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The relation between public manager compensation and members of parliament's salary across OECD countries: explorative analysis and possible determinants with public policy implications

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The compensation for central government senior managers has been the focus of considerable attention from the public, media and academia in recent years. In several countries, the average compensation of public managers, especially top level ones, has risen in a way that public considers disproportionate and inequitable. In this context, there is a hot debate that the government senior managers are overpaid. A growing literature has analysed the possible determinants of com-pensation in public and private organizations. However, some political and institutional factors af-fecting public managers' compensation are hardly known. Here, we show that the average compen-sation for central government senior managers seems to be positively associated to average salary of members of parliament (MPs), standardized with GDP per capita of countries. In addition, results show that higher levels of compensation for central government senior managers are mainly in countries based on Mixed Executive. We also show that higher public manager compensations are associated to countries with lower freedom of expression, freedom of association, free media, lower quality of contract enforcement, property rights and corruption control. These results can provide fruitful insights to support reforms and best practices that improve the efficiency of public administration, mainly in latecomer countries.

KEYWORDS: Compensation, Rewards, Wage for politicians, Pay for politicians, Bureaucracy, Public Managers; Executive, Public Administration, Public Policy.

JEL CODES: D72; H0; J3; J45.

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Contents

Overview of the problem

Remuneration in public administration has been the focus of considerable attention from the public, media, and academia in recent years, since the average compensation of senior public managers in OECD countries has risen in a way that the public considers disproportionate and inequitable (Coccia and Benati, 2017; L'Espresso, 2014; The New York Times, 2015; Liff, 2014; Jarque, 2008; Colvin, 2005).

In particular, topics of the compensation of public managers have inspired a voluminous literature. Gao and Li (2015) revealed that Chief Executive Officers (CEOs) in public firms are paid 30% more than CEOs in comparable privately-held firms, while Malul and Shoham (2013, p. 75) showed that non-competitive market structure in the public sector can induce abnormal wages and a distorted ownership (public) structure may lead to a severe distortion in wages, especially when the level of competitiveness in the sector is relatively low.

Although prior research has provided many significant insights about some drivers of compensation of senior managers in public administration, little is still known about the role of political and institutional factors, which can affect public managers' compensation.

In particular, the relation between compensation of public managers and salary of members of parliament (MPs) across countries is hardly known. The study explores this critical relation considering economic and institutional variables, the structure of executive and some key indicators of governance and rule of laws across countries.

The theoretical framework of the study is summarized in the following schema.

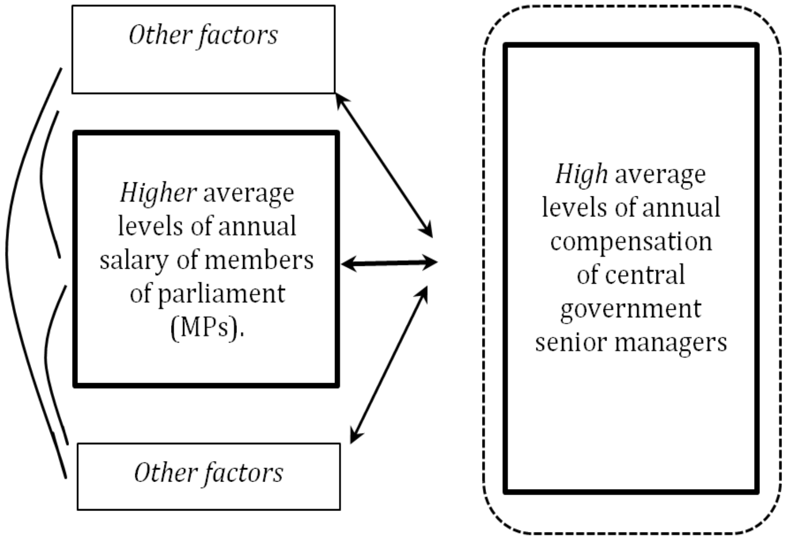

Fig.1: Theoretical framework

The study shows the importance of political and institutional factors in explaining public manager' salary. The results could be helpful to support the design of a realistic level of retribution in latecomer countries and to support public reforms aimed to design both legislative bill and best practices that improve the overall efficiency of public administration. Next sections present the theoretical framework and study design to analyse this considerable problem in the field of public administration.

1. Theoretical framework

The analyses of the compensation of public and private managers, as well as politicians, are conducted in several research fields such management, public economics, public administration and so on (Malul and Shoham, 2013; Coccia and Rolfo, 2007, 2013). In general, the compensation of public managers depends on a plurality of variables linked to economic, social and political system. Public economics, in particular, unveiled many aspects of managers' compensation (Messner and Polborn, 2004). These studies have increased in the last decades for understanding some components of the salary that may increase the incentives of managers and support the efficiency of public and private organizations as well as public administration in the whole (Gao and Li, 2015; *cf.,* Coccia, 2001, 2001a, 2004, 2008a, 2012, 2014a)[1].

However, the average compensation of managers has risen in recent years and the public opinion considers disproportionate and inequitable (Jarque, 2008; Colvin, 2005). In fact, there is a hot debate whether executive compensation of public managers is excessive or fair (Fahlenbrach, 2009). Moreover, the recent socio-economic problems in Europe have lead governments and regulators to re-consider laws about compensation deemed excessive (Dittmann *et al.*, 2011; Kuhnen and Niessen, 2012; *cf. also*, Coccia, 2003, 2005; 2007; 2013, 2014 for economic performances of countries).

