

Reform of Public Administration in Greece

*Evaluating Structural Reform of Central Government Departments in Greece:
Application of the DEA Methodology*

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Abstract

The focus of this study is the attempt to evaluate the efficiency and effectiveness of 19 Central Government Departments (CGDs) in Greece. To that end, the optimal inputs are taken into account that lead these ministerial units to improve their performance and quality of provided services. At the same time a comparison takes place between the optimal input with those defined by the recent Administrative Reform 2013 (AR2013).

The results presented in this work are obtained by four Data Envelopment Analysis (DEA) models (i.e. Variable Returns to Scale DEA, Targeted factor-oriented radial DEA, Stochastic DEA, and Quality-driven Efficiency-adjusted DEA). A bias-correction method to the DEA efficiency estimators is also applied. This novel analytical methodology does more than merely attempt to defend or argue against the AR2013. It provides a scientific framework for evaluating public organisations restructuring with managerial implications. This framework is applicable to public institutions across the board (regardless of political environment or historical circumstances) for measuring the performance of public organisations services through targeted actions.

The results reveal that the AR2013 do perhaps achieve a reduction of the operating cost of the CGDs but not optimal cost cutting. Consequently, the AR2013 effort does not lead the CGDs to substantial increases of overall efficiency and effectiveness and thus to the amelioration of the predicament with which public administration in the country is being faced with for a long period of time.

Keywords

Public administration, central government departments, ministries, administrative reform, public management, public organisations, Data Envelopment Analysis, efficiency, effectiveness, public services' performance

JEL classification

C61, C67, D24, H11

1. The institutional design of the political system in Greece

1.1. An overview

The crucial structural features of the Greek political system have taken shape through a complex process of change, adaptation and modernisation of the political and social life in Greece since the third decade of the nineteenth century, immediately after liberation.

More specifically, the Greek modern State was created as a result of the successful outcome of the struggle for national independence and the liberation of the Greeks from Ottoman rule. The fight for liberation lasted for approximately eight years (1821-1829) and during the course of this struggle the foundations of the political life of modern Greece were laid. It was at that period that, inter alia, three different constitutional texts (those of 1822, 1823 and 1827) were introduced and were marked by an exceptionally liberal character for that time.

The first government of the new born State was that of the Governor Ioannis Capodistrias, who was elected in April 1827 by the Third National Assembly of Troezen for a term of office of seven years. His period in office – he took up his duties in January 1828 – was prematurely cut short by his assassination in September 1831. What followed was a period of internal conflict and unrest which lasted for about two years.

Finally, in January 1833, the Bavarian Prince Otto ascended the throne of Greece and ruled the State for some 30 years (1833-1862) in an autocratic manner, until he was forced to leave the country as a result of the anti-monarchical uprising of October 1862.

The first period of King Otto's rule (1833-1843), which took the form of an absolute monarchy, was however cut short with the outbreak of the army and civilian revolt of 3rd September 1843, as a result of which the liberal Constitution of 1844 was brought into force, together with a new electoral law. The latter provided for virtually universal suffrage (for men, at any rate) much earlier than in many other countries of Europe. Thus began the process of liberalisation, albeit partial, of the country's political life and the regular holding of parliamentary elections, initially (1844-1864) every three years, and then (1864 onwards) every four years. More specifically, from 1844 to the present, that is, a period of over 170 years, 64 elections of members of Parliament have been held. These were interrupted by the periods of abnormality of

the dictatorship of Ioannis Metaxas (1936-1940), the German occupation (1940-1944), and of the dictatorship of the 'Colonels' (1967-1974).

Furthermore, the system of parliamentary democracy (namely, the confidence of Parliament to the Government of the day) was officially proclaimed by the speech from the Throne to Parliament in 1875, while the principle of the tenure and neutrality of civil servants was established by the revision of the Constitution in 1911.

In the years which followed, with a period of very acute political conflicts intervening, the system of the non-monarchical Second Hellenic Republic lasted for approximately a decade (1924-1935), in the inter-War years. Forty years later, after the grim decade of the 1940s, with the German occupation and the civil war which followed it, the political system of the Third Hellenic Republic, currently in force, was introduced as a result of the referendum of 1974 whereby monarchy was abolished in Greece.

Subsequently, by the constitutional reform of 1975 and, even more so, by that of 1986 (and those that followed), the system of the distribution of competences and of decisive influence within the political system was redetermined, in such a way that the centre of gravity of the actual functioning of parliamentary democracy focused on the Government, and particularly on its head, the Prime Minister, with the corresponding consequences for and effects upon the whole of the country's political life (parliamentary 'primeministerialism').

The revision of the Constitution, in 1986, removed some of the regulatory competences of the President of the Republic, the so-called 'super-powers' (such as, for example, the right of dissolving the Parliament, the dismissal of the Government, and the proclamation of a referendum), and transferred them to the Parliament and the Government which enjoys a majority in it. In the last analysis, the exercise of these competences is a direct function of the options and decisive initiative of the Prime Minister. He, as leader of the Government and of the party with the parliamentary majority, possesses a complex of powers and competences which render his role, and legal and political position absolutely vital for the whole operation of the political system in the country.

Whether a Government remains in office, rests exclusively upon the confidence of the Parliament and in no way upon that of the President of the Republic, since the relevant competence of the latter to dismiss the Government, even when that

enjoyed the confidence of the Parliament, has been abolished (since the constitutional reform of it).

The President of the Republic is elected by the Parliament through a reinforced majority (2/3 or 3/5) for a renewable term of office of five years. The constitutional role he has to perform is essentially to act as the ‘regulator’ of the political system in the way that is determined by the relevant constitutional provisions in force (that is, in essence, to maintain the checks and balances of the system)⁴.

Therefore, it could be said that from the time of national independence onwards, the State has assumed a decisive role for the shaping of the transformation of society and economy in Greece. Thus, the model of development which was adopted in the economic field could not have been undertaken without the interpolation and active involvement of the State in it. The guiding and coordinating role of the State at the political level and in the more general process of social formation has been similarly wide-ranging and decisive. An altogether different matter is however the degree and extent of efficiency and effectiveness, let alone the quality, of state action and control of sociopolitical and economic affairs in the country.

Equally important has been the process of the gradual internal democratisation and modernisation of the functioning of the State and of the country’s political life in a general sense. The establishment and strengthening of parliamentarianism, particularly by the introduction and application in practice of the principle of the ‘declared’ confidence of Parliament in the Government, has resulted (at least since 1875) in the ensuring of the independence of the representative body in the appointment and maintenance in power of prime ministers and governments.

At the same time, the strengthening and more effective organisation of the political parties, particularly during the course of the later part of the twentieth century, has also contributed to the prominence and the leading role of the Prime Minister and the Government in the operation of the political system as a whole. According to the constitutional provision of article 37, paragraph 2, as Prime Minister is appointed the leader of the party which maintains an absolute majority of seats in

⁴ Since the restoration of democracy in 1974, there have been seven Presidents of the Republic: Mikhail Stassinopoulos (provisional, 1974-1975), Constantine Tsatsos (1975-1980), Constantine Karamanlis (1980-1985), Christos Sartzetakis (1985-1990), Constantine Karamanlis (1990-1995), Constantine Stephanopoulos (1995-2005), Carolos Papoulias (2005-2015), and the newly elected President Prokopios Pavlopoulos (2015-).

the House of Parliament. He (the Prime Minister) then determines, within his own exclusive competence, the composition of the members of the Cabinet and the Government as a whole, and leads the operation of the country's governmental and administrative machinery. He thus combines a complex of powers and competences which render his position literally unique in terms of actual power and influence within the political system. This is what renders him essentially the most important politician in the country (Makrydemetres and Pravita, 2012: 205 ff.).

1.2. Structural configuration of the political system

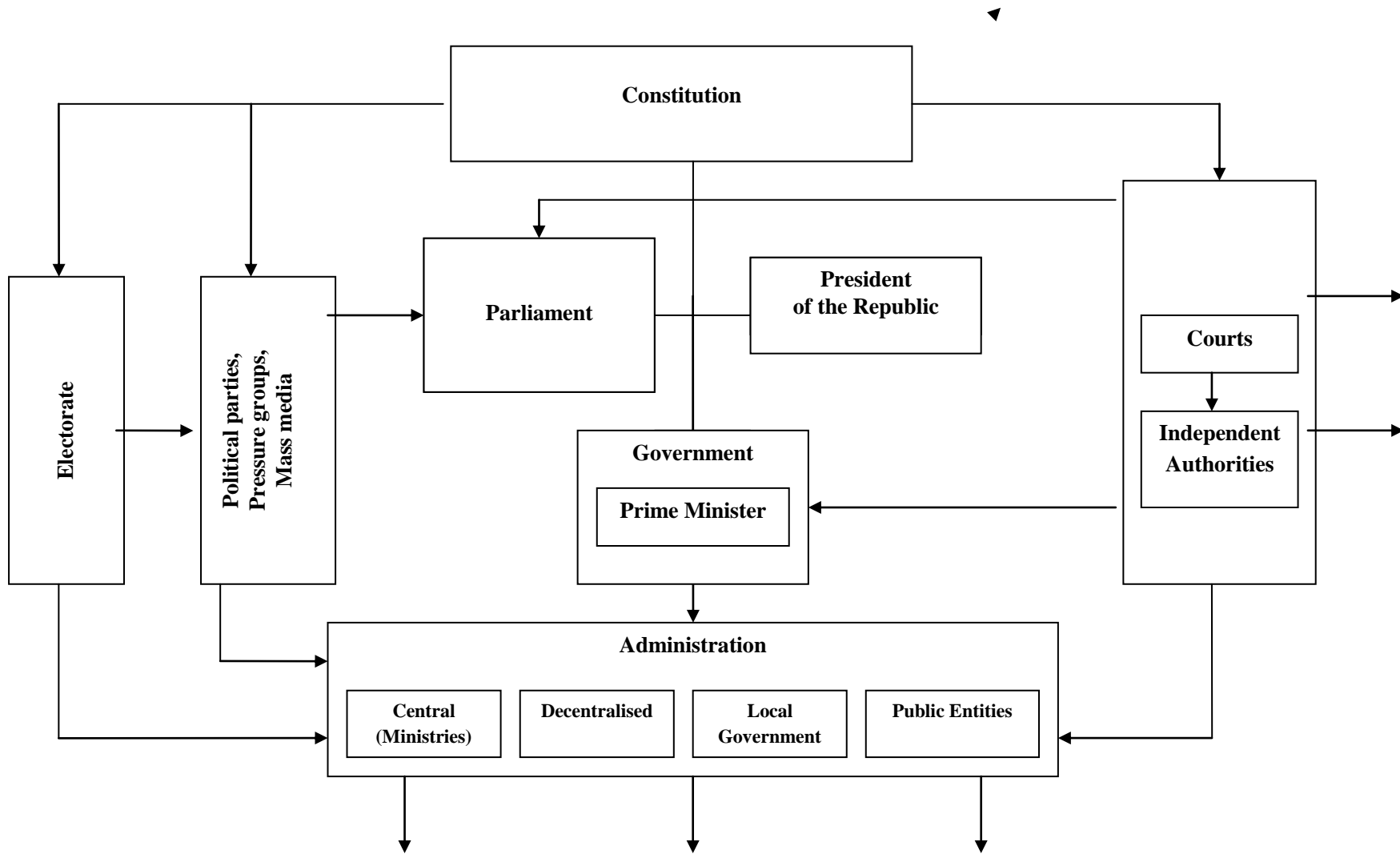
The Greek governmental system has been shaped, as it was already mentioned before, through a process of historical evolution covering approximately two centuries, from national liberation (1830) onwards. In its present form it displays the basic features of a complex and advanced system for the division of power in Greek political society. In this context, the rule of law, representative democracy, the market economy, public services and civil society constitute fundamental elements of the social and political reality in Greece, as in the most advanced countries of the world, including of course those which make up the European Union. The above constitutive 'evolutionary universals' (according to Talcott Parsons' analytical scheme, 1964) reflect the conceptual nucleus of the *acquis communautaire* and characterise in an inseparable manner the physiognomy of the public domain and the politico-administrative culture of the countries of Europe.

As far as the Greek political system is concerned, it exhibits the basic 'organisational constant' of functional and structural differentiation of its constituent elements or parts, insofar as it is organised in accordance with the principle of the separation of the powers (Article 26 of the Greek Constitution)⁵.

Thus, according to this fundamental organisational principle of the Constitution, the main constituent powers or the organs to which the differentiated basic functions of the political system are entrusted are as follows: the Electorate, the Political Parties, the Parliament, the Government, the Administration, and the Courts of Justice. If, furthermore, the hierarchical character of the political system's

⁵ Article 26 of the Constitution, which deals with State functions, lays down that: "1. The legislative powers shall be exercised by Parliament and the President of the Republic. 2. The executive powers shall be exercised by the President of the Republic and the Government. 3. The judicial powers shall be exercised by the courts of law, the decisions of which shall be executed in the name of the Greek people".

articulation is borne in mind, the diagrammatic representation of its functional differentiation can be presented as follows:



According to the Constitution of 1975 as it is currently in force (after the revisions of 1986/2001/2008), which provides the master plan of the functioning of the political system, the Executive is made up of the President of the Republic and the Government. The latter, in particular, determines and directs the country's general policy, while the Prime Minister, as its head, ensures its unity of action and directs its conduct in the implementation of public policy (Article 82 of the Constitution).

Public administration, at the central, decentralised and local level, forms (according to Articles 101-104 of the Constitution) the functionally differentiated part (sub-system) of the political system charged with the consistent and trustworthy application and implementation of the valid options and programmes of public policy as these are determined by the responsible organs or parts of the political system (Political Parties, Parliament, Government) and monitored as to their legality and constitutionality by others (the Courts of Law).

In fact, the 'strong' State in Greece is also shaped, inter alia, through the functional precedence of the 'executive' power over the rest of the major State powers (Parliament, Courts) and the primary, literally, dominant importance of the governmental branch of it (Government, Prime Minister, Ministers) as compared with its other parts (President of the Republic, Public Administration).

1.3. The tradition of centralism and concentration of power

During that formative period immediately after independence and in the first half of the 19th century, a period in which Greece along with other states and societies in the area entered the era of modernity, a number of things of strategic significance had to be and were decided about the shape and the trajectory of future development of the newly established State. One of these, without doubt, was the concentration of power and decision-making authority in the ruling administrative and political leadership and élite of the State. The unification of authority, through concentration and centralism, was however made possible at the cost of local autonomy, differentiation and independence, which was severely circumscribed if not eliminated altogether.

In contrast therefore, to the long tradition of semi-autonomous local communes under Byzantine and Ottoman rule, let alone the ancient Greek inheritance of the independent city-States, the modern Greek State was formed and shaped in an altogether different manner. Thus, centralised state machinery with novel institutions

was established hastily and in a spirit of urgent need. It is fair to say that Greeks had never experienced something similar in the past. The central state machinery was above all promoting uniformity, wiping out local variety and self-determination. The image of the city-State political diversity of the past gave, therefore, its place in modernity to that of the uniformity and centralism of the nation-State.

The idea of the centralised nation-State was not, however, a Greek novelty and peculiarity. It did rather, on the contrary, represent the dominant model of state building prevailing in most European societies at the time. Moreover, the bitterly realised experience of weak coordination during the War of Independence and the need for some kind of unified state authority and administration, made Greeks certainly more receptive after independence to the new modalities of state concentration and rule domination. Ever since the centralist model in the organisational structure and functioning of the modern Greek State has prevailed and is by and large still in force today. Needless to repeat that the concentrationist tendency was and has proved to be neither a Greek peculiarity nor an unsuccessful experience. On the contrary, centralised state authority and institutions seemed to be an almost universal trend in politics and a rather successful model for state building and functioning.

The crucial issue becomes then the kind and types of allocation of power and control among central, decentralised and local authorities and units. And that raises the major political and administrative issue of vertical division of functions and responsibilities: what belongs to the central institutions of the State and what to the decentralised and local ones, as well as the way they get coordinated with each other. An issue of no decisive resolve as yet.

2. The Greek administrative system

2.1. The governmental structure

Administrative arrangements in a country are considered as a crucial factor for sustainable development and social well-being, in the sense that they determine – to a considerable extent – the distribution of institutional power within a state as well as the implementation of public policy. Thus, public administration is understood as a structural element and integral part of the political system.

The Greek administrative system in its current shape and functioning forms an outcome of a rather longish historical process that has expanded in the time span of almost two centuries (1820-2015) and it is still undergoing serious change and transformation. Indeed, rapid adjustment in structure, functions, management practices and public service personnel is usually being raised as an issue both in domestic politics and in the European engagements of the country, especially in light of the fact that Greece is fully participating in the integrated European market place and its monetary system.

The Government consists, according to the Constitution (article 81, paragraph 1), of the Council of Ministers, which is made up of the Prime Minister and the ministers. Consequently, all the ministers, including alternate ministers and ministers without portfolio (or ‘ministers of State’, as they were renamed in 1991), and deputy ministers, provided that this is stipulated by the relevant provisions of law, belong to it. In accordance with Law 1558/1985 and Presidential Decree 63/2005 on the Government and Government Organs (article 1), all members of the Government except the deputy ministers, who may, however, be invited by the Prime Minister to take part in its meetings, without voting rights, make up, *ex officio*, the Council of Ministers (Cabinet).

All members of the Government in the broad sense, that is, including the deputy ministers, completely suspend during their term of office any other professional employment, and are collectively responsible for the overall policy of the Government, while each is separately responsible for acts and omissions which fall within his particular competence or jurisdiction (ministerial portfolio). As far as the liability of members of the Government is concerned, it is of three kinds and can be distinguished into parliamentary (in accordance with which members of the Government must have the confidence of the Parliament, be accountable to it, and resign if the Parliament withdraws its confidence in them), criminal and civil.

2.1.1. The Council of Ministers - Cabinet

The Council of Ministers is the supreme collegial organ of the government, and all the ministers (including alternate ministers) are its regular members, while deputy ministers attend when invited by the Prime Minister, without the right to vote.

The central competence of the Council of Ministers is, according to the Constitution (article 82, paragraph 1), to “*define and direct the general policy of the country, in accordance with the provisions of the Constitution and the laws*”. According to article 2 of Law 1558/1985 and Presidential Decree 63/2005 on the Government and Government Organs, the Council of Ministers is also responsible for deciding on political matters of more general importance, on any matter within the competence of the collegial government organs, or on any matter within the competence of one or more ministers which is referred to it by the Prime Minister, and for exercising any other relevant competence afforded to it by the Constitution and the relevant laws and acts of Parliament.

