suggests a theoretical question on whether IPSAS can sufficiently lead toward the cultural shift of new public management, or whether the cultural shift should predate any technical accounting reforms to secure active engagement. Although generalizations require cautious treatment, there could be prospective conclusions regarding other cases of IPSAS adoption in public organizations, and research in other sectors would be useful. Future research in lower ranks of hierarchy and a post-implementation evaluation will supplement the findings of this study.

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**Table 1:** Statistical Indicators per Question

Q-D1 Do you know where you stand with him/her? Do you usually know how satisfied he/she is with what you do?	<i>Very Often</i> (5)	<i>Often</i> (4)	<i>Sometimes</i> (3)	<i>Occasionally</i> (2)	<i>Rarely</i> (1)	<i>N</i>	<i>Mean</i>	<i>St. Dev</i>
	23.7 %	48.9 %	22.3 %	2.2 %	2.9 %	139	3.88	0.89
Q-D7 How would you characterize your working relationship with him/her?	<i>Very effective</i> (5)	<i>Above average</i> (4)	<i>Average</i> (3)	<i>Below average</i> (2)	<i>Very ineffective</i> (1)			
	21.2 %	51.5 %	18.9 %	6.8 %	1.5 %	132	3.84	0.89
Q-D3 How well does he/she recognize your potential?	<i>Fully</i> (5)	<i>Considerably</i> (4)	<i>Moderately</i> (3)	<i>A little</i> (2)	<i>Not at all</i> (1)			
	20,1 %	47,5 %	25,9 %	4,3 %	2,2 %	139	3.79	0.89
Q-D4 Regardless of how much formal authority he/she has built into his/her position, what are the chances that he/she would use his/her power to help you solve problems in your work?	<i>Certain</i> (5)	<i>High</i> (4)	<i>Moderate</i> (3)	<i>Low</i> (2)	<i>None</i> (1)			
	12.9 %	51.1 %	25.2%	10.1 %	0.7 %	139	3.65	0.86
Q-D6 I have enough confidence in him/her that I would defend and justify his/her decision were he/she not present.	<i>Totally agree</i> (5)	<i>Agree</i> (4)	<i>Neither</i> (3)	<i>Disagree</i> (2)	<i>Totally disagree</i> (1)			
	9.8 %	50.4 %	31.6 %	7.5 %	0.8 %	133	3.61	0.80
Q-D2 How well does he/she understand your job problems and needs?	<i>Fully</i> (5)	<i>Considerably</i> (4)	<i>Moderately</i> (3)	<i>A little</i> (2)	<i>Not at all</i> (1)			
	15.1 %	31.7 %	41.0 %	10.8 %	1.4 %	139	3.48	0.93
Q-D5 Again, regardless of the amount of formal authority he/she has, what are the chances that he/she would “bail you out” at his/her expense?	<i>Certain</i> (5)	<i>A lot</i> (4)	<i>Moderate</i> (3)	<i>Few</i> (2)	<i>None</i> (1)			
	8.6 %	33.1 %	25.2 %	22.3 %	10.8 %	139	3.06	1.16

Source: Authors' Survey

**Table 2:** Statistical Indicators of the Implementation per Question

	<i>Very High (1)</i>	<i>High (2)</i>	<i>Medium (3)</i>	<i>Low (4)</i>	<i>Very Low (5)</i>	<i>N</i>	<i>Mean</i>	<i>St. Dev</i>
Q-A12 To what extent do you believe that the application of IPSAS in the Hospitals sector will lead you to effectively identify unused resources?	1.5%	11.2%	<b>38.8%</b>	19.4%	29.1%	134	3.63	1.07
Q-A10 To what extent is there appropriate training of staff that allows the implementation of IPSAS in your hospital?	0%	6.4%	24.1%	31.2%	<b>38.3%</b>	141	4.01	0.94
Q-A3 To what extent are you involved in the implementation of IPSAS?	3.5%	21.8%	23.2%	25.4%	<b>26.1%</b>	142	3.49	1.19
Q-A2 To what extent are your employees aware of IPSAS?	0%	11.2%	21.7%	30.1%	<b>37.1%</b>	143	3.93	1.02

Source: Authors' Survey

**Figure 1:** Results of the Application of the Structural Equation Model