In theory, the main factor to explain managers' compensation should be the executive's degree of talent (Rosen, 1981, 1982, 1990; Dittmann *et al.,* 2011) but Friedman (2008) argues that the high compensation for managers cannot be explained easily using psychological and economic factors and that the managers are often paid high salaries even when organization's earnings are ordinary and/or there are consistent losses. Many scholars claim that the labour market is a main factor that determines the level of compensation contracts, although in some countries the power of trade unions affects the increase of salaries and the pay seems to be not linked to performance and goals of public firms (*cf.* Lamm West and Mykerezi, 2011; Hubbard, 2005). There are other factors that can affect managers' compensation, such as the ownership structure of the company (public or private), which Denis *et al.* (1997) demonstrate that it influences the executive power in the company. Malul and Shoham (2013, p. 75) identify the reasons for the huge differences in CEOs' compensation. In particular, CEOs in monopolies take advantage of the non-competitive market structure to gain abnormal wages. In

[1] Cf. also in this context the studies of organizational behavior of public research labs (Coccia and Cadario, 2014; Coccia and Rolfo, 2008, 2009, 2010).

addition, a distorted ownership structure may lead to a severe inequality in wages, especially when the level of competitiveness in the sector is relatively low.

Moreover, research in political science and public administration analyses the problem of remuneration in the general context of the relationship between politicians and bureaucrats. From the classical studies of Weber, through those of Aberbach et al. (1981, 2006), to most recent contributions by Svara (2001, 2006), Nalbandian (2006) and Baddeley (2008), the relationship between politicians and bureaucrats is described as a very complex linkage based on mutual interaction, which in turn, determines the spaces of actions and powers of two actors mentioned above. In short, politicians and bureaucrats establish a contractual relationship. An interesting line of research in public administration studies show that political and institutional elements may be more significant factors than economic ones in explaining the level and growth of salary for high public managers (Hood and Peters, 1994; Brans and Peters, 2012; Hood *et al.,* 2003). These studies consider the salary as a part of reward, which may also incorporate security schemes or work opportunities after retirement. In this perspective, public managers' salaries are the result of a "bargain" between politics and bureaucracy. Reward, competency and loyalty are the dimensions of the so called "public service bargain" (Hood and Lodge, 2006, p. 68). In particular, because of specificity of this relationship bureaucrats-politicians in each country, the bargain dynamics and its effects on salaries of public managers can be understood only in the context of a single country (*cf.,* Hood and Peters, 1994). Hence, scholars argue that the best approach of inquiry is based on comparative studies. In short, this literature in public administration argues that a relationship between the salaries of politicians and senior bureaucrats exists, but it is not measured and explained. This study here confronts this problem from another perspective. We endeavour to clarify, as far as possible, the characteristics of this relationship and association between variables understudy by analysing the dynamics of salaries of MPs and senior public managers in 12 countries of the OECD. Next section presents the study design to analyse this main relation and explain possible reasons of high levels of salary in public administration.

2. Materials, Methods and Study Design

The hypothesis of this study is the following (*HP*ϕ):

*HP*ϕ: high levels of compensation for central government senior manager are positively associated to high levels of Members of Parliament (MPs') salaries, *ceteris paribus.*

The present study ascertains whether empirical evidence substantiates the hypothesis (*HP*ϕ).

The indicators of this study and sources of data are shown in Table 1.

We focus on the annual compensation of central government senior managers. The level of total compensation for senior managers in the public sector is one indicator of the attractiveness of the public sector and of its ability to keep talent for positions with high levels of responsibility in government.

Compensation in these positions represents a minimal share of public expenditures, but holds symbolic value as it concerns staff who have a leading role in government policy making and execution and whose appointment is often discretionary. D1 managers, following OECD definition, are top public servants below the minister or Secretary of State. In particular, D1 Managers are top public servants just below the minister or Secretary of State/junior minister. They can be a member of the senior civil service and/or appointed by the government or head of government[2].

[2] D1 managers differ from country to country but they correspond, mainly, to the figure of Ministry General Director.

Table 1: Indicators of the analysis

Description	year	Source	Acronym
• Average annual compensation of central government senior managers D1 position, USD PPP	2011	OECD 2013	CompD1
• Average annual salary of members of parliament (MPs)	2005	IPSA 2015	MPs Salary
• GDP per capita PPP constant 2005 international $	2005	World Bank 2008	GDP per capita
• Classification of Executive	--	HoG Banks	TypeExec
• Kaufmann Voice and Accountability	2004	WGI	Voice
• Kaufmann rule of law	2004	WGI	Rule
• Kaufman corruption control	2004	WGI	Corrup control

Note: OECD is Organisation for Economic Co-operation and Development; IPSA is Independent Parliamentary Standards Authority; WGI is Worldwide Governance Indicators by World Bank (2008).