Apart from its general authority of direction, the Government has the right of legislative initiative (article 73, paragraph 1 of the Constitution) and, given the majority which it constantly enjoys in Parliament, and the conventional principle of the party discipline of party members including those who are members of Parliament, it exercises it in such a way that almost all the legislative material originates within it. The Government also has the initiative for the issuing by the President of the Republic of acts of legislative content “*under extraordinary circumstances of an urgent and unforeseeable need*” (Article 44, paragraph 1 of the Constitution). The competence of assessing the need for an early dissolution of Parliament and the calling of elections “*for a renewal of the popular mandate in order to deal with a national issue of exceptional importance*” also belongs exclusively to it. Last but not least, it is the Government which guides and directs the whole of the State’s public services (including the armed forces and the security forces) and supervises the implementation of public policy by them.

The Council of Ministers is convened by the Prime Minister in regular session every Wednesday – a practice that has been often violated, especially in the past (Pravita, 2013). For this purpose an agenda is drafted and official minutes, which remain classified for 30 years, are kept.

The operation of the Council of Ministers is supported in administrative terms by the Secretariat General of the Government, which is a distinct public service, directly subject and responsible to the Prime Minister.

Taking account of the above, the Government is the ‘powerhouse’ and the ‘steam engine’ of the political system, since it holds and plays an absolutely vital role

in the whole process of the country's governance, that is, the determination and implementation of public policy to deal with complex problems which arise in economy and society and fall within it.

2.1.2. *The Prime Minister*

The Prime Minister has figured in the governmental and politico-administrative life of the country almost since the foundational period of the Greek State under the name, used in the past, of President of the Council of Ministers.

Thus, apart from the impressive initial example of the Governor Ioannis Capodistrias (1828-1831), whose status in relation to the other members of his Government was a truly dominant one (approximating that of the President in non parliamentary democracies), in the two related Decrees of the Regency on the formation of the Secretariats (1833) and on the competences of the Chief Secretary of State (1835) there was a special reference to the institution of the President of the Council of Ministers. Namely, it was laid down in the first of these decrees that the President of the Council of Ministers, "*who shall preside*" over it and takes precedence over the rest of the members, "*shall be specially nominated by the King*". In the second, after a repetition of the provision that "*The Chief Secretary of State shall be President of the Council of Ministers*", it was added that "*he shall hold first rank among the servants of the Kingdom and shall thus have precedence over all*".

Thereafter, the corresponding provisions in the constitutional texts of 1844, of 1864 and 1911 also included references to the institution of the President of the Council of Ministers, whose role and status was successively elevated to that of the first Lord of the Government. The Constitution of 1927 for the first time defined the office of Prime Minister under that name; this was repeated later in the Constitution of 1952, and in the four constitutional texts of the Third Hellenic Republic (1975, 1986, 2001, 2008).

Thus, the pre-eminent legal and political position of the Prime Minister's office in government practice and in political life was finally reflected in the provisions of the Constitution, in which it occurs and is described, albeit in a concise form.

2.1.2.1. The powers of the Prime Minister

The basic competence of the Prime Minister is, according to the existing Constitution of the country (Article 82, paragraph 2), to “*safeguard the unity of the Government and direct its actions and those of the public services in general, for the implementation of government policy within the framework of the laws*”.

As to the more important of his individual competences, it is worth pointing out that, first of all, it is the Prime Minister who decides and determines the composition of the Government, since it is by his exclusive proposal and choice that ministers are appointed and dismissed by the President of the Republic. He does also define the particular competences and jurisdictions on public policy domain of the ministers of State, alternate ministers, and deputy ministers. He presides over the collegial government organs and represents the Government at the highest level, determines the precise content of government policy within the framework of the decisions of the Council of Ministers, coordinates the activities of ministers, and resolves any possible disagreements among them. He exercises general supervision over the procedures for the implementation of government policy by the public services and it is no-one else but the Prime Minister who gives permission for the publication in the Government Gazette of any text which must according to law be published in it (Makrydemetres and Pravita, 2012: 240 ff.).

To that end, three independent public services (the Secretariat General of the Prime Minister⁶, the Secretariat General of the Government, and the Secretariat General of Coordination), as well as the Central Committee for the Preparation of Laws are there to assist the Prime Minister in the exercise of his office. In this way, the organisational and staffing conditions and the infrastructure has taken shape for the establishment of a small-scale ‘White House’ under the Prime Minister, a fact which contributes to the stressing and reinforcement of his primary position in government and political practice as a whole.

It can thus be concluded that the dominant position of the Prime Minister in the operation of the mechanism of Government and of the country’s political practice

⁶ About a hundred individuals are directly employed in this bureau, including the heads of the individual offices and service units which belong to it (Economic, Diplomatic and Legal Bureaus, Strategic Planning Bureau, Special Policies Bureau, Press Office, European Union and International Relations Bureau, Bureau for matters of administration and organisation), of the offices of the Prime Minister’s special advisors and associates, and of the various non-tenured civil servants (secretaries, administrative staff, etc.).

also becomes apparent more generally from his pre-eminent legal and political status in relation to other governmental institutions and organs. This, of course, is dependent upon the facts of the current socio-political state of affairs (whether, for example, the Government is formed by a single party or by a coalition) and of the particular features of his own individual personality, outlook and orientation. The role of the Prime Minister is unique and the way in which it is exercised varies depending upon the historical period, the political situation, and the personality of each of its occupants.

2.1.3. Collegial government organs

Apart from the Council of Ministers, which is the supreme collegial government organ, whose existence and competences is provided for by the Constitution itself, there are within the framework of Greek governmental practice and tradition other individual government organs and committees which serve to ensure a better preparation and execution of the decisions of the Council of Ministers.

The chief of these is, according to the latest regulation in this connection⁷, the Cabinet Council (formerly called Cabinet Committee) which comprises of ten ministers heads of respective Central Government Departments. Its work is presided by the Prime Minister.

Apart from the above collegial government organs, a series of individual inter-ministerial government special purpose committees have also been set up and are in operation (for example, on privatisations, civil protection, minorities, road safety, and matters of youth).

2.2. Ministers and ministries

The parliamentary governmental system has raised the role of the Prime Minister at the centre of the political decision-making process, whereas particular ministers have the overall supervision of the public services which comprise their portfolio, as well as the supreme command for the design and the implementation of the public policy subject to the ministry they are in charge of.

⁷ Act No. 2 of the Ministerial Council of 6 February 2015.

The typical structure of a ministry (or department of State) includes General Secretariats, General Directorates, Directorates, Sections and Bureaus. The political leadership of a ministry, apart from the minister, often includes alternate ministers, deputy ministers and secretaries general (or special). Civil servants employed in the above-mentioned organisational units perform the corresponding duties and competences.

The ministers are members of the Council of Ministers and of the other collegial government bodies, but are also senior independent organs of the administration of the State, each of whom usually is in charge of a unit of public services which make up the corresponding ministry or department of State or Central Government Department.

Without precluding the existence of ministers without portfolio or ministers of State, as they were renamed in 1991 (Law 1943, article 79), ministers of the Government in the broad sense, including alternate ministers and deputy ministers, are organically linked with a corresponding unit of the public services and one separate area or domain of public policy. Thus, as a rule, the number of ministers and the names of their positions correspond to the ministries of which they take charge – with the exception of the ministers of State, if, of course, they do not head any ministry⁸.

The principle of correspondence of the number of ministers with the ministries in their charge became fully accepted during the 19th century and to such an extent that even the Prime Minister himself was organically associated with some ministry. The partial abandonment of this practice or convention of full coincidence of the number of ministers with the ministries in their charge started to take place during the second decade of the twentieth century with the introduction and inauguration of the institution of minister without portfolio (1918), and of that of under-secretary or deputy minister (1918). This was the result of the broadening of the scope and the functional differentiation of state action, and, naturally, governmental responsibilities in almost all sectors of public policy. Later, in the post-War period, this practice was

⁸ According to paragraph 2 of Article 79 of Law 1943/1991 above, “*Ministers of State shall be members of the Ministerial Council and may take charge of ministries*”. The office of Minister, or, more usually, Deputy Minister to the Prime Minister, whenever someone holds it, should be regarded as belonging, generally, to the same category. In this case, the Minister or Deputy Minister to the Prime Minister performs the duties and exercises the competences which are assigned to him by the Prime Minister within the framework of the latter’s own broader role of coordination and direction of the Government and the public services generally.

maintained by the establishment of the institution of alternate ministers, initially as the need arose (1953, 1964), until its use was extended (under the military dictatorship, but also from 1981 onwards, as in the last all-party Government in the period 1989-1990). Currently, in the present Government of the country (that of Mr. Alexis Tsipras) in almost all Government Departments (ministries) there were placed and appointed often more than one alternate ministers with respective division and allocation of segments of public policy; rise of the level of differentiation in political organisation can hardly avoid analogous intensification of problems of coordination, however.

Thus, the total number of ministers and members of the Government in general, in the broad sense of the term, is now not subject to any specific delimitation (*numerus clausus*) nor is it identical with the number of existing separate ministries, but often greatly exceeds it (by as much as two or three times).

Ministers have equal status among themselves from a purely legal point of view. As a general competence, in addition to their capacity as members of the supreme collegial government body, the Council of Ministers, they have the overall direction at the highest level of the public services which are subject to the ministry of which they are in charge. They also assume the supreme command for the design and the implementation of the area of public policy which falls within the contours of their department of State (ministry). Their individual and functionally differentiated *ratione materiae* competences are determined by the special legislation which applies to the operation of the State activity which they supervise.

Ministers of State and alternate ministers exercise the competences which the Prime Minister entrusts to them and specifies by a decision on his part, while the competences of deputy ministers are determined by a joint decision of the Prime Minister and the minister competent *ratione materiae*. Deputy ministers are not hierarchically the inferiors of ministers; on the contrary, they are legally of equal standing with them (sharing independent parliamentary and criminal liability). Nevertheless, they differ from the ministers chiefly from a political point of view and, consequently, they are subject to their coordinating supervision and authority of direction as to the specified field of the wider circle of public policy which corresponds to the ministry. They are also usually deprived of the prerogative of

legislative initiative, even for matters falling within their particular field of policy jurisdiction, which is maintained by the (full) minister himself (Pravita, 2010).

The present composition of the members of the Government of the country's current Prime Minister, Mr. Al. Tsipras, as that was arrived at after the last parliamentary elections, of January 2015, includes 1 vice-president, 10 Cabinet ministers, 3 ministers of State, 20 alternate ministers and 6 deputy ministers (2 of which are deputy ministers to the Prime Minister). The size of the Government in the broad sense is 41 members of the Government, including the Prime Minister. Of these, 6 are women and 14 (5 ministers, 7 alternate ministers and 2 deputy ministers) are extra-parliamentary figures, that is, they do not simultaneously hold a seat in Parliament.

The government machinery is currently structured in Greece into a complex of 10 (giant) separate departments (ministries) among which the members of the Government, with the exception of the Prime Minister and ministers of State, who are not in charge of any specific ministry, are distributed.

The ministries of the Greek Government of which the corresponding ministers are in charge are as follows, in order of precedence:

1. Ministry of the Interior and Administrative Reconstruction (with three alternate ministers and one deputy minister)
2. Ministry of Economy, Infrastructure, Shipping and Tourism (with three alternate ministers)
3. Ministry of National Defence (with one alternate minister and one deputy minister)
4. Ministry of Culture, Education and Religious Affairs (with three alternate ministers and one deputy minister)
5. Ministry of Productive Reconstruction, Environment and Energy (with two alternate ministers and one deputy minister)
6. Ministry of Justice, Transparency and Human Rights
7. Ministry of Foreign Affairs (with two alternate ministers)
8. Ministry of Finance (with two alternate ministers)
9. Ministry of Labour and Social Solidarity (with two alternate ministers)
10. Ministry of Health and Social Security (with two alternate ministers).

The structuring of the government machinery is complemented by a host of independent public services presided over by general secretaries (who are senior

untenured, that is, not permanent, civil servants with the first rank of the special posts), and various public legal bodies which are subject to the broader circle of responsibility and supervision of the individual ministry competent.

2.2.1. The evolution of Central Government Departments

The evolution of the ministries in the Greek governmental and administrative tradition⁹ can be divided into three main stages or phases:

During the first, and longest, period (1833-1910), the number of ministries remained fixed and unaltering at the seven first ‘classic’ ministerial departments. These were initially determined by the Decree of the Regency of April 1833 as seven secretariats of which corresponding secretaries of State took charge.

The seven first basic ministries or ‘secretariats of State’ as they were then called, were as follows:

1. The Secretariat for the Royal Household and Foreign Affairs
2. The Secretariat of Justice
3. The Secretariat of the Interior
4. The Secretariat of Ecclesiastical Affairs and Public Education
5. The Secretariat of Finance
6. The Secretariat of War
7. The Secretariat of the Marine.

Subsequently, although the basic structure of the government mechanism remained effectively unchanged for some 80 years, on the introduction of the Constitution of 1844, the secretaries of State were renamed ministers and, consequently, the secretariats ministries, also in accordance with Special Law ΑΓ’/1846 concerning the Organisation of the Ministries. From that point on, these

⁹ It is worth mentioning that during the revolutionary years leading to independence and in accordance with respective constitutional provisions, the structure of governmental machinery consisted of eight ministers, including the chief Secretary of State (stipulated by the Constitution of Epidaurus of 1822). The number of ministers was reduced to seven by a relevant provision of the Constitution of Astros (1823), whilst in accordance with the Constitution of Troezen (1827), the ministers were renamed ‘secretaries of State’, their number was further reduced to six, and they were placed under the guidance of the Governor of the Hellenic Polity. Finally, on the assumption of the office of Governor by Ioannis Capodistrias and following the changes which he brought about, mainly by means of Decree ΑΔ’ of 1829, the central administration of the State consisted of six ministries presided over by the corresponding secretaries of State. The latter subsequently, in accordance with the Constitution of 1832, were named ministers - secretaries.

names (minister, ministry) prevailed definitively in the Greek political, governmental and administrative tradition.

The second phase (1911-1951) extended effectively over the first half of the twentieth century and was marked by the gradual differentiation of the government machinery by the hiving off or dividing up of areas from the old unified ministries (the 'hard core' of state action) and their elevation into new independent ministries, and by the setting up of new fields of state activity and public policy, which were organised into ministries.

Thus, with the radical change in the political scene in the second decade of the 20th century and the commencement of the period of governance of the country by Eleutherios Venizelos, the Ministry of the National Economy, within whose scope the areas of agriculture, commerce and industry were included, was set up for the first time in 1911. This was followed in 1914 by the Ministry of Public Transport, in 1917 by the Ministries of Health Care and of Agriculture and Supply, in 1922 by the Ministry of Posts, Telegraphs and Telephones, and in 1935 by the Ministry of Labour. In the early post-War period, the Ministries of Coordination and of Public Order were set up in 1945 (the latter had been introduced for the first time in 1924 under the name of 'Ministry of Lawful Order').

This period ended with the first systematic codification in almost 100 years of the morphology of the government mechanism, carried out by Emergency Act 1671/1951, in compliance with which the ministries were organised into 16 basic areas of government action. These were:

1. Ministry to the Prime Minister
2. Ministry of Coordination
3. Ministry of National Defence
4. Ministry of Foreign Affairs
5. Ministry of Justice
6. Ministry of the Interior
7. Ministry of Education and Religious Affairs
8. Ministry of Finance
9. Ministry of Commerce
10. Ministry of Industry
11. Ministry of Public Works

12. Ministry of Transport
13. Ministry of Agriculture
14. Ministry of Social Security
15. Ministry of Merchant Marine
16. Ministry of Labour.

During the third phase of the evolution of the ministries, which brings us down to the present day (1951-2015), the articulation of the government mechanism has not undergone substantive structural changes, though some of the older ministries have in the meantime been amalgamated (e.g. Ministry of the Interior with the Ministry to the Prime Minister), whereas certain new ones have been set up (for example, the territorial or 'regional' Ministries of Northern Greece, in 1955, which was renamed as the Ministry of Macedonia and Thrace in 1988; of the Aegean, in 1985; of Culture and Sciences, in 1971, the Ministry of Planning, Housing and the Environment, in 1980, and the Ministry of the Press and the Mass Media, in 1994).

Thus, in accordance with later codifications of the structure of the government mechanism, Law 400/1976 on the Council of Ministers and Ministries set the number of the ministries in the period after the restoration of democracy at 19. Some ten years later, Law 1558/1985 on the Government and Government Organs kept the number of ministries at 19, but in the following year they were increased to 20 (Makrydemetres and Pravita, 2012: 290 ff.).

By way of conclusion, it could be said that in the present phase of its historical development, the structure of the government mechanism in Greece has developed till recently (January 2015) into 18 distinct ministries. This shows that the somewhat 'generous' arrangement of the government structure has continued to remain a 'constant' throughout almost all the post-War period and, in any event, during the period of the Third Hellenic Republic (from 1975 onwards). It would, therefore, not be unfair to say that this is perhaps indicative both of the wide range of public policy, which extends into almost all areas of social action and of the magnitude of state intervention in the social sphere. It also reflects the corresponding need for control of public bureaucracy by an equally complex and extensive political superstructure, with numerous government posts and appointed political offices for the guaranteeing of policy guidance over the administrative infrastructure (bureaucratic machinery).

The recent deduction (in Mr. Al. Tsipras' new Government) of the size or rather of number of Central Government Departments to 10, a detailed list of which has been given above (ante, page 19), has been brought about mainly through the formation of respective 'giant' departments by means of the formal merging of respective units of public services. It remains to be seen, however, whether this kind of formal delimitation of the number of government departments is reflected in the necessary adaptation of the corresponding organisational structuring (i.e. the composition and reshaping of directorates general, directorates, etc.) shown in organisational charts. The fact that, besides the head of each giant department, have been appointed alternate ministers in almost all government departments is an evidence of a rather formalistic than material reduction of the overall size of the Government.

The Government and the system of public services of the State do in practice form the core and constitute the most important and extensive part of the executive power within the framework of the organisation and functioning of the political system in Greece.

2.3. Decentralised units

The administration of the State is organised according to the principle of decentralisation. Thus, the administrative division of the country is based on geo-economic, social and transport conditions. The central government, with the exception of specific functions, coordinates and supervises the decentralised state organs, whereas the latter keep effective control over matters that concern their respective regions, implementing domestic and European policies on economic and social development within their geographic scope of competence. Furthermore, according to the Greek Constitution, local affairs are carried out by local authorities while central government has no autonomous presence and competencies and decentralised administration has been established.

Since 2010, the country has been divided into 7 decentralised administrative units of the State: 1. Attica, 2. Thessaly - Central Greece, 3. Epirus - Western Macedonia, 4. Peloponnese - Western Greece and Ionian Islands, 5. Aegean, 6. Crete and 7. Macedonia - Thrace.

As a result of this long established constitutional provision, which is of an obligatory nature, the decentralised units of most government departments are set in the 7 decentralised administrative units of the country. Each one of them is run by a Secretary General responsible, who is a senior public official appointed freely by the Cabinet. The 7 Secretaries General of the decentralised administrative units are not permanent civil servants, they do not enjoy any tenure of office and they are accountable directly to the Government and in particular to the Minister of the Interior and Administrative Reconstruction. The Secretary General has a political and administrative role. He is the representative of the Government and is responsible for implementing government policy on regional matters. He is in charge of all service units of the administrative unit, he directs, coordinates and monitors the actions of the services and their employees. Moreover, he exercises those competencies which have been entrusted or transferred to the decentralised administrative unit by law.

A respective council ensures representation of local interests with an advisory role. It is composed of the Secretary General, representatives of the local authorities, chambers of commerce, trade unions and professional associations.

The decentralised administrative units of government departments assume and exercise, according to the Constitution and subordinate legislation, general responsibility and jurisdiction within the confines of the territory of the respective administrative unit for all matters of policy and administration, except a number of them, which are exclusively retained by Central Government Departments (for instance, matters of national defence, foreign policy, nationwide economic matters, etc.).

2.4. Local government and regional authorities

Below or rather within the 7 decentralised administrative units, the administrative landscape of the country is further subdivided and differentiated again on a territorial basis into 13 regions of local or rather regional government being headed by the Governor of the Region and the regional councils, elected since 2010, directly by the people. More specifically, according to recent legislative reform, the regions ceased to form decentralised units of state administration. Instead, they were elevated to the status of a second tier of local government authorities. As a result, the regions now form separate legal entities, distinct from the legal entity of the State *stricto sensu*,

they have their own budget and they are run by officials who are elected by the populace through a universal suffrage and for a 5-year term of office, which is renewable.

The first level of local government consists of municipalities, which are responsible for the administration of local matters. These agencies, which incarnate the timeless Greek communitarian spirit, are, traditionally, viewed upon as the cornerstone of democracy in the Greek political system, to the extent that they give way to the participation of the citizens in the local - public affairs. Their competence include the overall responsibility for the administration of local matters and the care for the promotion of social, financial, cultural and spiritual interests of their citizens. Their leaders are elected by the people through a universal and secret ballot.

The first tier of local government in Greece has always been occupied by the municipalities (demoi) and the communes (koinotites). The pre-Revolutionary communes were abolished with the establishment of the modern State in the 1830s. As a result of that reform, there existed in the country about 600 units of local government during the biggest part of the 19th century. These were only the municipalities (demoi). This policy was reversed in the beginning of the 20th century (1912) with the aim to render local government more responsible and accountable to the local human and political community. Communes (koinotites) were accordingly brought to life again and were recognised by law as the first layer of local government along with the municipalities.

That was the case until very recently (2010) when the landscape of local government in Greece was altered once again by reverting to the initial model of bigger local government units and abolishing by obligatory law all the communes. The overall size of the local government units was thereby increased and their total number was reduced to 325 of them.

2.5. The public sector

The final outermost numerous and least homogeneous layer of public administration in Greece comprises of the multifarious agencies and organisations of the wider public sector, inclusive of public enterprises, state banks and their offspring's, public hospitals, educational and cultural institutions and so on.

The public sector as a whole in Greece is inclusive therefore of:

1. Ministries
2. Local Government Agencies (of 1st and 2nd level or tier)
3. Public Legal Entities, which are organisations established for the accomplishment of specific public goals. They enjoy administrative and budgetary autonomy and are supervised by the ministries. They are classified according to their legal status in: i) legal entities of public law such as hospitals, social security funds, chambers of commerce, etc., ii) legal entities of private law that pursue public benefit or other public purposes and are financed or subsidised by the State, iii) public companies, mixed economy enterprises and banks such as Public Power Corporation, Hellenic Petroleum Corporation, Bank of Greece, National Bank of Greece, etc.
4. Independent Administrative Authorities. They are entities which lie outside the hierarchical review or the supervision of the central government. They are equipped with broad decision-making competencies (regulatory, licensing, arbitration competencies as well as competencies for sanctions or competencies of review). Some of these are the following: the Supreme Council for the Selection of Personnel, the Ombudsman, the Authority for the Protection of Personal Data, the National Radio and Television Council, the National Telecommunications and Posts Commission, the Competition Commission, and the Energy Regulatory Authority.

The institutional shape as well as the concrete legal status of the wider public sector presents great variety and the particular agencies, authorities and organisations, which fall in this big category, reflect the way of State links and penetrates into the economy and society. That is, and has been the dominant model of development since World War II in various forms and aspects of social and economic activities, such as, for instance, in communication, health, education and culture, public works, infrastructure, etc. As a result of this kind of development, the Greek economy has been a mixed one, in the sense that the market economy has been mediated and regulated, perhaps over-regulated at least occasionally, by the State. The latter has assumed a preponderant role in development and that largely explains the extent of the State's direct or indirect involvement in the creation of the country's Gross National Product.

It comes of no surprise, therefore, that the new dominant paradigm of political economy in Greece – as it is the case elsewhere too – concurs in reversing the role ('rolling back') of the State's intervention and involvement in the economy and

society. A medium term objective, which is not unrealistic, would then be to reduce the total size of the State's share in the GNP from over 40% as used to be the practice until very recently to that of 30% in the near future. It is fair to say that this overall strategic objective is more or less common property not only among economists, but among mainstream politicians as well. Let alone the pressure for change induced with Greece's accession to the European Monetary Union, which can hardly be neglected.

2.6. The control of public administration

Administrative action must comply with the rule of law. The Greek legal system traditionally recognises parliamentary control of administrative action, administrative self-control and judicial control. A consistent effort is made during the recent years, to further promote transparency and accountability in the Greek political - administrative system. This important area of reform involves the introduction of new institutions. Special bodies of inspectors (such as the Administrative Inspectors and the Financial Crime Confrontation Body), are set up in order to increase public control on bureaucracy, to fight against corruption and to improve transparency, as well as the effectiveness of specific public policies.

2.7. Civil service

The Civil Servant's Code contains the principal regulations that govern the in-service status of the civil servants (the methods of selection, rights and duties, in-service changes, the promotion process, liability, the termination of the relation of employment, etc.). The engagement and in-service status of the military and police personnel as well as the personnel on a private law contract are governed by a distinct legal regime. Security of employment for civil servants has been guaranteed by the Constitution.

Civil servants are being divided into the following categories according to their legal status: i) regular civil servants, who are governed by norms of public law, are tenured, and their ranks evolve in accordance with the career system¹⁰, ii) civil

¹⁰ It may be reminded at this point that the principle of tenure in the civil service employment was constitutionally guaranteed in 1911 among a number of reforms initiated then by El. Venizelos, although it was actually implemented 20 years later along with the reestablishment of the Council of State. It should also be born in mind that the tenure principle along with the meritorious system of appointments in the civil service through examinations were regarded and long sought after as major modernisation measures aimed at

servants with a term of office, whose status, during their term, is assimilated to that of the preceding category, iii) civil servants on a private law contract of a fixed period, intended to deal with either unforeseen and urgent or transitory needs, iv) non-tenured civil servants, who enjoy the personal trust of those who appoint them and can be dismissed at any time without special guarantees and compensation (the political bureaus of the Prime Minister and ministers are staffed by non-tenured civil servants), v) civil servants on a private law contract in organic posts (experts, auxiliary or technical staff).

The selection of civil servants takes place by competitive examinations or by virtue of objectively assessed qualifications (experience, academic qualifications, social criteria, etc.). The selection and recruitment process is entrusted to an independent administrative authority, the Supreme Council for the Selection of Personnel (Civil Service Commission).

Civil servants are recruited at the starting rank provided for the relevant position and are promoted to the other ranks in the hierarchy, if they have completed the required time of service and if they have the formal qualifications required. Apart from seniority, academic qualifications and performance appraisal are important criteria for career advancement. The posts of the personnel are classified in the following categories: Special Posts category, University Studies category, Technical Studies category, Secondary Education category and Compulsory Education category.

3. Reforming the administrative structure

One of the crucial factors delaying reforms in economy and society in Greece is the poor condition of public administration. Namely, the administrative system of the country exhibits certain curious aspects and features which are conducive to remarkable weaknesses of performance and rather limited capacity of achieving results (Mergos *et al.*, 2012: 195 ff.).

The poor quality of public administration in Greece has been identified over the years by numerous experts' reports, pieces of academic analysis, and public opinion. The main factor responsible for this quality deficit is not only the overall

and capable of breaking the vicious circle of clientelism, the application of the *spolia victoribus* rule and the low level of professionalism and efficiency in the civil service thus. The first efforts for establishing the merit principles were initiated by Charilaos Trikoupis' reforms in the 1880s let alone the promulgation and the formal enrichment of the principle of merit by the constitutional documents of the revolutionary period.

extent of public intervention in economy and society, which is excessive by any means and standards of comparison, but also the long tradition of legalism, rigidity and formalism of administrative behaviour almost at any level and aspect of state action. Furthermore, the infiltration of political or rather party-political concerns into the operation of state agencies and organisations at the centre and the periphery of the administrative machinery of the country does only aggravate the condition of limited professionalism and civil service ethos and mentality in public administration. Excessive size, political dependence, legalistic culture and lack of professionalism in administration, if combined as they actually do, are factors which explain much of the present predicament of public administration in Greece.

Whether administrative crisis is a persistent phenomenon in a developing country like Greece remains the basic question. The reason is that despite various reforms and interventions which have taken place over the last 40 years or more and the widespread consensus for the modernisation of the political system as a whole, state bureaucracy and administration has failed to improve in a substantial way. Nor the worst symptoms of maladministration and bureaupathology have been overcome.

On the contrary, the features and characteristics of crisis seem to persist, if not intensify, and manifest themselves not only in the widening gap or deficit of public finance but also in the nearly negative efficiency and effectiveness of the administrative behaviour in the public sector. Related aspects of the administrative crisis include the size and the limited professional expertise of public employment, the outmoded and ill-shaped organisational structures, the virtual absence of modern management methods, principles and techniques, the prevailing legalism, formalism and underdevelopment of professional ethos in the administrative culture of modern Greece. As a result, a sense of implementation failure tends to prevail in almost every sector of state activity and performance.

The above factors of administrative crisis linked as they are among themselves as well as with others in adjacent social systems (i.e. education, party politics, urbanisation, weak industrialisation, etc.) produce the particular symptoms of the endemic pathology and incapacity of state bureaucracy. Accordingly, the administrative crisis does also seem to reflect and perpetuate a wider inertia and weakness of the public sector as a whole. The causes of this inertia ought, however, to

be sought at the structure and foundations of the political system rather than a particular coincidence.

For analytical purposes, it is perhaps warranted to distinguish between two main categories of concurring factors or causes of administrative crisis in the Greek case. Namely, the limited external differentiation of the administrative domain from politics, political control and party dominance. And secondly, the insufficient internal development and differentiation of the administrative subsystem in terms of structures, functioning and personnel professionalism which amounts to an overall capacity crisis of state bureaucracy and administration.

It does, therefore, seem to be the case that an inverse relationship tends to obtain among the above identified factors. That is, the tendency for politicisation and concentration of power, on the one hand, and the level of organisational underdevelopment and differentiation of the administrative subsystem, on the other. Thus, the intensification of political control and domination over state bureaucracy tends in the longer term to undermine the conditions of steady development and professional advancement – including meritocracy – in the administrative structure and culture. As a result, crisis phenomena tend to perpetuate themselves, which in turn creates the need for more political intervention and control, and so on in a vicious circle. It comes of no surprise, therefore, that the perception of failure and ineffectiveness of reform measures could be regarded as an instance of the phenomenon of ‘crisis of the crisis management’.

The fact that the administrative system in its present shape and condition presents itself as an obstacle rather than as a tool and helpful instrument for advancing and serving reforms in economy and society needs hardly to be emphasised. Indeed, it is increasingly being realised that unless and until administrative reform and modernisation is rapidly and effectively advanced, economy and society will be left unhelped in the desert of backwardness and dependence. Requisite types and forms of administrative reform are indispensable, in order to open up new possibilities and unleash forces, which will contribute to further development in the economic, political and social spheres in the country.

3.1. Capacity deficit and reform

As a result of the trajectory of development in Greece that has prevailed in the past, a point of imbalance has been reached between the size and scope of state activity and its capacity to deliver efficiently and effectively. Namely, the size of the state intervention in society and economy has grown and been overstretched in a manner that tends to be improportional to its functional capacity to deliver and implement accordingly. Thus, prevails a situation whereby a rather biggish and oversized state machinery – with a multitude of rules and regulations, of agencies and civil servants – is accompanied by limited capacity for qualitative administrative action and performance. The quality or capacity deficit refers to a sort of reverse relationship that tends to obtain between the size and scope of state activity, on the one hand, and its capacity or potential to deliver, on the other. That is, the capacity deficit forms more certainly a kind of root cause for maladministration in Greece.

As far as the prospects of reform are concerned, the optimal strategy would then rather tend to focus on increasing and improving the capacity and quality of state machinery. That would perhaps have to entail to a certain extent taking measures to reduce the overall size and scope of state involvement and intervention in economy and society. The overstretched and oversized state involvement looks likely as necessary to be reversed and rolled back to more manageable proportions. At the same time a relevant precondition – a *conditio sine qua non* – for further development would relate to the substantial amelioration of the quality and professionalism of public services. Namely, the capacity of the state to act efficiently and effectively, in a manner that is responsible and accountable to the people and civil society at large.

The twin strategy of size reduction and capacity improvement lies at the heart of the more inclusive policy ideal of reform and ‘re-founding’ or reconstructing the state. Re-founding or re-establishing the role and functions of the state would then entail striking a new balance in its relations with market economy and civil society. Above all, the idea to ‘re-found’ and reconstruct the state machinery in the face of new challenges would involve a special emphasis and attention on the capacity and quality of the administrative machinery. The quality of state performance in the various branches of Government and public administration forms an indispensable condition for sustainable development. And development ought to be understood in qualitative terms too; that is, as the way forward towards an open and more

democratic policy enriched with public services and institutions that function well and respond to people's desires and demands in the context of the rule of law.

Overall a kind of a 'paradigmatic shift' is underlying the whole effort to 'reinvent' public governance and administration in contemporary times. Thus, a new emphasis is more than visible on the need to circumscribe the institutional monopoly of the centralised state administration by attempting to reduce and optimise its regulatory intervention in the economy and society.

3.2. Prospects of reform and modernisation

Society and economy essentially expect from the state the provision of the appropriate legal and institutional means and infrastructure for their functioning and self-regulation as well as the necessary human personnel in quantity and quality – inclusive of knowledge and experience – appropriate for novel social and economic activities. As a result, the role of the state vis-à-vis the economy and society is currently undergoing a rapid and drastic transformation. The state is thereby called to cease or seriously curtail its overtly interventionist operations and replace them with a more supportive role. That is to say, state institutions are invited to maintain and even improve the quality – but not necessarily the quantity – of their regulatory functions in the context of the rule of law, while at the same time reduce or even abolish excessive direct involvement in the productive sector of the economy.

Last, but not least in significance, the internal structuring of public administrative systems is also confronted by related challenges of reform and reshape. The traditional centralised model of administration and public management tends to give way to a very significant extent to more decentralisation and autonomy in local government and administration. Accordingly, the central institutions of the state are challenged to assume and contain themselves to more programmatic or regulatory functions and responsibilities. And they are expected to offload and transfer the rest of the more executive functions and their implementation to decentralised agencies, to local government authorities as well as to institutions flourishing in civil society.

'Steering and governing but not rowing' is the prevailing model idea for the state functions and outlook by the turn of the century. 'Governing' and 'steering' mean providing the essential guidelines, the human one, and above all the spirit and motivation. And 'rowing' entails implementation under conditions of relative

autonomy and discretion but in harmony and coordination as well of the executive functions of the state. Governing and rowing take place in the same vessel, however. And that suggests that they need to be correlated and coordinated too.

3.3. Rowing and steering between (the Scylla of) politicisation and (the Charybdis of) bureaucratic weakness

Given the over-inflation of political and state functions, institutions and responsibilities in a peripheral country such as Greece, the question presented is why the State has failed, not totally perhaps, but to a considerable extent, to undertake a more positive and creative role and help accelerate overall development and modernisation in a more efficient, effective and qualitative way.

The mode of organisation of state machinery that has prevailed over the time has resulted in a huge, oversized bureaucracy of gargantuan proportions¹¹ which is, however, at the same time very weak and impotent in terms of strategy, policy making and management capacities. The giant bureaucracy with the weak 'mind' (weak in the sense of steering capability) presents an obstacle and hindrance to development and modernisation, rather than a tool and weapon for it.

The explanation of this kind of failure or rather the slow rate of modernisation (in qualitative terms) would have, of course, to refer to more inclusive social factors and determinants of the developmental predicament. These factors have included, especially in the past, the backwardness and the pre-modern or pre-capitalist structure of the economy, the mode of the organisation of the agriculture and the articulation of the primary with the secondary sector of the economy, the poor industrialisation and the limited differentiation of civil society. Extremely important are also the particularities of State's political and administrative structures and infrastructures, which perhaps may be held to account for the failures or deficiencies in economy and society.

These are factors whose occurrence has resulted to the exaltation of the role of the State and the significance of political mediations and interventions; and even more, to the bitter realisation of the limited capacity of the state agencies to shape and guide development in an intelligent, efficient and effective way. The paradox of

¹¹ For instance, public expenditure has been on the raise for a number of decades amounting at certain points of time, especially in the 1980s, to almost 50% of GNP.

coincidence and conflation on the level of state political and administrative institutions of great expectations only to be followed by comparable disenchantment and failure accounts to a very significant extent for the interpretation of the Greek case.