They advise government on policy matters, oversee the interpretation and implementation of government policies and, in some countries, have executive powers. D1 managers may be entitled to attend some Cabinet/Council of ministers meetings, but they are not part of the Cabinet/Council of ministers. They provide overall direction and management to the ministry/Secretary of State or a particular administrative area. In countries with a system of autonomous agencies, decentralised powers, flatter organisations and empowered managers. The precise job title can differ across countries (OECD, 2012).

The independent variable is the salary of the members of parliament (MPs) of some OECD countries: Italy, Japan, New Zealand, United States, France, Germany, Ireland, UK (Westminster), Canada, Australia, Sweden, Norway, Switzerland and Spain (*see* also Appendix A)[3]. We also consider the levels of GDP per capita as

[3] Data understudy for other countries were not available.

control variable to analyse the relation between average annual compensation of central government senior managers and the salary of the members of parliament (World Bank, 2008). In addition, this study, in order to explain some estimated relationships, analyses the annual compensation of central government senior managers in relation to three relevant political indexes defined by Kaufmann *et al.* (2005): Voice and Accountability, Rule of law and Control corruption. Kaufmann Voice and Accountability Index captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Kaufmann Rule of Law – capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Kaufmann Control of Corruption – capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

Data were subjected to horizontal and vertical cleaning, excluding some years with missing values and/or outliers. The normal distribution of variables is checked by Kurtosis and Skewness coefficients. As some variables do not have normal distributions, a logarithmic transformation has adjusted these distributions in order to apply correctly descriptive statistics, correlation analyses, and regression analyses. The ratio of average annual compensation of central government senior managers divided by GDP per capita PPP constant 2005 international $ is also calculated to compare the results of countries in a homogenous framework. The descriptive statistics of variables under study is also performed considering some main typology of executives (Norris, 2008): Parliamentary monarchy, Presidential Republic, Mixed Executive.

This study has performed the bivariate correlation and partial correlation controlling GDP per capita. The study also analyses the data with a simple regression model: The specification of this linear model is given by:

$y_{i,t} = a + B_0 \, x_{i,t} + u_{i,t}$

where:

y= Average annual compensation of central government senior managers

x= Average annual salary of members of parliament

$u_{i,t}$ = Error term

The study applies this analysis with a log-log simple regression model using as dependent variable the Ratio Average annual compensation of central government senior managers / GDP per capita PPP constant 2005 international $, whereas the explanatory variable is Kaufmann Voice and Accountability, Rule of law and control of corruption. These models are estimated with ordinary least squares (OLS) method.

In addition, the hierarchical cluster with the Squared Euclidean distance and Ward's Method linkage is also applied to detect homogenous sets of countries that have a similar behaviour concerning the annual compensation of central government senior managers. The arithmetic mean of variables under study is analysed across sets to detect regularity in the behaviour of compensation of public managers of countries. Statistical analyses are performed by means of the Statistics Software SPSS.

3. Empirical analysis

Table 3 shows that Average annual compensation of central government senior managers is higher in Parliamentary Monarchy and Presidential Republic. However, when the compensation of public managers is standardized with the level of GDP per capita PPP constant 2005 international $, Figure 1 shows that mixed executive countries tend to have higher levels of Average annual compensation of central government senior managers.

Table 2: Descriptive Statistics

Descriptive Statistics	N	Mean	Std. Deviation (SD)
Average annual compensation of central government senior managers, D1 position, USD PPP	20	244,650.38	131935.26
Average annual salary of members of parliament (MPs)	20	542,46.30	26642.01
GDP per capita PPP constant 2005 international $	20	19,868.75	9185.33

Table 3: Descriptive Statistics per types of executive

Classification of Executive	Statistics	CompD1	MPs salary	GDP per capita
Parliamentary Monarchy	Mean	291,814.13	55,741.49	23,863.63
N=8	SD	87,819.00	13,361.93	5,963.58
Presidential Republic	Mean	27,4261.70	97,264.60	37,267
N=1	SD	na	na	na
Mixed Executive	Mean	207,657.52	49,248.14	15,381.73
N=11	SD	15,5891.22	3,1769.63	8,380.01

Note: SD=Standard Deviation; MPs salary= Average annual salary of members of parliament (MPs); Comp D1= Average annual compensation of central government senior managers, D1 position in USD PPP; GDP per capita= GDP per capita constant 2005 international $; na= not available: SD is not represented because the arithmetic mean is based on a single case (country).

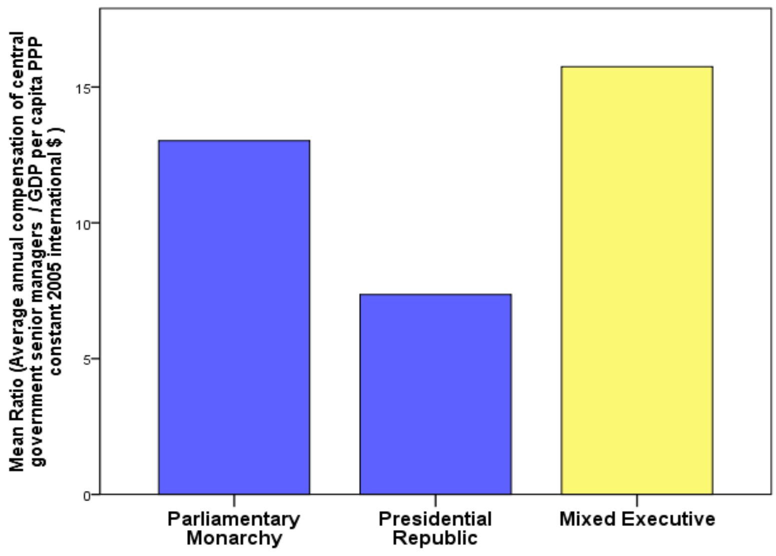

Fig.2: Average annual compensation of central government senior managers divided by GDP per capita PPP constant 2005 international $ per typology of executive.