By the same token, however, reforms and transformations at the political and institutional level have proved to be of limited use and effectiveness because of the persistence of backwardness and retardness at the socio-economic level. This kind of developmental lag, schism and imbalance or discrepancy between the political - institutional and the socio-economic level results to the limited modernising value of reforms. That is to say, the reform interventions, which are ceaselessly being produced and reproduced by the government of the day, tend to assume a highly symbolic function and usually be contained at a purely legal - rational façade. They help, of course, sustain the mythology and ideology of reform and modernisation but they become rather shallow and formalistic and they prove to be largely irrelevant at the practical level.

Despite the fact that Greek society entered the modern era at a rather early stage (at the beginning of the 19th century), it has always lagged behind not only the more advanced Western European societies but also with regard to some late comers but more successful performers in late development and modernisation (for instance, Australia, Japan and the four 'Asian Tigers' as well as most of the Scandinavian Countries). And that in spite of the 'cognitive', so to call, advantage of late comers, in the sense of being provided with a historically mapped developmental route and paradigm, which could perhaps allow them both to compress developmental and evolutionary stages (thanks to the exponential nature of subsequent growth) and to avoid others' mistakes and failures. As a matter of fact, however, a remarkable degree of affluence did take place during the 30 years of rapid-economic growth (1950-1980) in the post-World War II period and an unprecedented improvement in the standard of living conditions for a big part of the population was made possible mainly through tourism, émigré capital transfers, construction, petty bourgeoisie and small market activities – by and large in the margins of a shadowy economy. But these changes in living conditions failed to affect in a significant way the basic political - administrative infrastructure of the country. Instead, the main features of an essentially clientelist political culture and practice were maintained and indeed were

found to be quite 'functional' in the unplanned and unregulated in desired ways growth of the economy, which is stained by a nouveaurichism ethic and the widespread vulgarism. Thus, it took place in recent times a remarkable improvement in the standard of living and consumption if not affluence, but without modernising influence and consequences in politics and the administration. On the contrary, this type of affluence was made possible at the expense of state modernisation. That is made evident, for instance, in the persistent failure on the part of the state to design and implement a thorough and effective mechanism for the collection of taxes and to combat bribery of state organs including police and security, tax officers, doctors, teachers, etc.

3.3.1. Parliamentary Clientelism

A broader look is therefore warranted at the structure and functioning of the type of Parliamentary Clientelism that has prevailed in the form of political participation in Greece. That in turn accounts in a very basic way for the limited positive and creative role that the state administration has managed to undertake in the developmental process. 'Super-politicisation' may pose as a distinct feature of modern political life in Greece, but ought to be understood not as an innate characteristic of Greek mind and psyche; but rather as a 'functional' element in clientelist politics and the prevailing political culture. Thus, people's politicisation, that is politicisation on the part of the public, comes about because it is essentially through this medium (i.e. attachment to political party or a personality) that people may be able to obtain state subsidies and benefits – including appointment in the civil service, especially in the not too distant past.

On the other hand, politicians' politicisation is a feature of politics as a profession for a considerable segment of the middle class who in order to maintain their position in the political limelight and the benefits ensuing thereof tend to 'sell' their services to their clientele on a very thin ideological or principle's base. Moreover, as much as politicisation is a cause of bureaucratic dependency and inefficiency it does also form a consequence of these conditions, which in turn accelerate politicisation, and so in a vicious circle.

The state apparatus, including the size of the personnel approximating 650.000 public employees in the wider public sector and the direct involvement in the

economy, is nonetheless very weak and ill-equipped with the requisite professional and strategic capacity and authority to function as an instrument and rational agent for reform and modernisation. Despite the over inflated size and role of the state bureaucracy, it has failed to acquire distinct and appropriate developmental features which would enable it to act as the engine and driving force for intelligent service and advancement of the society as a whole. Instead of designing and shaping the strategy and the overall policy for rational and long-term development, state bureaucracy in Greece undertook usually the backward and traditional role of satisfying the short term clientelist needs and expectations at the expense of a creative and flexible role and function. Administrative bureaucracy took on a top-heavy and grotesque shape of gargantuan proportions ill-structured and ill-equipped for the complexity of the tasks and the challenges of the process of development and modernisation.

On the other hand, the prevailing mode of dirigiste politics has, basically, failed despite certain notable exceptions to provide the appropriate leadership and creative role in development and modernisation – even when trusted with wide popular support. That may well be the result of a problem of supply of political leadership or of the internal, oligarchic structuring and patterns of domination in the political parties. It may, also, have had to do with the extreme concentration and manipulation of power on the part of a crust of decisive political élites such as the prime ministers, the leaders of the political parties, the strong ministers and party barons. The prime objective of these élites has naturally been to maintain and perpetuate their hold of power, which, however, only partially correlates with modernisation and reform of state machinery and organisation.

As a whole, a dirigiste and highly autocratic mode of political conduct comes about which, despite the concentration of power that it entails, is nonetheless hardly capable for ensuring modernisation and development in the desired pace and form.

3.4. An instance of an underdeveloped bureaucracy

Greek bureaucracy has been in such a state of affairs for a rather long period of time. Suffice it to mention here that Spyridon Eulamblos, who wrote a book in 1894 under the very insightful title *Maladministration in Greece* (he was actually the first Greek author who used this term), was even then talking about the crisis of bureaucracy in

Greece, its deficiencies and pathologies, which he thought that they could be redressed by wide radical reform and modernisation.

3.4.1. Aspects of crisis in the administrative system

The fact that the Greek administrative system is undergoing a crisis is an open secret among professionals, academics and the public. A number of official reports have also been addressed to the biggest malady of the country, as it is often called, and have tried to identify the symptoms and the means of redress (Makrydemetres and Michalopoulos, eds, 2000). These reports have not differed greatly in the diagnosis nor indeed as far as the reform recommendations were concerned.

To go a little bit backwards, according to Kyriakos Varvaressos, who produced his influential report on the “Greek Economic Problem” in the beginning of the 1950s, the inefficiency of the public services posed as the hardest problem that the country was confronted with in the general effort for reconstruction and development at the aftermath of the war and the crisis period of the 1940s. He did then also underline that administrative dysfunction rendered practically impossible the amelioration of the economic condition of the country. Among the most serious factors of administrative pathology K. Varvaressos considered the following:

- (a) the uneven distribution of personnel in the various governmental services and institutions which resulted in their concentration in the central departments placed at the capital and the very weak staffing of the regional and decentralised units. The problem was further aggravated by the unabated preservation of an unorthodox system of position classification which rendered virtually impossible the interagency transfer and circulation of personnel
- (b) the long established practices of clientelism, favouritism and patronage, the blatant violation of meritocracy and the widespread corruption, bribery and low morale even among the top ranking officials and administrators, and
- (c) the prevalence of legalism, formalism and bureaupathology in the functioning and performance of public services which not only inhibited initiative and creativity in tackling the nation’s problems but also severely troubled and pestered citizens, especially those of the lower and more vulnerable classes and strata of the society.

Along with proposing concrete measures and reforms to meet these particular drawbacks, K. Varvaressos insisted in unmistakable terms that an essential indeed

sine qua non conditio to overcome the acute administrative plight would be to maintain genuine impartiality and the cease of party interference in the affairs of the civil service (including appointments and promotions). For that purpose he strongly recommended the establishment of an independent Commission of Experts that would oversee and evaluate the reform measures and strategy.

At about the same period Georgios Marangopoulos, who subsequently became President of the Conseil d'État, drafted a blueprint for the new "Methods of Recruitment and Training of the Civil Service Personnel" (1950) providing for the generalised application of a system of meritocratic appointments in the public service based on competitive examinations, the establishment of a distinct class of senior administrators and the continuous in-service training and perfection of public employees.

A few years later, F.M.G. Willson, an OECD consultant and university professor from Great Britain, analysed the "Machinery of Government in Greece" (1964), pinpointed at the structural deficiencies of the central departments of Government, the weak coordination among them and the inadequate development of decentralisation.

At about the same time, another OECD consultant, professor Georges Langrod from France, did also produce the most comprehensive so far report on the "Reorganisation of Public Administration in Greece" (1965). G. Langrod identified the capacity deficit of the civil service at the structural, the procedural and the personnel level and components of the administrative system. He even underlined the fact that the operational inadequacy and failure of the civil service contrasted sharply with the requirements posited by Greece's eventual accession to the European Community with which Greece had already, since 1961, signed an association agreement (this agreement provided for the first time for a full accession date 20 years later, and that was what actually happened in 1981). G. Langrod in his report strongly emphasised the need for raising the level of professionalism in administration with all that it entails, the intensification and professional re-orientation of the educational component at the secondary and tertiary level as well as the updating and proliferation of in-service training and developmental opportunities.

Other commentators in the meantime and in view of Greece's entrance to the, then, EEC had pointed out the impotence of Greek bureaucracy and kept arguing that

it posed more as an obstacle than as a factor for development and modernisation (inter alia, Argyriades, 1970).

The last three reports which will very briefly be referred to here are the “Report on Public Administration” produced in 1988 by a team of experts who were brought together by the Centre of Planning and Economic Research (KEPE), the white paper on the “Reform and Modernisation of the Civil Service” produced in 1990 by another team of experts under the auspices of the Department of Public Administration and, finally, the Mikhail Decleris’ Report on “Greek Administration 2000” that formed the basis of a Cabinet resolution which was, however, never implemented.

Understandably, perhaps, after each report was published and promulgated, a number of reform measures were announced or even enacted in accordance with the recommended interventions. But they hardly affected the practical horizon of administrative (ill)performance.

3.4.2. Modernism versus tradition: a curious amalgam

Modernisation has always been an objective of the reformers and state builders in the modern history of Greek political life. Even during the War of Independence from Ottoman rule in the second decade of the 19th century one of the most persistent and acutely fought conflicts and differences was that between modernisers and traditionalists (Petropulos, 1985; Diamandouros, 1972). In a rather schematic description of them, the former (modernisers) sought to install elaborate political and administrative institutions in the newly born State which were largely inspired from patterns observed in more advanced western societies; the latter (traditionalists), on the other hand, preferred to preserve and maintain as much as possible the long established fabric of the society with minor perhaps adjustments and alterations. Moreover, this counter poise if not contradiction between the new and the old, modernity versus tradition, cut across another set of opposites, that is between the alien and the imported, on the one hand, and the indigenous and the local, on the other.

As a whole, therefore, it is the case that modernism and tradition have established themselves as a set of dominant cultural trends, and the most inclusive and significant ‘pattern variables’ in Greek political life over the last two hundred years.

In case one wonders what was the outcome of this conflict eventually that went on during the whole of the 19th century and is still going on unabated, it rather seems to be a draw or an indecisive contest. It may also be an instance of the phenomenon of ‘cultural columnisation’, whereby the respective cultural systems (modernity and tradition) tend to oppose each other and perpetuate their own self-referential and reflexive autonomy. More apposite seems to be the case, however, of a curious amalgam and a syncretism of various elements in the material structure and composition of the political and administrative system of the country. Thus, there can rather easily be observed numerous instances of modern and advanced institutions and reforms having been established in the administrative machinery of the State and the political system as a whole. Yet, real life in politics and administration continues to a very significant extent to be attached to more traditional or backward forms and patterns of conduct with regard to state functions.

It is understandable, therefore, that in such a context institutional reforms which bear the mark of modernity (mostly influenced from the more advanced western prototypes) surely do not exhaust nor do they fully shape the reality of Greek political and administrative life. As a matter of fact, it is usually the case that legal - rational reforms tend to be or rather become very formalistic in their outlook and consequences (Mouzelis, 1978: 134). It is a peculiar kind of formalism which is manifested in what Fred Riggs (1964, 1973) has described as ‘prismatic’ societies and refers to the gap or discrepancy between the formal - legal prescription or provision, on the one hand, and the reality of administrative or political life, on the other. Presumably, the latter is only to a limited extent shaped or determined by the formal - legal provision.

If that is the case, then, one may wonder whether we ought to be talking of an altogether failure of reform efforts or preferably of a highly complex even fractal framework of partial failure and partial success – a patchwork of modern alongside pre-modern, traditionalist forms, structures and practices in politics and most certainly in public administration. As a matter of fact, the experience of administrative reform in Greece abounds of examples of this kind of modernity cum tradition patchwork or variety.

What this kind of institutional variety and heterogeneity, then, suggests is the existence in parallel, but not necessarily in harmony, of practices and attitudes which

may be modern, rational and reformist, and others which may be quite obsolete, backward, traditionalist, even reactionary. In the context of this line of argumentation, therefore, civil service reforms in the Greek case have seldom failed or succeeded on the whole in a clear cut zero-sum fashion. Needless to say that there may be found examples of either extreme case as well, that is total failure or absolute success.

Usually, however, the picture that emerges from the experience of administrative reform is a hybrid model or rather a pattern of partial failure and limited success (Makrydemetres, 1995). Reform and modernisation may succeed in the sense that it is enacted and implemented in a legal - rational fashion at the institutional level. And given the normative and paradigmatic function and potential of both law and reform, they may affect and to a certain degree influence the shape and conduct of the bureaucracy. But reforms may also fail to the extent that they do not succeed in creating irreversible changes. Instead, they can easily be modified in practice after a while, they may also be assimilated and adapted without any great influence on the practices and tradition; or they may get neutralised and pushed to the margins of the administrative system.

3.4.3. The imbalance thesis

A further plausible explanation of the reform failure is that reforms go wrong and flunk because they are too advanced and disassociated from the acceptability level in the societal system which they are designed to reform. In that case, transplanting institutional structures and processes from advanced, industrialised societies is rather likely to fail to affect in significant ways a backward bureaucracy in a peripheral or semi-peripheral society which is traditionally attuned to different forms and practices of institutional and political association.

Thus, whenever the modernisers attempted to install novel political and administrative institutions drawing largely upon western (American included) models of state building and organisation, not only did they meet resistance but often the reforms and innovations did not manage to get rooted and assimilated; or rather in their application they got transformed and became dysfunctionalised. That was due to the background character of the more inclusive societal system. Namely, society was experiencing and perceiving them as alien adjuncts which were neither organically

related nor genuinely reflecting deeper values and needs prevailing at the time in society.

This kind of modernisation discrepancy or imbalance may be used to explain, for instance, the distorted application of such contemporary and modernising institutions such as the male suffrage (gained as early as in 1844) in the face of the context of an essentially traditional, undifferentiated and underdeveloped political culture, a pre-capitalist and unindustrialised economy in a backward society. The installation of advanced institutional formations in backward pre-capitalist societal conditions could not help setting off a number of dysfunctional consequences, from the point of view of administrative and organisational rationality and efficiency. Such as, for example, the flaring up of clientele practices, the patronage and spoils system in state employment and, in general, the overgrowth of the size of the administrative machinery of the State which has been as a rule staffed with excessive personnel.

The introduction of universal franchise, which was a novel reality and a substantial factor in political life even since the middle of the 19th century, it so operated however, in the context of the Greek political and social life, that the application of this modern and democratic institution was followed by adverse (or dysfunctional) consequences with regard to the staffing and functioning of the civil service. Since the political parties were largely formed by a number of notables, that is, strong political personalities who represented particular areas and clienteles in the country, and very broadly agreed on certain basic political lines, these personalities operated mainly as patrons towards their constituency. Thus, there emerged a mutual relationship of support (on the part of the local client) and protection (on the part of the patron - politician) (Mouzelis, 1978; Tsoukalas, 1977).

The basic, underlying contradiction that explains the above was the incompatibility between the weak development or rather underdevelopment in the primary and secondary, the business and the industrial sector of the economy, on the one hand, and the liberalisation of political institutions and the opening up of the political process, on the other. That is, of course, an instance of the difference and incongruence, if not contradiction, between civil society and the state or the political system. Whereas the state institutions presented to underdevelopment of business and industry, political parties and politicians in general have proved to be ideal mediators

on the basis of widespread clientelism, spoils system practices, even corruption and graft.

Evidently the mode of political leadership that is nourished and emerges from the unbridled clientelist pattern of political domination leaves much to be desired in terms of public policy making capability, strategic vision and reform orientation, which would be necessary to guide and monitor effective reform and modernisation. (The opposite has, as a result, been usually the exception rather than the rule).

The public, on the other hand, tends to get demoralised and become quite cynical in their perception of interest and attitude towards the state. Indeed, a curious process of transformation occurs: the object of desire, namely the appointment to a state position or the appropriation of some kind of state benefit, subsidy or contract can very quickly become a despised object of ridicule and exploitation through illegal or corrupt ways and means. The realisation on the part of individuals that the satisfaction of the clientelist demand usually followed by miserable returns and bad working conditions led to further demoralisation and cynicism. After all, clientelist dependence has had a cost or a guilty repulsion on both sides (Tsoukalas, 1993).

These underlying social conditions do, therefore, go a long way in explaining the virtual failure of reforms to rationalise and modernise state bureaucracy and administration – such as, for instance, to reduce the size of unnecessary and of poor quality personnel and distribute it more evenly in the public service, to decentralise the top-heavy and over concentrated bureaucracy, to establish the merit principle in state employment, to professionalise and streamline the bureaucracy, to equip it with requisite managerial methods and techniques, to render it more effective and efficient.

3.5. Politics of reform

It is of no surprise that politicians, party leaders and parties will usually support, initiate and implement big scale reform and modernisation in the civil service only in so far as this is conducive to their political or re-election prospects. The political survival imperative requires that the cost (of reform) should not exceed the benefit (of survival and re-election). The adherence to this ‘imperative’ of political influence and survival usually results, however, to certain reforms which are often mutually exclusive and very seldom form a comprehensive strategy which is rationally designed, implemented and evaluated.

The significance, on the other hand, of political agents can hardly be disputed thanks to the predominance and the unparalleled concentration of effective power and control in the hands of politicians in Greece. Some other factors that mitigate the effectiveness of politically conditioned reform have not only to do with the profile and personal qualifications of particular politicians; but also with internal organisation of political parties in government and in opposition; the policy making features and capability that each party is equipped with; the fact that usually civil service modernisation and reform does not form a significant factor in the electoral choices of the public despite the widespread dissatisfaction with its performance; the conflict and fight among the political parties with regard to the reform issue whereby one or some parties may be more pro-reform oriented than others (thus, Charilaos Trikoupis' liberal reforms in late 19th century were fiercely opposed by his rival's, Theodoros Deliyannis, more traditionalist attachments; or, in the first part of the 20th century, Eleutherios Venizelos' liberalism was opposed by Royalist Conservatism); last but not least in significance there may also be considered the difference if not contradiction between pro-reform oriented politicians and their populist or traditionalist counterparts within the major political parties. Needless to say that in the last case, modernisers across the political spectrum may have closer albeit unacknowledged affinity among themselves than with their ideological companions (Mouzelis, 1994).

If the above sounds rather pessimistic with regard to the prospects of reform, it should not be construed as suggesting that the reform of bureaucracy is unattainable and that all or any reform effort is doomed to fail; nor that the crisis of bureaucracy will necessarily be followed by its break up and demise. Given the plasticity of social institutions (public bureaucracy included) and their high immortality record that is very unlikely to occur.

What we are actually suggesting is the slow rate and pace of reform, limited modernisation and fledgling adaptation in complex social conditions and circumstances. This kind of relative incongruence or mismatch between requisite and available institutional complexity and problem solving capability lies really at the heart of the matter. It forms an adaptation lag which is maintained by the limited provision of positive or corrective feedback on the part of the social agents involved.

That is why it was argued earlier in this paper that administrative crisis is sustained by a sort of more inclusive, second order 'crisis of the crisis management'.

Nonetheless, the prevailing attitudes of mass consumption and pop culture are comparable to types and measures which are present even in more advanced societies. It is, also, possible that even in a relatively backward country there may be present elements of the wider trend of modernity. That is a sign of a universal trend nowadays owing to the transferability on a global scale innovations and the penetration of information in all societies however remote. Nevertheless, if one moves from the technological to the behavioural, the institutional and the value and belief system, modernisation becomes less unequivocal in its consequences and requirements. The reason is that values, customs and long cherished traditions being deeper rooted in the socio-political culture are less amenable to change and reform.

In conclusion, Greece or rather the Greek politico-administrative system and culture seems to lack so far the appropriate strategic (or 'cybernetic') capacities and tools to lead the overall development and modernisation of the country in an intelligent and efficient way, which in turn must account for the failure or the limited success story of modernisation and reform. Moreover it must account for the widespread quandary and confusion with regard to options and challenges of the future.

3.6. Convergence on reform: administrative practices and prospects in Europe

Convergence on reform efforts in public administration is usually related nowadays, as it was already mentioned, to either deregulation policies and projects or to the advent of new public management methods and spirit in the organisation and especially the functioning of public services. Naturally, both issues form a matter of concern and an object of deliberation to analysts and practitioners.

Underlying all this, however, is an almost pan-European devotion to a more comprehensive concept of modernisation. A concept and an idea whose scope of application expands far beyond the contours of public administration. Nonetheless, modernisation in public administration presents an area and a subject matter on which and by means of which a lot can be done in the direction of possible cooperation among European states; but also of eventual convergence in their systems and practices.

It does seem though that modernisation as a general catchword refers to and is inclusive of a rather big variety of policies and orientations in the institutional domains of public administration in the European states. What is also usually observed is a divergence of concepts, attitudes and practices among state departments and policy sectors even within a single country.

Understandably, therefore, administrative convergence remains an imprecise and elusive concept that is not easily susceptible to clear cut definitions and classifications. Analysing convergence is part of the wider discipline of comparative administration and the empirical evidence required to substantiate conclusions is far from being complete and conclusive. Even more, most available evidence is country specific reflecting legacies of the past, varieties of culture and historical experience, as well as differing legal and political contexts.

On the other hand, whenever some degree of possible convergence in administrative matters (whether in theory or in practice) is being detected, that should not be a cause of great surprise; after all most governments and administrations face similar problems and challenges, as well as constraints. Indeed, past experience has shown that administrative arrangements may be copied and transferred more easily than political ones, especially if they are couched in clear cut and comprehensible terms. To a certain extent, therefore, a degree of some basic or rather 'minimal' convergence in administrative structuring and organisation is hardly surprising in the era of modernity and in a number of countries.

Thus, taking an example from the Greek administrative history, it had proved relatively easier to install in the first decade after Independence (1833-1843) administrative arrangements such as, for instance, the prefectural system of decentralisation in public administration, which was patterned after the French model, than to establish genuine representative institutions of governance. That became, however, possible in the period that followed the bloodless army and civil revolt of 1843 and through the exertion of many efforts for founding genuine parliamentary governance in the decades of 1870s and 1880s.

In a more general sense, too, historically speaking administrative convergence had proven to be rather high in the course of the 19th century when, for instance, the Napoleonic model of administrative construction spread almost all over Europe. Accordingly, drafting codes of law, organising local government and decentralisation,

professionalising the civil service, and establishing councils of State (i.e. administrative courts and tribunals) were seen as key features and factors for modernising state function and organisation. At least at the formal or institutional level if not in actual practice and performance.

Indeed, the French administrative model and the British parliamentary system of government formed the two dominant yet hard to combine paradigms of governance in Europe in the 19th century. Needless to mention that modernisation in politics and public administration did follow separate ways and trajectories of development in various countries resulting in distinct systems if not models of governance and administration. Yet, modernisation has nonetheless been an overarching ideal and a trend all along. And the degree of institutional convergence or even ‘isomorphism’ emanating from the wider trend cannot be dismissed as insignificant.

On a broader theoretical basis one may even argue that among the fundamental preconditions for modernising contemporary societies are included chiefly those most basic reforms described by Parsons in his famous set of the key ‘evolutionary universals’ (1964): namely, the combined presence of an articulate system of rule of law, of representative democratic institutions in the political domain, of market economy in the productive sphere, and of organised public services. The implication being that, unless and until particular countries and societies adopt and adapt to the above set of crucial presuppositions of social and political progress and development, they will fail to meet the challenges and requirements of modernity and they will be deprived of the benefits accruing thereof.

If the above may have sounded somewhat too far flung in the past, there is little doubt now in the first decades of the 21st century that the aforementioned set of the ‘evolutionary universals’ seem to bear a wider significance. Indeed, they mark a new era in the art and practice of organising public affairs in the context of which the essential preconditions of modernity in politics, society and administration are indeed converging to an extent unknown in the past. To that regard trends and tendencies of ‘globalisation’ in economy, technology, transport and communication may have exerted an influence that is particularly strong and undeniable.

If ‘global convergence’ would amount to no less than a ‘global illusion’ or ‘useful myth’, it is however the case that some kind of moderate or ‘minimal’

convergence does seem to be taking place. That can be noticed in several aspects of state administrations around the world and most certainly in Europe. Regardless of whether the West or the East may be unique or not, modernity on its part is universal at least as a general trend and an ideal of the people of the world. It may well form a kind of preferred 'evolutionary path' for social reform, but it is not of a rectilinear nature in its forms of application and implementation in various social contexts and historical circumstances.

Regarding present day developments and the potential of a certain convergence on reform one may distinguish for comparative and analytic purposes among four approaches to administrative modernisation that are being pursued in one way or another in many European countries. These are the following:

(a) an approach anchoring on the reduction of the overall size of the public sector by lessening public expenditure, curbing rising cost and in general seeking economy and rationalisation in managing scarce resources. Being an outcome of the cut back management philosophy of the 1970s and 1980s the need for economy in public affairs still looms large and dominates to a considerable extent reform efforts in quite a few European administrations¹²

(b) secondly, modernisation efforts often appear to venture steering a kind of a new course in the interface of state - society relations. Thus, strengthening and empowering civil society – where and to the extent that it was not so developed or articulated – entails among other things an adherence to the principle of the subsidiary role of the state vis-à-vis economy, culture and society. That is to say, the old fashioned model of an excessively interventionist role of the state through nationalisation of the means of production and the direct assumption of commercial and entrepreneurial activities is rapidly abandoned. As a result, the public sector is increasingly restricted and areas of economic activity that used to be under its immediate control are transferred to the private sector of the economy through privatisations, outsourcing and contracting out. While the state on its part is being confined to a more cybernetic role of overall guidance, evaluation and direction in policy setting and rule making.

¹² In particular, for the Euro-economists real convergence is being measured or estimated on the basis of comparable units of purchasing power as a percentage of the GNP per person. Nominal convergence, on the other hand, refers to the set of criteria defined in the Treaty of Maastricht; namely, the extent of public deficit, inflation long-term interest rates and participation to the monetary union.

Reversing, however, the tradition of state control and domination over economy and society for a more balanced perspective in their interaction is a huge task lying ahead especially in those countries where the state had assumed in the past a preponderant role in social and economic performance and development

(c) thirdly, rationalising and modernising the administrative machinery itself and the complex armoury of the state entails among other things (for instance, the extensive use of information technology) advancing professionalism in public services through combating clientelist practices, revamping recruitment patterns, career prospects, ethics and morality, training and constant reskilling of personnel. Equally significant for streamlining bureaucracy are measures for decentralisation by means of which executive functions and competences are delegated and devolved not only to independent administrative agencies, but also to territorial units of regional administration and local government. The latter are thereof empowered to proceed in the delivery of services to satisfy local needs and requirements. Of course, the degree of centralism or decentralisation and devolution varies a lot among the European countries reflecting different concepts and traditions of state building and political culture

(d) fourthly, the emerging almost worldwide orthodoxy of new public management endeavours to steer a new course for the public sector away from traditional rule and politics dominated models of public administration towards a more managerial and entrepreneurial profile of public services. To the extent that public management pursued by various sorts of ways in several countries around the world and certainly in Europe keeps on a truly moderate track in the middle way between business and politics, then it has a lot to offer as a tool for invigorating performance and outlook in the public services. But not as a procrustean stretcher ironing out in a mechanical manner all differences and variations.

Needless to stress that the above distinctions are of a rather general and analytic nature which may be useful for comparative purposes. In practice, however, administrations present all kinds of mixtures and combinations among the perspectives which have just been distinguished.

The variation of reform strategies and orientations is of course an outcome of the fact that public administration was and still is considered as core and kernel of national sovereignty in each state. European Union too still lacks a concrete and

coherent policy of administrative harmonisation and convergence, subject perhaps to certain exceptions. The latter may include, for instance, the accessibility of foreign nationals as employees in the public services of other states save to positions involving the exercise of public authority and the safeguarding of the national interests.

Thus, the skeptical attitude on the issue of convergence would tend perhaps to the conclusion that there seems to be far more talk about convergence than there is real convergence in action. Talk and action, theory and practice form parallel regimes on this as in many aspects of life.

Thanks, therefore, to the cherished principle of subsidiarity of community functions and institutions vis-à-vis those of the member states, national administrations are let to proceed on their own ways and by their own means towards requisite modernisation and convergence. As a result, various countries go about attempting to modernise their public services with differing speed and modalities reflecting their respective national cultures, traditions, habits, circumstances and interests. At the community level, though, what is still prevailing is a kind of an implicit assumption, occasionally nearing wishful thinking, that European integration being an overall comprehensive objective will eventually cause a sort of spill over effect to participating administrative systems and it will not be limited to economic matters and policies only.

It is hardly surprising, then, that a sort of realist or rather minimalist scope of convergence ensues from that in the sense that it takes the form of restricting or eliminating extreme instances of divergence among national administrations. For the rest, administrative cultures and practices keep following the path of national diversity.

Clearly, the variety of contexts cannot be stressed enough and hardly needs explaining. What has been and still is a product of long historical conditioning cannot be readily abolished nor ignored. On the contrary, administrative models in Europe and elsewhere not only vary a lot and diverge among themselves but they also compete for domination and influence (especially the stronger and the more prestigious ones, none of which, however, has attained a status of undisputed global or pan-European superiority).

Unlike managerial dicta seeking global application in the business world, there is no ‘one best way’ of running state administration and organisation. As there is not a single size of shoes fitting all feet, similarly there is not a single nor a best model or type of administration appropriate for all systems and countries in all times and circumstances. Instead, there exist numerous tested and valuable administrative systems and traditions, which may nonetheless share certain common elements and features.

In conclusion, if full unity is at the moment impossible or even undesirable, total collapse and divergence does also seem to be equally inconceivable and unacceptable. Europe, after all, has suffered a lot in the past of the extremities of one kind or the other. Thus the present state of affairs in Europe is best conceived by what Gottfried Wilhelm Leibniz once said referring to the European heritage: “*We are fond of and we like diversity, but diversity which is conducive to a unity*”. That is an equally appropriate remark to describe the nature and the prospects of convergence on administrative reform efforts and plans in Europe at present.

4. The current Greek crisis and administrative reform

The modernisation of public administration formed one of the structural policies that Greece assumed the responsibility to implement in the context of the Memorandum of Economic and Financial Policy (confirmed by Law 3845/2010), with the aim to contain expenses as well as to improve the effectiveness of public services. It was envisaged inter alia that the Greek Government would collaborate with the European Commission in order to “*launch an independent external functional evaluation*” of central administration of the country. In subsequent Law 4024/2011, enacted by the Government of the then Prime Minister Georgios A. Papandreou, it was specified that evaluation of structural units and the personnel is necessary for the rationalisation of public administration and, in particular, the reconstruction of public services by means of drafting new organisational charts of ministerial structures, the merger of service units, the transfer of personnel and the abolishment of redundant posts. For that reason a special Committee was set up in each ministry (article 35).

Despite the change of Government in 2011 and again in 2012, the country continued to be under the obligation to close and downsize general government units (Law 4046/2012), which is suggestive of the fact that rather little of previous

obligations had been efficiently and effectively implemented. Therefore the effort for reorganising public administration was maintained. In this context and taken account of the concrete schedule for the implementation, it was considered as necessary the establishment at the Ministry of Administrative Reform and E-Governance of a stable structure for Inter-Ministerial Coordination, which would provide better guidance and break the intra-Ministry attitude of neglect and inertia (European Commission, 2012: 12-13, 38). Equally necessary was considered the setting up of a high-level transformation steering group, under the Prime Minister's authority, with the responsibility to “*supervise, monitor and ensure the implementation of administrative reforms*”: it is about the Governmental Council of Administrative Reform which has assumed the responsibility of policy design for the improvement of organisation, functioning and effectiveness of public services as well as of the evaluation of the results achieved and the decisions taken on them.

Additionally, various Committees in distinct departments of State comprised of civil servants in the Greek public administration and their colleagues from other European countries (e.g. France) prepared reports on the reshaping of the internal structure of ministries which were further elaborated by the Ministry of Administrative Reform and E-Governance. They were even further revised after a certain period of time elapsed by the Governmental Council of Administrative Reform, which finally approved them.

4.1. The Administrative Reform 2013

As it is highlighted in the *Greece: Review of the Central Administration* (OECD, 2011: 24), a fundamental role is played by the Central Government Departments, “*which are formally responsible for the supervision of all other entities of the public sector*”. As a matter of fact, however, government departments are characterised by organisational sprawl which leads – among others – to poor quality of public services and ineffectiveness (Ministry of Administrative Reform and E-Governance, 2012: 39).

The Administrative Reform 2013 is the most recent reform project for the Greek public administration, the details of which were announced by the Ministry of Administrative Reform and E-Governance in late April 2013. Administrative Reform 2013 aimed to reform the administrative machinery of the State regarding the central

government, adopting the principle of the ‘unity of direction’ and attaining the appropriate span of control for a more effective public management.

The government machinery in Greece, as that was shaped after the government reshuffling of June 24th 2013, under the premiership of Mr. Antonios Samaras, has been structured into a complex of 18 separate central departments (ministries)¹³ among which the members of the Government, with the exception of the Prime Minister and Minister of State, who were not in charge of any specific ministry, were distributed.

The Central Government Departments consist of agglomerations of public services and respective jurisdictions at the central level of the government, under the leadership of members of the Government, and function with the aim of the formulation and implementation of goals of public interest and respective spaces of public policy. The respective forms and names of departments of State delineate and share basic branches of public services at the central level of the government as it is the case in most contemporary and in particular European countries. They develop a guiding role in the formulation of public policy including the design and the implementation of the legal and regulatory framework that envisages the various activities and services. As a result government departments represent not only the most basic pillars of the organisation of the central administrative machinery of the State but also the most crucial institutional components in the process of formulation and implementation of public policy. Thus, it comes of no surprise that the great part of policy making takes place in association with or within them.

Taking account of the historical evolution of the Central Government Departments (ante, pages 20-23), they include major institutional components in respective policy areas, such as: home administration and security of the State, foreign policy and defence, economic policy, public works and infrastructure, social policy, education, national heritage and culture. Despite the fact that the size and extent of policy composition of state machinery may vary along the time and the political orientations of the social forces, nonetheless the core element of the Government composition is being formulated in respective ministerial or departmental structures and services.

¹³ See *infra*, page 65: Table I. Configuration of the General Government structure.

The Administrative Reform 2013 placed emphasis on the operational restructuring (downsizing) of the following Greek Central Government Departments and Secretariats General¹⁴:

- Ministry of Finance
- Ministry of the Interior
- Ministry of Development, Competitiveness, Infrastructure, Transport and Networks

Heretofore:

Ministry of Development and Competitiveness

Ministry of Infrastructure, Transport and Networks

- Ministry of Education and Religious Affairs, Culture and Sport

Heretofore:

Ministry of Education and Religion

Ministry of Culture and Sports

- Ministry of Administrative Reform and E-Governance
- Ministry of Health
- Ministry of Labour, Social Security and Welfare
- Ministry of Rural Development and Food
- Ministry of Environment, Energy and Climate Change
- Ministry of Justice, Transparency and Human Rights
- Ministry of Tourism
- Ministry of Shipping and the Aegean
- Ministry of Macedonia and Thrace
- Secretariat General of Information and Communication, and the Secretariat General of Mass Media.

The scope of the Administrative Reform 2013 was the enhancement of performance, efficiency and control over the expenses of these particular public bodies, the reduction of their size through the alteration of their structure, and the amelioration of the quality of the related public services. In addition, it was regarded by the Ministry of Administrative Reform and E-Governance as the basis for the implementation of mobility and the dismissal of civil servants.

¹⁴ See http://www.minpress.gr/minpress/index/other_pages2/dioikitiki_metarithmisi_2013.htm.

Taking into account that the Greek economic crisis is mainly due to fiscal problems, the importance of the Administrative Reform 2013 was significantly high for the Greek economy and public administration. The significance of this administrative reform and its immediate implementation were made explicit in the reports of the European Commission (2013) that reviewed the *Second Economic Adjustment Programme for Greece*, and in the press releases of the Ministry of Administrative Reform and E-Governance.

4.1.1. Focus of reform analysis

Analysing the internal environment of public administration refers to parameters and processes which characterise a complex system as such. Former analysis of the internal structure of the administrative system is usually inclusive of the following elements:

- (a) operational activities which pertain to description of professional structuring, categories of the public that is being served, relations with relative institutions, etc.
- (b) organisation and functioning of the dominant administrative structure inclusive of political guidance and control, organisational charts of the basic service units as well as description of the function at the level of directorates general, directorates, sections and the rest of the service units
- (c) human and material resources inclusive of the personnel and their skills, competencies and capabilities (moral, professional and intellectual), technical and informational infrastructure, financial resources.