Table 4: Bivariate Correlations

		Average annual salary of members of parliament (MPs)	Average annual compensation of central government senior managers, D1 position, USD PPP
Average annual salary of members of parliament (MPs)	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	20	
Average annual compensation of central government senior managers, D1 position, USD PPP	Pearson Correlation	0.717**	1
	Sig. (2-tailed)	0	
	N	20	20

Note: Correlation is significant at the 0.01 level (2-tailed).

Table 5: Partial Correlation

Control Variables		Correlation	Average annual salary of members of parliament (MPs)
GDP per capita PPP constant 2005 international $	Average annual compensation of central government senior managers, D1 position, USD PPP	*r*	0.673
		Significance (2-tailed)	0.002
		df	17

Bivariate correlation Corr (CompD1, MPs salary) is 0.717 (significant at the 0.01 level; cf., Tab. 4), whereas the partial correlation (control variable GDP per capita) shows r= 0.673 (significant at 0.01; cf., Table 5).

Table 6: Scientific field regressions of equation

Dependent variable: LN Average annual compensation of central government senior managers, D1 position, USD PPP				
The independent variable / Predictors	*Constant* *α* *(St. Err.)*	β_0=B_0 *(St. Err.)*	R^2 *Adjusted (St. Err. of the Estimate)*	*F (sign).*
1. Model Average annual salary of members of parliament (MPs)	52017.808 (48,928.187)	3.551*** (0.814)	0.487 (94,477.97)	19.052 (0.00)
Dependent variable: LN Ratio Average annual compensation of central government senior managers/ GDP per capita PPP constant 2005				
	Constant *α* *(St. Err.)*	β_0=B_0 *(St. Err.)*	R^2 *Adjusted (St. Err. of the Estimate)*	*F (sign.)*
2. Model LN Kaufmann Voice and Accountability	2.947*** (0.224)	−1.203** (0.573)	0.15 (0.452)	4.401 (0.05)
3. Model LN Kaufmann rule of law	2.662*** (0.100)	−0.603** (0.193)	0.32 (0.407)	9.743 (0.01)
4. Model LN Kaufman corruption	2.631*** (0.094)	−0.424** (0.126)	0.35 (0.396)	11.258 (0.00)

Note: ***Coefficient of regression is significant at 1‰; **Coefficient β is significant at 5%. * Coefficient β is significant at 10%. Geometric representation of estimated relationship is in Appendix B.

Regression analysis (Model 1) shows that about 50% of the variation of annual compensation of central senior managers can be attributed linearly to differences in Average annual salary of members of parliament (MPs). Give the *F*-test, the model is statistically highly significant.

Linear Model shows that higher levels of significant annual salary of members of parliament (MPs) increase the expected annual compensation of central senior managers. Log-linear models 2-4 have lower coefficient of determination but F-test indicates that these models are statistically significant at 1 ‰ and 5%.

In addition, the estimated coefficients LN (Kaufmann Voice and accountability), LN (Kaufmann rule of law), LN (Kaufmann corruption) would simply imply an expected ratio (Average annual compensation of central government senior managers / GDP per capita PPP constant 2005 international $) decrease for an increase of explanatory variables by 1%.

In particular, Kaufmann Voice and accountability has the highest impact on Ratio Average annual compensation of central government senior managers divided by GDP per capita (Appendix B shows the geometrical representation of estimated relationships).

Table 7 – Correlation analyses

		LN Kaufmann Voice and Accountability	LN Kaufmann Rule of Law	LN Kaufmann Corruption
LN Ratio/ GDP per capita PPP constant 2005 international $ Average annual compensation of central government senior managers	Pearson Correlation	–0.443	–0.593**	–0.620**
	Sig. (2-tailed)	0.050	0.006	0.004
	N.	20	20	20