The following analysis adopts a structured approach that is based on the collection and classification of information concerning the above in an organised and methodical manner, including flowcharts, budgetary information and size of personnel.

The analysis of the internal environment is being conducted at a certain depth and scope which may perhaps facilitate the identification of a series of strong and weak points. The research of the internal environment of the administrative system aimed, particularly, at the following elements or aspects of its functioning, on the basis of which may be extracted the necessary conclusions:

- (a) depicting the existing organisation and structure of the central service units of the government departments on the basis of the available legal documents envisaging

it (legal enactments and the rest of presidential decrees referring to the administrative structure of Central Government Departments)

- (b) extracting the relevant information resulting from the above in the form of organisational flowcharts, span of control of units at the various administrative hierarchy
- (c) describing and analysing jurisdictional demarcations along the lines which the policy space of the respective departments is being defined and organised
- (d) a certain element of comparative evaluation and benchmarking is being also aimed at the empirical administrative analysis of the available material that may contribute to the more objective evaluation of the manner of the organisation and functioning of the system under examination.

4.1.2. New structure of the ministries

New organisation charts of the ministries were issued (in the form of presidential decrees) by the end of August 2014 and were put on force about two months later (by the beginning of November 2014). As it was announced by the Ministry of Administrative Reform and E-Governance, the overall reduction of the size of the service units in the ministries exceeded 40%, which led to respective reduction of the expenses contributing in such a way to efficiency and effectiveness of public administration. Presumably, contraction of the structure of the services facilitates the coordination of the units. In the OECD edition *Review for Greece* (2011: 57) it was underlined that the need for drastic reduction of administrative structures in the central level of governance, as well as the rationalisation of their internal organisation would help increase the productivity of the administration.

In the process of restructuring of the organisational charts an effort was made so that certain concrete principles of administrative science were taken into account. It was expected therefore that the criteria of internal differentiation of the ministries would follow the precepts of ‘unity of direction’ and ‘unity of command’ as well as the optimisation of ‘span of control’. As far as the ‘unity of direction’ is concerned, it is worth mentioning that the units of administrative support of the central services of the ministries were merged with those of secretaries general which existed in the various departments of State. The same occurred with the service units with the responsibility regarding matters of finance and information technology.

Concerning the span of control within the central administrative structure of the country, it has been identified as a particularly “*problematic aspect of the Greek central administration*” (Ministry of Administrative Reform and E-Governance, 2012: 40-41). It has been seen, for instance, that in one out of five sections the head of the respective unit had no subordinate employees at all or one in three sections has only one employee (OECD, 2011: 26, 56).

The standard span of control of 1/5-7 with regard to the head of the section and its subordinates may be overcome, when that is necessary and is required by the particularities of the subject matter of the service unit. In the new organisational charts it has been often adopted a rather narrow span of control while it is not seldom observed a ratio of 1/2, which can hardly be sustained: such are, indicatively, the cases of the Directorate of Elections in the Ministry of the Interior (Presidential Decree 105/2014, article 16) as well as the Directorate of Buildings Infrastructure in the Ministry of Infrastructure, Transport and Networks (Presidential Decree 109/2014, article 47). Related examples are those of the Directorate General of University Education in the Ministry of Education and Religion (Presidential Decree 114/2014, article 35), the Directorate General of Personnel Administration in the Ministry of Administrative Reform and E-Governance (Presidential Decree 99/2014, article 13), and the Directorate General of Justice, Transparency and Human Rights in the same titled Ministry (Presidential Decree 101/2014, article 5). The Directorate General of Public Investment in the Ministry of Development and Competitiveness is comprised by a single Directorate, the one of Public Investment (Presidential Decree 116/2014, article 37).

Nevertheless, the criticism that has been exerted regarding the whole effort has pointed that the process of reform seems to be rather fragmentary and placing special emphasis mainly to the numerical reduction of the service units without taking account to the necessary extent of the functional complementarity of administrative units as well as the overlapping of competences even within the same ministry and even more among different ministries. Moreover, since the restructuring was based on the then existing government scheme without examining the possibility of each reform in the direction of the reduction of the number of ministries themselves or an alternative agglomeration of various sectors of public policy. Otherwise, internal restructuring of particular ministries which form part of a rather extended or

fragmented governmental structure (comprised of a rather biggish number of ministries headed by full ministers or alternate ministers, not to include deputy ministers) seems to have little impact on the efficiency and effectiveness of the Government as a whole. That's why, although the number of Central Government Departments has been reduced, the phenomenon of scattered office locations has not been dealt with at all¹⁵.

5. Methodology

In this study, there is attempted the measurement of efficiency and effectiveness on the part of 19 Central Government Departments; accordingly, a comparison takes place between the outputs of this measurement and those of the Administrative Reform 2013. The measurement of efficiency and effectiveness draws on four Data Envelopment Analysis models: i) Variable Returns to Scale DEA (VRS DEA), ii) Targeted factor-oriented radial DEA (Targeted DEA), iii) Stochastic DEA, and iv) Quality-driven Efficiency-adjusted DEA (QE-DEA).

DEA is a widely applied non-parametric method for measuring the relative efficiency and performance of operational units. Based on the seminal paper of Charnes, Cooper and Rhodes (1978), standard DEA programmes use linear programming to evaluate the production process of operational units. Conventional DEA programmes are either input-oriented, where the objective is the minimisation of inputs while holding the outputs fixed, or output-oriented, where the objective is the maximisation of outputs while the inputs remain unchanged.

Since the AR2013 suggests a decrease of inputs of the CGDs, in this paper an application takes place of four input-oriented DEA expressions. The scope of the study is to assess whether the input levels of the 19 CGDs, as defined by the AR2013, lead these units to efficiency, optimal economy and effectiveness. This assessment draws on a comparative analysis between the input levels identified by the AR2013 and those measured by the four DEA expressions. The VRS DEA, Targeted DEA and Stochastic DEA measure efficiency, under different assumptions, while the QE-DEA measures effectiveness.

¹⁵ Regarding the sitting of the administrative centre, see Ministry of Administrative Reform and E-Governance, 2012: 65 επ., OECD, 2011: 63-64.

Prior to the presentation of the four DEA expressions, it is useful to provide an analytic description of the notions efficiency and effectiveness, and the way they are perceived and applied in the context of the present study:

Efficiency of a unit refers essentially to the production of as many outputs as possible from a given set of inputs (output-oriented efficiency) or the utilisation of as few inputs as possible to produce a fixed amount of outputs (input-oriented efficiency) (Farrell, 1957). In the case of single-output and single-input, the measure of efficiency points to the ratio of output over input. Drawing on the theory of linear fractional programming, output-oriented efficiency is measured by the maximum ratio of the sum of weighted outputs to the sum of weighted inputs as long as that ratio for every unit under evaluation is less than or equal to unity (Charnes *et al.*, 1978). Similarly, input-oriented efficiency is measured by the minimum ratio of the sum of weighed inputs to the sum of weighted outputs as long as that ratio for every unit under evaluation is greater than or equal to unity (Charnes *et al.*, 1978). It is evident then that efficiency is regarded as an operational measure; as it only takes into account the inputs and outputs of a production process.

Effectiveness, on the other hand, refers essentially to the capacity to achieve desired results (Sherman and Zhu, 2006; Pollitt and Bouckaert, 2004; Poister, 2003). Effectiveness goes then beyond efficiency as the latter can be one of the goals that a unit is expected to achieve. An objective for the administrative units forms the provision of high perceived - quality services that satisfy users (i.e. citizens) (Ferlie *et al.*, 2007; Pollitt and Bouckaert, 2004).

In this study, effectiveness is defined as referring to the attainment of efficiency and employees' satisfaction from the work environment, too. Employees' satisfaction is regarded as the users' perspective of the performance of the unit. Citizens' satisfaction is not, however, an appropriate measure for evaluation since there is usually no interaction between citizens and CGDs, but mainly between citizens and the decentralised units of the government departments as well as the local agencies.

5.1. Variable returns to scale DEA

An extension of the original Constant Returns to Scale DEA (CRS DEA) programme put forth by Charnes *et al.* (1978) is the Variable Returns to Scale DEA (VRS DEA)

programme introduced by Banker *et al.* (1984). The input-oriented VRS DEA programme is defined as follows:

$$\begin{aligned}
& \min \theta - \varepsilon \left(\sum_{i=1}^m s_i^- + \sum_{r=1}^s s_r^+ \right) \\
& \text{s.t.} \quad \sum_{j=1}^n \lambda_j x_{ij} + s_i^- = \theta x_{i_o} \quad i = 1, \dots, m \\
& \quad \quad \sum_{j=1}^n \lambda_j y_{rj} - s_r^+ = y_{r_o} \quad r = 1, \dots, s \\
& \quad \quad \sum_{j=1}^n \lambda_j = 1 \\
& \quad \quad \lambda_j \geq 0 \quad j = 1, \dots, n
\end{aligned} \tag{1}$$

where θ ($0 \leq \theta \leq 1$) is a scalar and represents efficiency, x_{ij} stands for the i th input of the j th unit and y_{rj} denotes the r th output of the j th unit. The x_{i_o} and y_{r_o} are the i th input and r th output of the unit under evaluation, respectively. In addition, λ_j are non-negative scalars. The non-zero optimal λ_j identify the benchmarks for the unit under evaluation. Furthermore, ε denotes an infinitesimal quantity, and s_i^- and s_r^+ express the input and output slacks, respectively.

A unit under evaluation is efficient only if the optimal $\theta = 1$ and $s_i^- = s_r^+ = 0$ for all i and r . Otherwise, if the optimal $\theta < 1$, then the unit under evaluation is inefficient.

5.2. Targeted factor-oriented radial DEA

The Targeted factor-oriented radial DEA (Targeted DEA) programme developed by Lim and Zhu (2013) incorporates target levels in DEA. In addition to traditional inputs and outputs, variables which have a specific target level are introduced in the DEA programme. In conventional DEA programmes, the objective is either the minimisation of inputs (input orientation) or the maximisation of outputs (output orientation). In the Targeted DEA programme, the objective for inputs and outputs remains the same as that of the conventional DEA programmes. The novelty in the

Targeted DEA programme is the introduction of a third type of variables, called ‘factors’, which can move in two directions (i.e. increase or decrease) aiming to reach a targeted level that is set by the decision-makers. In this study, when the Targeted DEA programme is applied, the variable ‘Budget 2013’ is treated as a factor, and its target level is the ‘Budget 2014’.

The input-oriented Targeted DEA programme developed by Lim and Zhu (2013) can be written as follows:

$$\begin{aligned}
 & \min \theta \\
 & \text{s.t.} \quad \sum_{j=1}^n \lambda_j x_{ij} \leq \theta x_{io} \quad i = 1, \dots, m \\
 & \quad \quad \sum_{j=1}^n \lambda_j y_{rj} \geq y_{ro} \quad r = 1, \dots, s \\
 & \quad \quad \sum_{j=1}^n \lambda_j |z_{tj} - w_t| \leq \theta |z_{to} - w_t| \quad t = 1, \dots, h \\
 & \quad \quad \sum_{j=1}^n \lambda_j = 1 \\
 & \quad \quad \lambda_j \geq 0 \quad j = 1, \dots, n
 \end{aligned} \tag{2}$$

where θ represents efficiency, x_{ij} and y_{rj} express the i th input and the r th output, respectively, of the j th unit, z_{tj} stands for the t th factor of the j th unit, and w_t denotes the targeted level for the t th factor.

5.3. Stochastic DEA

Stochastic DEA (Charnes and Cooper, 1963; Land *et al.*, 1993; Olesen and Petersen, 1995; Dyson and Shale, 2010) deals with measurement and specification errors by introducing stochastic inputs and outputs in DEA. The uncertainty that is present both to the input and output data, which raises doubts about their accuracy, and to the economic environment inside which the units operate, leads to the utilisation of a stochastic DEA programme to capture this uncertainty. The application of traditional (i.e. non-stochastic) DEA programmes in cases where uncertainty is possible leads to biases in the measurement of efficiency.

In this study, stochastic DEA was applied in order to test an alternative scenario of evaluating the efficiency of the 19 CGDs, which takes into account possible ‘noise’ in data. The stochastic DEA programme applied here is as follows:

$$\begin{aligned}
& \min \theta \\
& \text{s.t.} \quad \sum_{j=1}^n \lambda_j x_{ij} + \sum_{j=1}^n \lambda_j (E(x_{ij}) - x_{ij}) + \zeta \left(\sum_{j=1}^n \sum_{l=1}^n \lambda_j \lambda_l \text{cov}(x_{ij}, x_{pl}) \right)^{1/2} \leq \theta x_{io} \quad i = 1, \dots, m \\
& \quad \sum_{j=1}^n \lambda_j y_{rj} + \sum_{j=1}^n \lambda_j (E(y_{rj}) - y_{rj}) - \zeta \left(\sum_{j=1}^n \sum_{l=1}^n \lambda_j \lambda_l \text{cov}(y_{rj}, y_{ql}) \right)^{1/2} \geq y_{ro} \quad r = 1, \dots, s \\
& \quad \lambda_j \geq 0 \quad j = 1, \dots, n \quad (3)
\end{aligned}$$

where θ expresses efficiency, x_{ij} and y_{rj} represent the i th input and the r th output, respectively, of the j th unit, $\zeta = \Phi^{-1}(\alpha)$ denotes the normal distribution function, α is the level of significance (e.g. $\alpha = .05$), and λ_j are non-negative scalars. In addition, $E(x_{ij})$ and $E(y_{rj})$ are the means of x_{ij} and y_{rj} , and $\text{cov}(x_{ij}, x_{pl})$ and $\text{cov}(y_{rj}, y_{ql})$ stand for the covariance of $x_{ip,j}$ and $y_{rq,l}$, respectively.

5.4. Quality-driven Efficiency-adjusted DEA

The Quality-driven Efficiency-adjusted DEA (QE-DEA) method (Zervopoulos and Palaskas, 2011; Brissimis and Zervopoulos, 2012; Zervopoulos, 2014) introduces exogenous variables in DEA, such as users’ satisfaction. Exogenous variables are those that are either non-controlled or partially controlled by the unit. The exogenous variables should be equal to or greater than a threshold value set by decision makers. The measurement of efficiency is constrained by this threshold value for the exogenous variables. In other words, the minimum inputs defined by the QE-DEA method cannot violate the threshold value. In the case that the exogenous variables are inversely related to efficiency, which means that the former are directly related to inputs, the optimal inputs should not cause the optimal levels of the exogenous variables to drop lower than a minimum acceptable value.

In this study, use is being made of one exogenous variable (i.e. employees’ satisfaction) inversely related to efficiency. The threshold value set for employees’

satisfaction is 0.800, which is the percentage transformation of a rating of four on the five-point Likert scale (i.e. 1 – very dissatisfied, 2 – dissatisfied, 3 – neither satisfied nor dissatisfied, 4 – satisfied and 5 – very satisfied). The QE-DEA method defines the minimum inputs that simultaneously satisfy the threshold value of the exogenous variable. Consequently, the minimum inputs defined by the QE-DEA model are expected to be greater than those obtained from the VRS DEA. The lower the satisfaction scores assigned by employees to the CGDs, the lower the reductions that are expected to apply to the inputs as the priority of the QE-DEA method is to satisfy the threshold value, which is set to the exogenous variable.

The QE-DEA model draws on an algorithm comprised of four-steps:

Step 1: Apply VRS DEA (i.e. model (1)) to define the efficiency scores of the units.

Step 2: The efficient units that are assigned employees' satisfaction scores lower than the threshold value (i.e. 0.800) are put through an adjustment process. This leads the employees' satisfaction score at least to the threshold value while proportionally decreasing the efficiency score according to the inverse relationship between employees' satisfaction and efficiency. The adjustment process is expressed by the following formula:

$$\theta' = \theta_o + \left(\frac{\left[(s - s_o)^2 (\theta_o - 1)^2 \right] (s' - s_o)^2}{\left[(s - s_o)^2 + (\theta_o - 1)^2 \right] (s' - s_o)^2 - (s - s_o)^2 (\theta_o - 1)^2} \right)^{1/2} \quad (4)$$

where θ' stands for the adjusted efficiency score, θ_o is a user-defined cut-off level for the efficiency score (e.g. 0.200), s denotes the employees' satisfaction score, s_o stands for a user-defined cut-off level for the satisfaction score (e.g. 0.200), and s' is the adjusted employees' satisfaction score, which should be equal to or greater than the threshold value (e.g. 0.800).

The adjustment of the efficiency score (i.e. θ') requires modification of the inputs:

$$x_i' = (\theta')^{-1} x_i \quad i = 1, \dots, m \quad (5)$$

where x_i' denotes the modified inputs, and x_i the original inputs. From expression (5), it is straightforward that $x_i' > x_i$ as $\theta' < 1$.

Step 3: The adjusted inputs (x_i') replace the original ones in the dataset, and VRS

DEA is re-applied.

The QE-DEA model ensures that the benchmarks both are efficient and are assigned employees' satisfaction scores equal to or greater than a threshold value. More details on the QE-DEA model are provided in Zervopoulos and Palaskas (2011).

5.5. Bias-correction method

Since DEA is a non-parametric method, its efficiency estimators are sensitive to sampling variations of the production frontier and the dimensions of the input-output space. Banker (1993) proved the overestimation of DEA efficiency scores for a finite sample size. DEA estimators resemble the actual efficiency scores online in large samples (Banker, 1993; Grosskopf, 1996; Banker and Natarajan, 2011). Cooper *et al.* (2007) presented a 'rule of thumb' to reduce overestimations of DEA efficiency scores, which is as follows: $n \geq \max\{x \cdot y, 3(x + y)\}$, where n denotes the number of units, and x and y stand for the inputs and outputs, respectively.

Our sample consists of 19 units that use five inputs to produce one output. According to the 'rule of thumb' of Cooper *et al.* (2007), the minimum number of units in our sample should be 18. The total number of units in our sample (i.e. 19) is regarded as marginally acceptable; however, it is not enough to prevent bias in the efficiency estimators. The problem of overestimations becomes more significant in the second sample that is used in this study, which consists of 12 units. This problem is associated not only with higher efficiency estimators than the actual efficiency scores but also with input levels that require further reduction than that defined by the four DEA programmes that are applied in order to project the units to the real efficiency frontier.

A widely used method for correcting the bias of DEA efficiency estimators is the smoothed bootstrap method developed by Simar and Wilson (1998, 1999, 2000). In this work, an advanced expression of the smoothed bootstrap put forth by Kneip *et al.* (2011) is applied. Details and additional information on this advanced expression of the smoothed bootstrap method are available in Kneip *et al.* (2008, 2011).

5.6. Evaluating AR2013

The following analysis is focusing on the existing government composition (government departments) and the basic internal units (general directorates, directorates, sections), the size of the staff, the elements of the budget and the legal enactments:

Table I. Configuration of the General Government structure											
DEPARTMENT OF	GENERAL DIRECTORATES - 2013	DIRECTORATES - 2013	SECTORS - 2013	GENERAL DIRECTORATES - Dec 2014	DIRECTORATES - Dec 2014	SECTORS - Dec 2014	TENURED STAFF - Dec 2013	TENURED STAFF - Oct 2014	BUDGET - 2013	BUDGET - 2014	LAWS - 2013
1 FOREIGN AFFAIRS	8	56	175	8	56	175	2004	1969	308759655.00	292980000.00	13
2 FINANCE	16	119	410	13	73	285	15836	15156	613304369.37	585185000.00	22
3 NATIONAL DEFENCE*	4	15	60	4	15	60	88347	87073	332126357.75	3067298000.00	14
4 INTERIOR	6	22	75	5	14	48	654	642	25783721.00	30181000.00	1
5 DEVELOPMENT & COMPETITIVENESS	14	78	257	13	36	132	1685	1683	23650714.00	19387000.00	4
6 EDUCATION & RELIGION*	11	57	208	10	31	115	177547	171946	3085112754.78	3682781000.00	4
7 CULTURE & SPORTS	7	41	177	6	32	99	7563	7254	334617635.87	297950000.00	1
8 ADMINISTRATIVE REFORM & E-GOVERNMENT	9	35	139	5	22	88	822	803	81603046.32	32998000.00	2
9 HEALTH*	5	27	92	4	19	63	86063	80833	23403726.16	20841000.00	6
10 LABOUR, SOCIAL SECURITY & WELFARE*	8	53	161	7	21	79	17150	16757	512313541.14	538940000.00	3
11 RURAL DEVELOPMENT & FOOD	9	49	270	6	29	105	2155	2073	722813921.04	506317000.00	4
12 INFRASTRUCTURE, TRANSPORT & NETWORKS	10	60	160	9	36	134	4597	4472	774554245.30	560737000.00	16
13 ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	58	208	9	30	110	830	787	70393146.00	70230000.00	13
14 JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	4	13	31	3	9	31	15233	15726	36781173.60	25965000.00	9
15 PUBLIC ORDER & CITIZEN'S PROTECTION*	1	6	25	1	6	25	62722	63003	1789703384.70	1742378000.00	0
16 TOURISM	2	10	30	2	8	30	831	778	32804872.38	26966000.00	4
17 SHIPPING & THE AEGEAN*	5	27	100	4	19	71	8124	8012	317228294.00	295243000.00	4
18 MACEDONIA & THRACE	1	8	34	1	4	19	132	123	7038063.00	5597000.00	1
19 SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION / SECRETARIAT GENERAL OF MASS MEDIA	2	10	33	2	5	20	449	435	42952755.57	41570000.00	1
SUM =	134	744	2646	112	465	1689	492744	479525	12924082576.99	11841370000.00	122
OECD AVERAGE PER MINISTRY =	10	60	240								

As far as Table I is concerned, it needs to be explained that there have been taken account of:

- the ministerial structures that emerged after the government reshuffle of June 2013 (ante, page 54), as a result of which two ministries were divided and the total number of CGDs rose to 18 (from 16); in that number has to be added the distinct Secretary General of Information and Communication along with that with Mass Media responsibility
- the evaluation of the internal structure of the Ministries of Foreign Affairs, National Defence, and Public Order and Citizen's Protection has not led so far to any significant reorganisation; for that reason the data referring to the years 2013 and 2014 do not present any difference whatsoever
- the number of organisational units (Directorates, etc.) refers exclusively to those at the central services of the ministries (i.e. they are not inclusive of the decentralised ones). It is worth mentioning that, as it was emphasised within the OECD Review concerning the Central Government in the country (2011: 57), it is not unlikely that administrative practice may not reflect the legal provisions regarding

ministries' competences, whereas the organisational charts which are presented in the website of each one have many differences from the legal and the actual administrative structures (OECD, 2011: 57)

- in the overall number of Directorates General there have been included the Secretariats General which comprise of Directorates only
- as far as the number of permanent civil servants is concerned, the respective data have been searched in the Public Employees Record (www.apografi.gov.gr), which however presents the total number of civil servants in the ministries including those employed in central services, in decentralised units and in public bodies and agencies. The Record is constantly being revised taking account of the personnel transfer and mobility, so that certain variations may be seen in the passage of time
- a special case is that of the Ministry of Justice, Transparency and Human Rights since in the personnel there are included the judicial functionaries, who are nevertheless not considered as civil servants in the strict sense of the term; similar is the case of the Ministry of Shipping and the Aegean, in the personnel of which there are included civil and military staff
- with regard to the budgetary documents there have been accounted resources referring to the central services of the ministries, solely, excluding decentralised units, public bodies and agencies supervised by the ministries, as well as the related independent authorities
- nonetheless, in certain cases that was not attainable: for instance, in the Ministry of Culture and Sports, because in the central government budget reference is being made to culture services, only (which is most likely inclusive of the decentralised units, as well). Similar are the cases of the Ministry of the Environment, Energy and Climate Change, the Ministry of Tourism, etc.
- ministries with regard to which the above mentioned variations may occur are being signified with an asterisk
- regarding the promulgating legal documents the research and crossreference have been based on the websites of Hellenic Parliament as well as the Government Printing Office.

6. Empirical results

6.1. Efficiency measurement tool

The aforementioned methods and programmes were applied to Central Government Departments to measure their efficiency and effectiveness, and define their optimal input levels. These input levels, holding the output (i.e. laws) fixed (input-oriented analysis), ensure the attainment of efficiency (i.e. efficiency score equal to unity) and effectiveness (i.e. effectiveness score equal to unity) for every CGD. In addition, the optimal inputs obtained from the application of the methods and programmes (1) - (5) are compared against the inputs defined by the AR2013 for the 19 CGDs. The reason for this comparative analysis is to examine whether the AR2013 leads the CGDs to efficiency and effectiveness or only aims to reduce public spending.

The methods and programmes (i.e. VRS DEA, Targeted DEA, Stochastic DEA, QE-DEA and Bias-corrected DEA) were applied to both the 19 CGDs, which comprise the complete sample under reform, and a subsample of 12 CGDs. The CGDs excluded from the second sample (ante, page 66) are presented with an asterisk (*) following their name in the Tables that include 19 CGDs (i.e. Tables 1, 3, 5, 7, 9, 11 and 13).

The efficiency scores of the 19 CGDs and the 12 CGDs are displayed in Tables 1 and 2, respectively. In particular, in both Tables, columns 3, 4 and 5 present the efficiency scores defined by the application of the VRS DEA, the Targeted DEA and the Stochastic DEA programmes, respectively. Column 6 illustrates the effectiveness scores determined by QE-DEA, which balance efficiency and civil servants' perception of quality of their work environment. The last three columns, under the title 'Bias-corrected', display the bias-corrected efficiency scores on the left-hand side, and the lower and upper bounds of the confidence interval of these efficiency scores in the middle and right-hand side columns, respectively.

The calculation of the VRS DEA efficiency scores drew on the 5 inputs and 1 output of our dataset (see Table A1 in Appendix 1). To determine the Targeted DEA efficiency scores, a target was set for the input variable 'Budget 2013', which is the input variable 'Budget 2014'. According to the AR2013, no CGD should spend more than the amount determined in 'Budget 2014'. The Stochastic DEA programme yields efficiency scores, which take into account the possibility of 'noise' in the data. The

presence of 'noise', which is not unlikely in data from public organisations, is responsible for significant distortion of the results. Such flaws are particularly associated with non-parametric techniques (e.g. DEA), which are sensitive to data irregularities.

Unlike the previous three DEA programmes, which only take into account input and output variables, the QE-DEA method yields scores that incorporate exogenous variables, such as employees' satisfaction, in addition to input and output variables. The QE-DEA scores are associated with effectiveness since they express a balance between the operational perspective (i.e. efficiency) and the environmental perspective (i.e. employees' satisfaction). Employees' satisfaction is regarded as an environmental variable since it cannot be directly or fully controlled by the management of the unit (i.e. CGD). However, employees' satisfaction affects the outputs of the unit (i.e. CGD).

The last DEA programme (i.e. bias-corrected) estimates the efficiency scores for the sample CGDs considering the unknown population of CGDs. Hence, based on the bias-corrected efficiency estimators, even sample CGDs that are regarded as efficient by the VRS, Targeted and Stochastic DEA programmes may need reforms.

In Tables 1 and 2, the efficient CGDs are assigned efficiency scores equal to unity, which is equivalent to 100% of efficiency. CGDs with efficiency scores lower than unity are regarded as inefficient and in need of operational reform. In other words, taking into account the orientation of AR2013 and of this study, the inefficient CGDs should reduce their inputs to a certain level to become efficient.

Table 1. Efficiency and effectiveness scores (19 Central Government Departments)

ID	CGDs	Efficiency & Effectiveness scores						
		VRS	Targeted	Stochastic	QE-DEA	Bias-corrected		
						C.I. lower	C.I. higher	
1	FOREIGN AFFAIRS	1.0000	1.0000	1.0000	1.0000	0.8205	0.3392	0.9888
2	FINANCE	1.0000	1.0000	0.8914	1.0000	0.6872	0.1805	0.9894
3	NATIONAL DEFENCE*	1.0000	1.0000	1.0000	1.0000	0.7147	0.2256	0.9898
4	INTERIOR	0.4442	0.4597	0.3807	0.6688	0.3844	0.1717	0.4398
5	DEVELOPMENT & COMPETITIVENESS	0.9223	0.6579	1.0000	1.0000	0.8022	0.4293	0.9126
6	EDUCATION & RELIGION*	0.1689	0.1678	0.1803	0.2846	0.1553	0.1369	0.1670
7	CULTURE & SPORTS	0.1944	0.4999	0.1643	0.2656	0.1748	0.1227	0.1927
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	0.3104	0.3734	0.3357	0.5400	0.2686	0.1453	0.3071
9	HEALTH*	1.0000	1.0000	1.0000	1.0000	0.8479	0.3909	0.9901
10	LABOUR, SOCIAL SECURITY & WELFARE*	0.2042	0.5097	0.2761	0.3808	0.1857	0.1352	0.2021
11	RURAL DEVELOPMENT & FOOD	0.2947	0.9992	0.3807	0.5545	0.2605	0.1881	0.2914
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	1.0000	1.0000	1.0000	1.0000	0.7606	0.2201	0.9901
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	1.0000	1.0000	1.0000	1.0000	0.7034	0.1955	0.9899
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	1.0000	1.0000	1.0000	1.0000	0.6991	0.2107	0.9894
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1.0000	1.0000	1.0000	1.0000	0.8288	0.5241	0.9901
16	TOURISM	1.0000	1.0000	1.0000	1.0000	0.7534	0.3649	0.9895
17	SHIPPING & THE AEGEAN*	0.3926	0.6419	0.6057	0.7934	0.3572	0.2425	0.3888
18	MACEDONIA & THRACE	1.0000	1.0000	1.0000	1.0000	0.7068	0.2306	0.9885
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	0.9771	1.0000	0.8849	1.0000	0.8839	0.6531	0.9665

According to Table 1, the four DEA programmes (i.e. VRS, Targeted, Stochastic and QE-DEA) recognise as efficient and effective the Ministries of Foreign Affairs (ID #1), National Defence (ID #3), Health (ID #9), Infrastructure, Transport & Networks (ID #12), Environment, Energy & Climate Change (ID #13), Justice, Transparency & Human Rights (ID #14), Public Order & Citizen's Protection (ID #15), Tourism (ID #16), and Macedonia & Thrace (ID #18). Accordingly, the Ministries that need significant reform are those assigned the lowest scores, such as the Ministries of Education & Religion (ID #6), Culture & Sports (ID #7), Labour, Social Security & Welfare (ID #10). However, it should be noted that the first and third Ministries cannot be directly compared with the other Ministries that have no asterisk indication following their name, since a significant number of their tenured staff is employed in decentralised departments and public entities supervised by the Ministries (e.g. primary and secondary schools, social security offices).

The bias-corrected efficiency estimators of all sample CGDs lie below unity, implying that no Ministry is efficient. Consequently, reforms are needed for all CGDs. The CGDs that report the lowest deviation from unity are the Secretariat General of Information & Communication/Secretariat General of Mass Media (ID #19) followed by the Ministries of Health (ID #9), of Public Order & Citizen's Protection (ID #15), of Foreign Affairs (ID #1) and of Development & Competitiveness (ID #5). For instance, the Secretariat with ID #19, which has an estimated efficiency of 0.8839 (or 88.39%), is required to reduce its resources by 0.1161 (or 11.61%) to become efficient. Similarly, drawing on the bias-corrected efficiency estimators, most CGDs need to decrease their resources even more than recommended by the VRS DEA, Targeted DEA, Stochastic DEA and QE-DEA approaches.

Table 2. Efficiency and effectiveness scores (12 Central Government Departments)

ID	CGDs	Efficiency & Effectiveness scores						
		VRS	Targeted	Stochastic	QE-DEA	Bias-corrected		
						C.I. lower	C.I. higher	
1	FOREIGN AFFAIRS	1.0000	1.0000	1.0000	1.0000	0.8414	0.4455	0.9910
2	FINANSE	1.0000	1.0000	0.9736	1.0000	0.7324	0.2026	0.9911
3	INTERIOR	0.4442	0.4597	0.3896	0.6688	0.3981	0.1897	0.4407
4	DEVELOPMENT & COMPETITIVENESS	0.9673	0.8185	1.0000	1.0000	0.8586	0.4140	0.9587
5	CULTURE & SPORTS	0.1951	0.6645	0.1805	0.2663	0.1781	0.1217	0.1938
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	0.3104	0.3735	0.3357	0.5400	0.2757	0.1607	0.3078
7	RURAL DEVELOPMENT & FOOD	0.2947	0.2947	0.3807	0.5545	0.2645	0.1909	0.2921
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	1.0000	1.0000	1.0000	1.0000	0.7984	0.2878	0.9910
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	1.0000	1.0000	1.0000	1.0000	0.7289	0.2103	0.9915
10	TOURISM	1.0000	1.0000	1.0000	1.0000	0.7591	0.3476	0.9912
11	MACEDONIA & THRACE	1.0000	1.0000	1.0000	1.0000	0.7452	0.2714	0.9912
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	0.9771	1.0000	0.8880	1.0000	0.9006	0.7192	0.9687

In Table 2, the CGDs that are regarded as efficient and effective, according to the four DEA programmes (i.e. VRS, Targeted, Stochastic and QE-DEA) are the same as in Table 1. The scores presented in Table 2 are expected to be higher than these in Table 1. This expected upward movement is due not to a true efficiency and effectiveness change but to the decrease of the sample size while the dimensions of the input-output set remain unchanged. However, there may be some exceptions, such as the Targeted DEA efficiency score assigned to the Ministry of Rural Development & Food (ID #7). This score is significantly lower (i.e. 0.2947) compared to the corresponding efficiency score assigned to the same Ministry (i.e. 0.9992) when the sample consisted of 19 CGDs. The decline of this particular efficiency score is

explained by the change of the benchmark CGDs for the Ministry of Rural Development & Food (Tables 3 and 4). In particular, in the case of the 19-CGD sample, the production process of the Ministry of Rural Development & Food was dominated by the production process of the Ministry of Tourism (ID #16) and the Ministry of Macedonia & Thrace (ID #18). In other words, the latter two Ministries were regarded as benchmarks for the Ministry of Rural Development & Food. In the case of the 12-CGD sample, four Ministries are defined as benchmarks for the Ministry of Rural Development & Food, which are the Ministry of Foreign Affairs (ID #1), the Ministry of Environment, Energy & Climate Change (ID #9), the Ministry of Tourism (ID #10), and the Ministry of Macedonia & Thrace (ID #11).

Regarding the bias-corrected efficiency estimators displayed in Table 2, all CGDs need to be reformed in order to become efficient. The CGDs that need the minimum intervention in the production process is the Secretariat General of Information & Communication/Secretariat General of Mass Media (ID #12) since its efficiency is estimated to be 0.9006. The most significant reforms should be made to the Ministries of Culture & Sports (efficiency estimator: 0.1781), Administrative Reform & E-Governance (efficiency estimator: 0.2757), and Interior (efficiency estimator: 0.3981).

Tables 3 and 4, particularly columns 3 - 6, illustrate the benchmark CGD(s) for every dominated CGD presented in column 2. It should be noted that the production process of the benchmark CGDs does not have the same impact on all of the dominated CGDs, which are inefficient. The efficient CGDs are self-dominated. For instance, there is a single benchmark CGD for the Ministry of Foreign Affairs, which is efficient according to the VRS, Targeted and Stochastic DEA programmes (Tables 1 and 2), and effective according to the QE-DEA method, that is the same Ministry (Tables 3 and 4).

Table 3. Benchmarking (19 Central Government Departments)

ID	CGDs	Benchmarks (IDs)			
		VRS	Targeted	Stochastic	QE-DEA
1	FOREIGN AFFAIRS	1	1	1	1
2	FINANCE	2	2	1, 12, 14, 16	2
3	NATIONAL DEFENCE*	3	3	3	3
4	INTERIOR	16, 18	18, 19	13, 14, 16	18, 19
5	DEVELOPMENT & COMPETITIVENESS	13, 14, 18	13, 14, 18	5	5
6	EDUCATION & RELIGION*	14, 15, 16, 18, 3	3, 15, 16, 18	3, 14, 16	3, 14, 18, 19
7	CULTURE & SPORTS	14, 15, 18	3, 12, 18, 19	1, 14, 16	3, 15, 18, 19
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	13, 16, 18	1, 13, 18	13, 16	1, 13, 16, 18
9	HEALTH*	9	9	9	9
10	LABOUR, SOCIAL SECURITY & WELFARE*	16, 18, 3	3, 12, 18	1, 14, 16	1, 14, 18
11	RURAL DEVELOPMENT & FOOD	1, 13, 16, 18	16, 18	1, 13, 16	1, 16, 19
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	12	12	12	12
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	13	13	13	13
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	14	14	14	14
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	15	15	15	15
16	TOURISM	16	16	16	16
17	SHIPPING & THE AEGEAN*	16, 18, 3	3, 12, 16, 18, 19	1, 14, 16	1, 14, 16, 18
18	MACEDONIA & THRACE	18	18	18	18
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	16, 18	19	1, 14, 16	19

In Table 3, drawing on the VRS DEA, Targeted DEA and QE-DEA results, the CGD that appears most frequently as a benchmark is the Macedonia & Thrace (ID #18). In particular, VRS DEA, Targeted DEA and QE-DEA identify this Ministry as a benchmark 10 times, 8 times and 6 times, respectively. In the VRS DEA context, the second most dominant production process is that of the Ministry of Tourism (ID #16), which appears 7 times as a benchmark for the inefficient CGDs. In the case of the Targeted DEA and QE-DEA, the Ministry of Tourism and the Ministry of Infrastructure, Transport & Networks (ID #12) are benchmarks for 3 inefficient CGDs. According to the Stochastic DEA results, the two most dominant CGDs are the Ministry of Tourism (ID #16) and the Ministry of Justice, Transparency & Human Rights (ID #14), which are identified as benchmarks 9 times and 7 times, respectively.