** Correlation is significant at the 1% level (2-tailed).

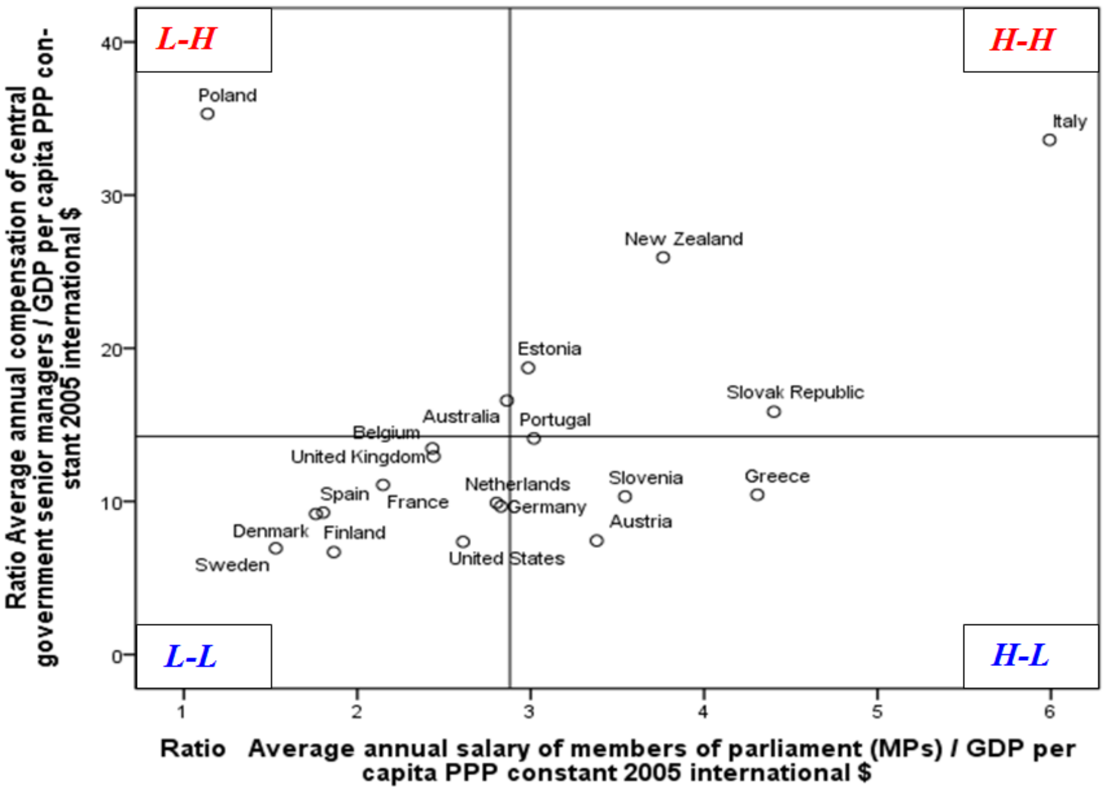

Fig.3: Scatter plot between Average annual compensation of central government senior managers and Average annual salary of members of parliament (MPs) standardized with the GDP per capita.

Correlation analyses in table 7 show (and confirm) a negative association, statistically significant at 1%, between the ratio just mentioned and Kaufmann indices (except, the variable Kaufmann Voice and Accountability).

Figure 2 shows four main quarters:

- *High-High (H-H)* Salary is in North-west corner in fig. 2: countries with High Compensation of public managers and Higher salary of MPs compared to their GDP per capita (*e.g.*, Italy, New Zealand, Slovak republic, *etc.*);
- High –Low (H-L) salary is in South-west corner: countries with Lower Compensation and Higher salary of MPs compared to their GDP per capita (e.g., Greece, Slovenia, Austria, etc.).

- Low-Low (L-L) salary is in South-East corner: countries with lower Compensation and lower salary of MPs compared to their GDP per capita (e.g., Sweden, Finland, UK, USA, etc.). This may represent the set of virtuous countries.
- Low-High (L-H) salary is in North-east corner: countries with Higher Compensation and lower salary of MPs compared to their GDP per capita (e.g., Poland).

Cluster analysis shows an interesting dendrogram in figure 3.

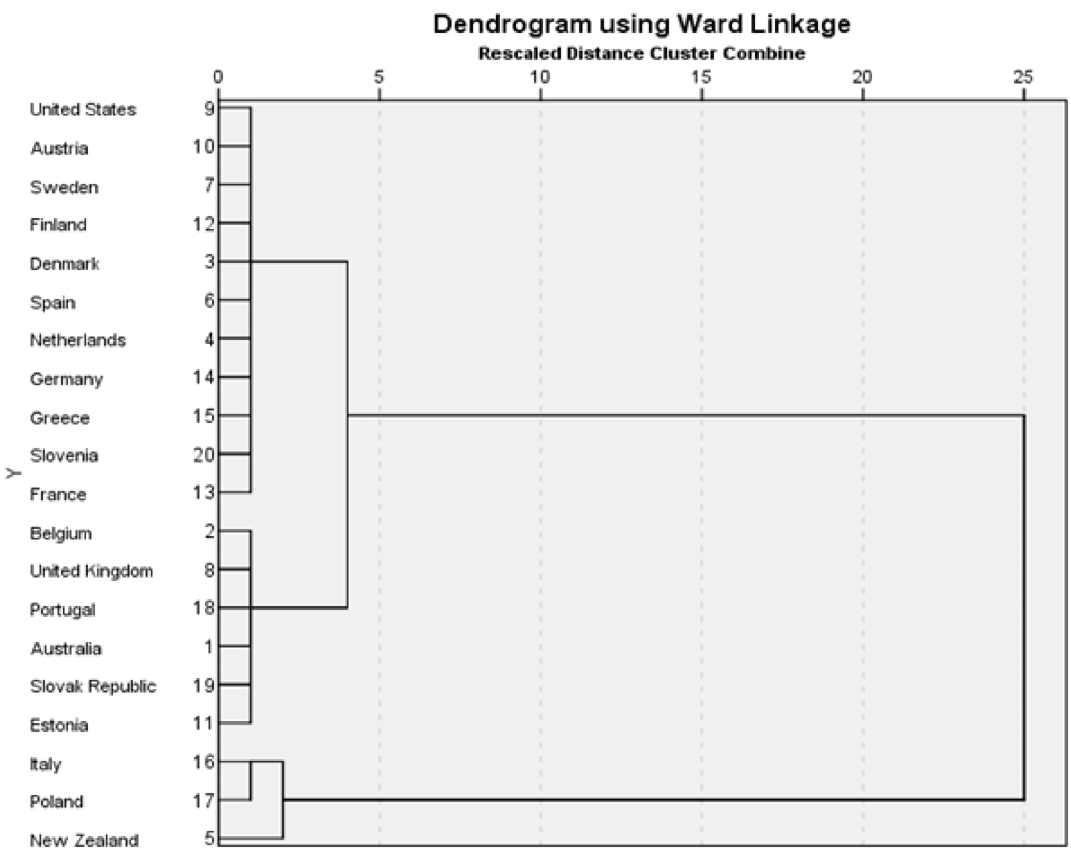

Fig.4: Hierarchical analysis (dendrogram using Ward linkage) based on ratio Average annual compensation of central government senior managers (D1 position) divided by GDP per capita PPP constant 2005 international $.

Table 8: Arithmetic mean of variables per groups identified with cluster analysis.

	Arithmetic Mean					
Clusters	GDP per capita PPP constant 2005 $	Annual salary of members of parliament (MPs) $	Annual compensation of central government senior managers	Kaufmann Voice and Accountability	Kaufmann rule of law	Kaufmann corruption
1) Italy, Poland, New Zealand	13 280.00	59 774.60	410 163.10	1.33	1.00	1.04
2) Australia, Belgium, Estonia, Portugal, Slovak Rep., UK	15 948.83	43 682.30	232 846.98	1.37	1.26	1.35
3) Austria, Denmark, Finland, France, Germany, Greece, Netherland, Slovenia, Spain, Sweden, USA.	23 803.82	58 500.77	205 948.76	1.50	1.53	1.75

Note: low Kaufmann corruption indicates that there is a low control of corruption, vice versa high levels.

Table 9: Quartile of variable

Quartile	Average annual compensation of central government senior managers $	Kaufmann Voice and Accountability	Kaufmann Rule of Law	Kaufmann Corruption	Ratio Average annual compensation of central government senior managers / GDP per capita PPP constant 2005 international $
1 Quartile Mean	226 570.67	1.64	1.81	2.20	7.52
2 Quartile Mean	174 463.62	1.38	1.27	1.37	9.92
3 Quartile Mean	288 783.61	1.37	1.20	1.26	19.76

Note: low Kaufman corruption indicates that there is a low control of corruption, vice versa high levels.

The groups of dendrogram in fig. 3 are analysed in table 8-9; in general, higher public manager compensations are associated to lower freedom of expression, freedom of association, free media, lower quality of contract enforcement and property rights and corruption control.

4. Discussion

In general, the statistical evidence seems to be consistent with the hypothesis ϕ: on average, high levels of Average annual compensation of central government senior managers are associated with higher levels of Average annual salary of members of parliament (MPs).

In particular, Italy, New Zealand and Poland experienced the highest compensations of public managers compared to salary of MPs (standardized with GDP per capita). Studies by OECD (2013, 2011) show that on average, a D1 senior manager's compensation is 3.4 times higher than the average tertiary educated employee's compensation. Differences in compensation levels across countries can result from differences in the share of highly qualified employees, seniority levels and the share of women in senior occupations (OECD 2011; 2012). Differences in compensation levels can also result from differences in national labour markets, laws of public contracts, power of trade unions and in particular the remuneration in the private sector for comparable skills. The analyses show that Italy is an outlier that deserves to be explained.

4.1 The focus on Italy

Italy is a significant anomaly: the average annual compensation of central government senior managers in relation with Average annual salary of members of parliament (MPs), both standardized with GDP per capita PPP constant 2005, is the highest considering all sample of countries. The high compensation of Italian public managers is also highlighted by the socio-economic literature (Perotti and Teoldi, 2014; Perotti and Teoldi, 2014a). This result can be due to several factors: political, legislative, and organizational ones.

- With regard to the former's higher management in public administration, it is recruited by co-optation by the political representatives, without any competition. For this reason, their salary is high because it is aimed at preserving the loyalty to politicians who appointed them.
- High compensation could also be due to legislative factors. In Italy, for instance, a bill links the salary of MPs to the judges appointed chairman of the Chamber of the Supreme Court (Presidente di Sezione della Corte di Cassazione) that may affect with a cascade (and also imitation) effect the compensation of annual compensation of central government senior managers.
- Moreover, from an organizational perspective, the Italian Public Administration is also characterized by a strong influence of administrative law, with a hegemonic administrative paradigm (Capano, 2003). This influence is not only an Italian peculiarity but also occurs in other European countries (Kickert, 2011). However, in Italy, the dominance of the law has been so high that there has been a sort of institutionalization of administrative law that has played a central role in all major public sector reforms that occurred in this country. Italy appears to have imported the French model, which is a model of the public sector that was developed by Napoleon I in France, in its entirety, while other countries imported only individual portions of this model (Ongaro, 2008). Reforms in Italy increased the spoils system, with a requirement that career public managers must be confirmed in their offices by the newly elected government (Ongaro, 2011). As a consequence, managers can obtain tenure or have a renewable or short-term contract that may or may not be extended, depending on their performance as well as political reasons4. Italy has also

[4] For analyses of performance in public research laboratories, *cf. also* Coccia, 2001a, 2003, 2004, 2005a, 2005b, 2006, 2008; Coccia *et al.*, 2015: Coccia and Rolfo, 2002.

recently experienced an increase in the number of managers hired from outside the Regional Governments (i.e., externally appointed), increasing the dependence of managers on their political masters, who can determine the duration of their contracts. The main reason for enacting these reforms was the desire of political parties for more influence, jobs and power. One of the main consequences of the reforms was that top officials became highly dependent on and fully loyal to political masters.

This political and administrative structure can explain the high levels of average annual compensation of central government senior managers. In order to control (and also reduce) this issue of high compensation of public managers in Italy, one of the latest reforms (i.e., legislative decree n. 150/2009) required public administrations to introduce principles that include: a new management approach, a new system of evaluation, and incentives and rewards (both monetary and non-monetary) based on performance and merit (Stupak and Moore, 2007). Public administrations are also required to set up an Independent Evaluation Unit to evaluate top managers, to ensure the adoption of an appropriate evaluation system, and to certify performance reports (Spano and Asquer, 2011). In this context, public managers play a central role in human resource management, defining what tasks are to be completed and what targets are to be reached. However, Italy remains a latecomer and is less effective than other countries in the introduction of New Public Management (NPM) reform with a disproportionate high level of Average annual compensation of central government senior managers, D1 position, compared to other countries. Alesina and Tabellini (2008) show that bureaucrats are likely to be better than politicians if the criteria for good performance can be easily described ex ante and are stable over time. Bello and Spano (2015) analyse how politicians influence managerial activities by providing empirical evidence for the existence of a deep form of politicization and a partisan management of public service in Italy. Hence, many changes must be implemented in order to reach the level of development of the most efficient countries in the field of public administration (Bouckaert and Halligan, 2008; Ongaro, 2011; Ongaro and Valotti, 2008).

5. Concluding observations

On the basis of the argument presented in this paper, we can therefore conclude that high levels of average annual compensation of central government senior managers, D1 position, seem to be associated with level of Average annual salary of members of parliament (MPs), *ceteris paribus* GDP per capita of countries. In addition, we also show that higher levels of compensation for central government senior manager are in countries that have a structure of the executive based mainly on Mixed Executive, and in particular with lower freedom of expression, freedom of association, free media, lower quality of contract enforcement and property rights and corruption control.

The present study shows the strong association between Average annual salary of members of parliament (MPs) and Average annual compensation of central government senior managers. This result may be due to several factors. In short,

(1) The present conceptual framework assigns a central role to level of Average annual salary of members of parliament (MPs), which can affect the Average annual compensation of central government senior managers in specific countries.

(2) The framework here shows that higher levels of compensation for central government senior manager (compared to their GDP per capita) are mainly in countries with Mixed Executive;

(3) This study shows that higher levels of public manager compensations are associated to lower freedom of expression, freedom of association, free media, lower quality of contract enforcement and property rights and lower

control of corruption. This confirms the literature that public services have come under increased pressure to improve their efficiency and effectiveness and to reduce demand on taxpayers while maintaining the volume and quality of services supplied to the public.

(4) These results may help policymakers to improve the efficiency of public administration by implementing reforms focused on best practices of New Public Management (NPM).

The current study here is exploratory in nature and examines only a limited number of variables. Although this study offers important insights to knowledge in these research fields, the study's findings need to be considered in light of their limitations. In fact, the relation investigated in this study is a problematic topic due to the diversity of political and administrative structure of countries. Hence, some results discussed here should be considered with great caution because they are based on aggregate data of different countries.

Moreover, especially limiting is the fact that the study here to analysis did not permit some intervening variables that may have been useful in providing a deeper and richer explanation of these phenomena of interests. Much work remains if we are to understand in more depth the reasons for and the implications of high compensation of managers in public administration.

Future research should focus on additional case study and in particular to investigate other factors that can affect the relation under study here. Overall, then, this preliminary study can be a main starting point to understand some possible determinants of high salary of public managers in heterogeneous socioeconomic contexts to design best practices directed to improve the management and organizational behaviour of public administration in countries with low government effectiveness.

To conclude, we empathise that these conclusions are, of course, tentative. There is need for much more detailed research to shed further empirical light on this vital relation between average wage of central government senior managers, salary of MPs and government effectiveness.

Appendix A. Sample of countries

Australia, Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom, United States, New Zealand.

Remark: Data understudy for other countries were not available.

Appendix B. Visual representation of estimated relationships

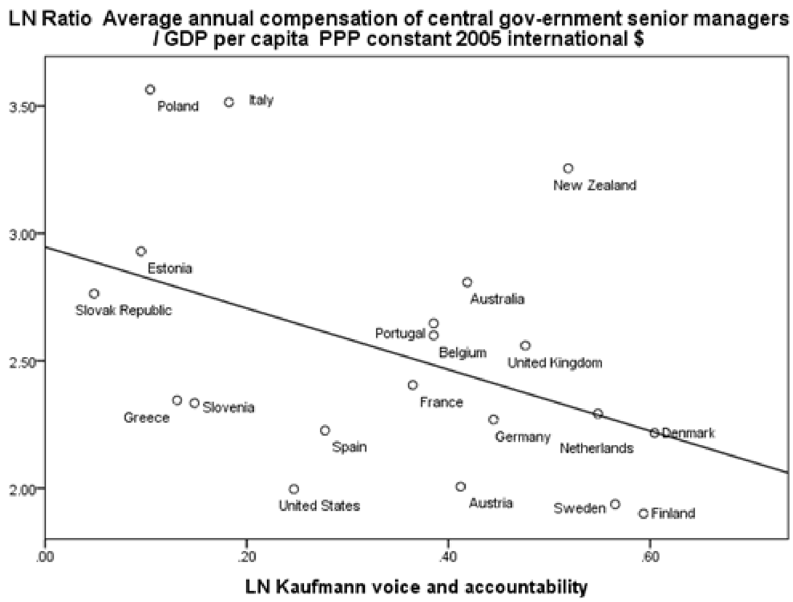

Figure 1B. Scatter and log-linear estimated relationship of average annual compensation of central government senior managers/ GDP per capita PPP constant 2005 international $ on Kaufmann Voice and Accountability

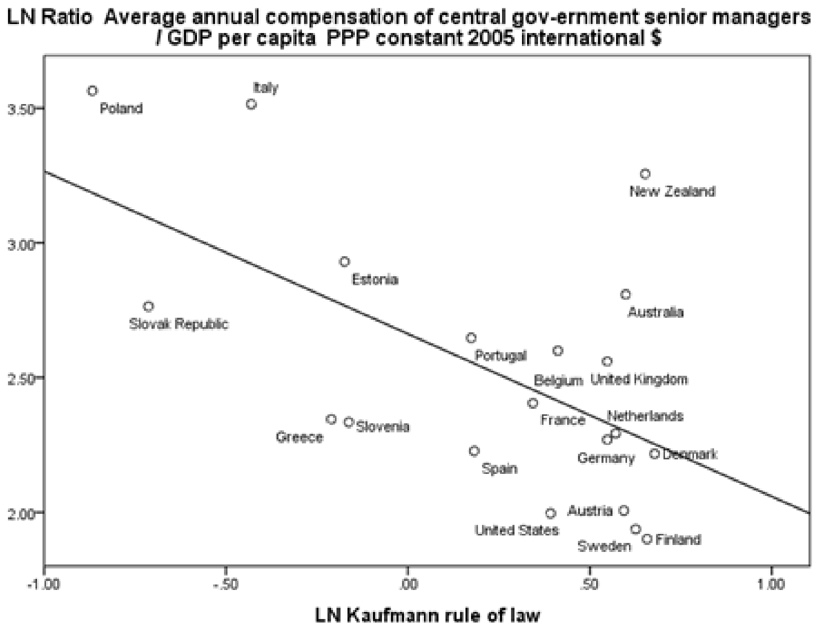

Figure 2B. Scatter and log-linear estimated relationship of average annual compensation of central government senior managers/ GDP per capita PPP constant 2005 international $ on Kaufmann rule of law

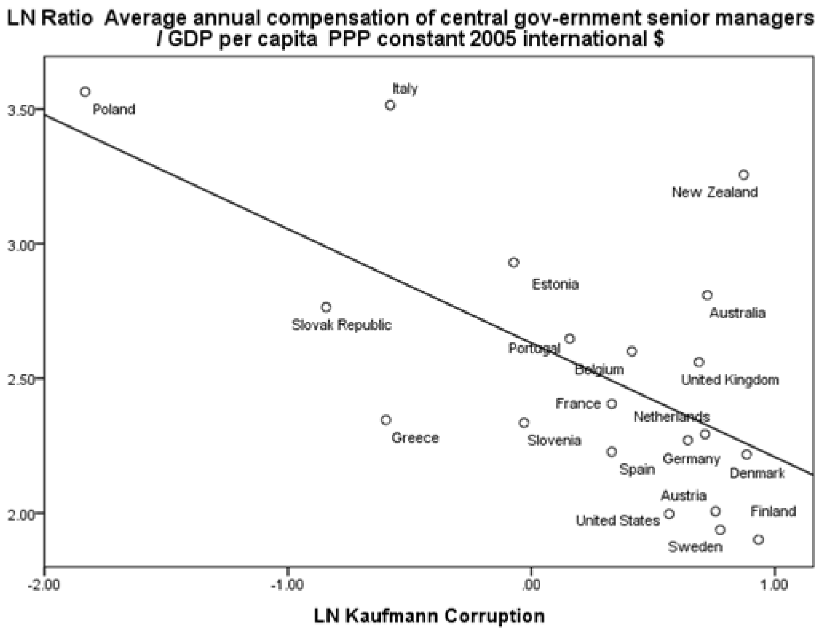

Figure 3B. Scatter and log-linear estimated relationship of average annual compensation of central government senior managers/ GDP per capita PPP constant 2005 international $ on Kaufmann corruption control.

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