Table 4. Benchmarking (12 Central Government Departments)

ID	CGDs	Benchmarks (IDs)			
		VRS	Targeted	Stochastic	QE-DEA
1	FOREIGN AFFAIRS	1	1	1	1
2	FINANCE	2	2	1, 8, 10	2
3	INTERIOR	10, 11	11, 12	9, 10	11, 12
4	DEVELOPMENT & COMPETITIVENESS	11, 9	9, 11	4	4
5	CULTURE & SPORTS	11	8, 11, 12	1, 8, 10	11, 12
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	10, 11, 9	1, 9, 11	9, 10	1, 9, 10, 11
7	RURAL DEVELOPMENT & FOOD	1, 10, 11, 9	1, 9, 10, 11	1, 9, 10	1, 10, 12
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	8	8	8	8
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	9	9	9	9
10	TOURISM	10	10	10	10
11	MACEDONIA & THRACE	11	11	11	11
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	10, 11	12	1, 10	12

In the case of the reduced sample, the Ministries of Macedonia & Thrace and Tourism remain the most dominant for the inefficient CGDs (Table 4). The Ministry of Macedonia & Thrace is also identified as the most dominant for the ineffective CGDs. In particular, the Ministry of Macedonia & Thrace is identified as a benchmark 6 times and 5 times by the VRS DEA programme and the Targeted DEA programme, respectively. The same Ministry is regarded as a benchmark 3 times by the QE-DEA method since it is efficient and reports a high level of employees' satisfaction. According to the VRS DEA and Stochastic DEA programmes, the Ministry of Tourism dominates the production process of 4 inefficient CGDs and 6 inefficient CGDs, respectively. In addition to these two Ministries, the Ministry of Environment, Energy & Climate Change is identified many times as benchmark by the three DEA programmes (i.e. VRS, Targeted and Stochastic).

The following Tables (i.e. Tables 5 - 14) present the actual input levels before the implementation of the AR2013 (column 3), the input levels suggested by AR2013 programme, and the change in the input levels before and after the implementation of the AR2013. In addition, in Tables 5 - 14, columns 6 - 14 illustrate the optimal input levels as defined by the VRS DEA, Targeted DEA and Stochastic DEA programmes. On the right-hand side of the columns with the optimal inputs, the change between the actual and optimal input levels, and the one between the AR2013 input levels and optimal input levels is displayed.

Table 5. Optimal number of General Directorates (19 Central Government Departments)

ID	CGDs	General Directorates											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	8	8	0.00	8	0.00	0.00	8	0.00	0.00	8	0.00	0.00
2	FINANCE	16	13	-0.19	16	0.00	0.23	16	0.00	0.23	13	-0.19	0.00
3	NATIONAL DEFENCE*	4	4	0.00	4	0.00	0.00	4	0.00	0.00	4	0.00	0.00
4	INTERIOR	6	5	-0.17	1	-0.83	-0.80	2	-0.67	-0.60	2	-0.67	-0.60
5	DEVELOPMENT & COMPETITIVENESS	14	13	-0.07	3	-0.79	-0.77	4	-0.71	-0.69	14	0.00	0.08
6	EDUCATION & RELIGION*	11	10	-0.09	2	-0.82	-0.80	2	-0.82	-0.80	2	-0.82	-0.80
7	CULTURE & SPORTS	7	6	-0.14	1	-0.86	-0.83	3	-0.57	-0.50	1	-0.86	-0.83
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	9	5	-0.44	2	-0.78	-0.60	2	-0.78	-0.60	2	-0.78	-0.60
9	HEALTH*	5	4	-0.20	5	0.00	0.25	5	0.00	0.25	5	0.00	0.25
10	LABOUR, SOCIAL SECURITY & WELFARE*	8	7	-0.13	2	-0.75	-0.71	4	-0.50	-0.43	2	-0.75	-0.71
11	RURAL DEVELOPMENT & FOOD	9	6	-0.33	3	-0.67	-0.50	9	0.00	0.50	3	-0.67	-0.50
12	INFRASTRUCTURE, TRANSPORT	10	9	-0.10	10	0.00	0.11	10	0.00	0.11	10	0.00	0.11

& NETWORKS													
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	9	-0.25	12	0.00	0.33	12	0.00	0.33	12	0.00	0.33
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	4	3	-0.25	4	0.00	0.33	4	0.00	0.33	4	0.00	0.33
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1	1	0.00	1	0.00	0.00	1	0.00	0.00	1	0.00	0.00
16	TOURISM	2	2	0.00	2	0.00	0.00	2	0.00	0.00	2	0.00	0.00
17	SHIPPING & THE AEGEAN*	5	4	-0.20	2	-0.60	-0.50	3	-0.40	-0.25	2	-0.60	-0.50
18	MACEDONIA & THRACE	1	1	0.00	1	0.00	0.00	1	0.00	0.00	1	0.00	0.00
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	2	2	0.00	1	-0.50	-0.50	2	0.00	0.00	1	-0.50	-0.50

Focusing on the number of general directorates for every CGD, the AR2013 programme suggested a decrease between 0.07 (or 7%), which applies to the Ministry of Development and Competitiveness, and 0.44 (or 44%), which applies to the Ministry of Administrative Reform & E-Governance. In addition, there are four CGDs that do not need to limit the number of their general directorates, namely, the Ministry of Foreign Affairs, the Ministry of National Defence, the Ministry of Public Order & Citizen's Protection, and the Ministry of Tourism.

The three DEA programmes regard as optimal the actual number of general directorates for the four CGDs mentioned above. In particular, VRS DEA and Stochastic DEA programmes hold unchanged the number of general directorates of 10 CGDs (e.g. Ministry of Foreign Affairs, Ministry of National Defence, Ministry of Health). The number of general directorates that was optimal in 2013 increases to 11, according to the Targeted DEA programme; however, it should be noted that these results are sample-based since they are defined through the comparative analysis of the sample CGDs. Hence, the reforms suggested by the three DEA programmes lead the inefficient CGDs to efficiency, which is defined by the 19 CGDs, or the 12 CGDs. In the case where the attainment of global efficiency is sought, which is defined by population data rather than sample data, reforms should be implemented even to CGDs that have sample-based optimal input levels. The average reduction of the input levels is defined by the bias-corrected efficiency estimators presented in Tables 1 and 2.

According to Table 5, the most significant decrease in the number of general directorates should be introduced in the Ministries of Education & Religion, and Culture & Sports. Only the VRS DEA programme suggests the same significant decrease in the number of general directorates for the Ministry of the Interior. It is clear from Table 5 that the levels of adjustment that should be applied to the number of general directorates vary depending on which DEA programme we use for the evaluation of the activity of the CGDs. The Targeted DEA and Stochastic DEA programmes are better at expressing either a fundamental target of the Greek public administration, which is control over the spending of the CGDs, or the 'noise' that the data of the CGDs is likely to contain.

Through the DEA-based evaluation that was applied in this paper and the associated research that was conducted, it can be identified how the optimal number

of general directorates deviates from the level introduced by AR2013, which applies to most of the CGDs in Table 5. It is noteworthy that the deviations are not only negative but also positive. Negative deviations of the optimal number of general directorates, or, in general, of the optimal input levels, from the level of the corresponding input as defined by AR2013 imply the need for an additional decrease in this input to ensure the attainment of efficiency by the CGD. In the case of positive deviations, an increase in the level of input, compared to that determined by AR2013, is required to ensure the efficiency of the CGD.

Table 6. Optimal number of General Directorates (12 Central Government Departments)

ID	CGDs	General Directorates											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	8	8	0.00	8	0.00	0.00	8	0.00	0.00	8	0.00	0.00
2	FINANCE	16	13	-0.19	16	0.00	0.23	16	0.00	0.23	14	-0.13	0.08
3	INTERIOR	6	5	-0.17	1	-0.83	-0.80	2	-0.67	-0.60	2	-0.67	-0.60
4	DEVELOPMENT & COMPETITIVENESS	14	13	-0.07	4	-0.71	-0.69	4	-0.71	-0.69	14	0.00	0.08
5	CULTURE & SPORTS	7	6	-0.14	1	-0.86	-0.83	5	-0.29	-0.17	1	-0.86	-0.83
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	9	5	-0.44	2	-0.78	-0.60	2	-0.78	-0.60	2	-0.78	-0.60
7	RURAL DEVELOPMENT & FOOD	9	6	-0.33	3	-0.67	-0.50	3	-0.67	-0.50	3	-0.67	-0.50
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	10	9	-0.10	10	0.00	0.11	10	0.00	0.11	10	0.00	0.11
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	9	-0.25	12	0.00	0.33	12	0.00	0.33	12	0.00	0.33
10	TOURISM	2	2	0.00	2	0.00	0.00	2	0.00	0.00	2	0.00	0.00
11	MACEDONIA & THRACE	1	1	0.00	1	0.00	0.00	1	0.00	0.00	1	0.00	0.00

12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	2	2	0.00	1	-0.50	-0.50	2	0.00	0.00	1	-0.50	-0.50
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The Ministry of the Interior and the Ministry of Culture & Sports remain among those that need the greatest adjustment to the number of their general directorates even when the sample size is reduced to 12 CGDs (Table 6). In particular, based on the VRS DEA programme, the optimal number of general directorates for the Ministry of the Interior is 1, whereas it was 6 before the AR2013 and dropped to 5 after the implementation of the AR2013. When the Targeted DEA and Stochastic DEA programmes are taken into account, the optimal number of general directorates for the same Ministry is 2. Nevertheless, generally speaking, taking account of the fact that the optimised span of control is defined by the ratio 1/5-7, the above mentioned provides evidence for the need that the Ministry should not be a distinct department but it should be merged with other service units. On the contrary, the three DEA programmes define as optimal the 12 general directorates for the Ministry of Environment, Energy & Climate Change, which were operating before the implementation of the AR2013.

Deviations between optimal levels of resources and the corresponding levels defined by the AR2013 are present in most CGDs. However, there is consensus between the AR2013 and the programmes about the number of general directorates of the three Ministries (i.e. Ministry of Foreign Affairs, Ministry of Tourism and Ministry of Macedonia & Thrace). This consensus appears only in cases where there is no need for adjustment.

Table 7. Optimal number of Directorates (19 Central Government Departments)

ID	CGDs	Directorates											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	56	56	0.00	56	0.00	0.00	56	0.00	0.00	56	0.00	0.00
2	FINANCE	119	73	-0.39	119	0.00	0.63	119	0.00	0.63	74	-0.38	0.01
3	NATIONAL DEFENCE*	15	15	0.00	15	0.00	0.00	15	0.00	0.00	15	0.00	0.00
4	INTERIOR	22	14	-0.36	8	-0.64	-0.43	9	-0.59	-0.36	8	-0.64	-0.43
5	DEVELOPMENT & COMPETITIVENESS	78	36	-0.54	18	-0.77	-0.50	19	-0.76	-0.47	78	0.00	1.17
6	EDUCATION & RELIGION*	57	31	-0.46	10	-0.82	-0.68	10	-0.82	-0.68	6	-0.89	-0.81
7	CULTURE & SPORTS	41	32	-0.22	8	-0.80	-0.75	20	-0.51	-0.38	5	-0.88	-0.84
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	35	22	-0.37	11	-0.69	-0.50	13	-0.63	-0.41	11	-0.69	-0.50
9	HEALTH*	27	19	-0.30	27	0.00	0.42	27	0.00	0.42	27	0.00	0.42
10	LABOUR, SOCIAL SECURITY & WELFARE*	53	21	-0.60	9	-0.83	-0.57	25	-0.53	0.19	8	-0.85	-0.62
11	RURAL DEVELOPMENT & FOOD	49	29	-0.41	14	-0.71	-0.52	49	0.00	0.69	18	-0.63	-0.38
12	INFRASTRUCTURE, TRANSPORT	60	36	-0.40	60	0.00	0.67	60	0.00	0.67	60	0.00	0.67

& NETWORKS													
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	58	30	-0.48	58	0.00	0.93	58	0.00	0.93	58	0.00	0.93
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	13	9	-0.31	13	0.00	0.44	13	0.00	0.44	13	0.00	0.44
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	6	6	0.00	6	0.00	0.00	6	0.00	0.00	6	0.00	0.00
16	TOURISM	10	8	-0.20	10	0.00	0.25	10	0.00	0.25	10	0.00	0.25
17	SHIPPING & THE AEGEAN*	27	19	-0.30	10	-0.63	-0.47	17	-0.37	-0.11	11	-0.59	-0.42
18	MACEDONIA & THRACE	8	4	-0.50	8	0.00	1.00	8	0.00	1.00	8	0.00	1.00
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	10	5	-0.50	9	-0.10	0.80	10	0.00	1.00	6	-0.40	0.20

Focusing on the number of directorates, when 19 CGDs are under evaluation (Table 7), the most significant adjustment is required by the Ministries of Education & Religion, Culture & Sports and Labour, Social Security & Welfare. In most cases, adjustments aimed toward the attainment of efficiency lead to a significant decrease in both the number of directorates as defined before and after the implementation of the AR2013. The significance of the adjustment depends on the priorities set by policy makers and consequently by the particular DEA programme being applied.

According to the three DEA programmes (i.e. VRS, Targeted and Stochastic), the majority of the CGDs should keep the same number of directorates, as they were defined before the implementation of the AR2013.

Table 8. Optimal number of Directorates (12 Central Government Departments)

ID	CGDs	Directorates											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	56	56	0.00	56	0.00	0.00	56	0.00	0.00	56	0.00	0.00
2	FINANCE	119	73	-0.39	119	0.00	0.63	119	0.00	0.63	91	-0.24	0.25
3	INTERIOR	22	14	-0.36	8	-0.64	-0.43	9	-0.59	-0.36	8	-0.64	-0.43
4	DEVELOPMENT & COMPETITIVENESS	78	36	-0.54	21	-0.73	-0.42	21	-0.73	-0.42	78	0.00	1.17
5	CULTURE & SPORTS	41	32	-0.22	8	-0.80	-0.75	27	-0.34	-0.16	7	-0.83	-0.78
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	35	22	-0.37	11	-0.69	-0.50	13	-0.63	-0.41	11	-0.69	-0.50
7	RURAL DEVELOPMENT & FOOD	49	29	-0.41	14	-0.71	-0.52	14	-0.71	-0.52	18	-0.63	-0.38
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	60	36	-0.40	60	0.00	0.67	60	0.00	0.67	60	0.00	0.67
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	58	30	-0.48	58	0.00	0.93	58	0.00	0.93	58	0.00	0.93

10	TOURISM	10	8	-0.20	10	0.00	0.25	10	0.00	0.25	10	0.00	0.25
11	MACEDONIA & THRACE	8	4	-0.50	8	0.00	1.00	8	0.00	1.00	8	0.00	1.00
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/ SECRETARIAT GENERAL OF MASS MEDIA	10	5	-0.50	9	-0.10	0.80	10	0.00	1.00	5	-0.50	0.00

In a reduced sample of 12 CGDs (Table 8), drawing on the results of the three DEA programmes, the Ministries that should considerably decrease their number of directorates are the Interior, and the Rural Development & Food. Significant downward adjustment of the number of directorates should also be applied to the Ministry of Culture & Sports, the Ministry of Development & Competitiveness, and the Ministry of Administrative Reform & E-Governance.

Table 9. Optimal number of Sections (19 Central Government Departments)

ID	CGDs	Sections											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	175	175	0.00	175	0.00	0.00	175	0.00	0.00	175	0.00	0.00
2	FINANCE	410	285	-0.30	410	0.00	0.44	410	0.00	0.44	214	-0.48	-0.25
3	NATIONAL DEFENCE*	60	60	0.00	60	0.00	0.00	60	0.00	0.00	60	0.00	0.00
4	INTERIOR	75	48	-0.36	33	-0.56	-0.31	34	-0.55	-0.29	28	-0.63	-0.42
5	DEVELOPMENT & COMPETITIVENESS	257	132	-0.49	67	-0.74	-0.49	71	-0.72	-0.46	257	0.00	0.95
6	EDUCATION & RELIGION*	209	115	-0.45	35	-0.83	-0.70	35	-0.83	-0.70	19	-0.91	-0.83
7	CULTURE & SPORTS	177	99	-0.44	34	-0.81	-0.66	88	-0.50	-0.11	16	-0.91	-0.84
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	139	88	-0.37	43	-0.69	-0.51	52	-0.63	-0.41	40	-0.71	-0.55
9	HEALTH*	92	63	-0.32	92	0.00	0.46	92	0.00	0.46	92	0.00	0.46
10	LABOUR, SOCIAL SECURITY & WELFARE*	161	79	-0.51	32	-0.80	-0.59	82	-0.49	0.04	21	-0.87	-0.73
11	RURAL DEVELOPMENT & FOOD	270	105	-0.61	50	-0.81	-0.52	270	0.00	1.57	57	-0.79	-0.46

12	INFRASTRUCTURE, TRANSPORT & NETWORKS	160	134	-0.16	160	0.00	0.19	160	0.00	0.19	160	0.00	0.19
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	208	110	-0.47	208	0.00	0.89	208	0.00	0.89	208	0.00	0.89
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	31	31	0.00	31	0.00	0.00	31	0.00	0.00	31	0.00	0.00
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	25	25	0.00	25	0.00	0.00	25	0.00	0.00	25	0.00	0.00
16	TOURISM	30	30	0.00	30	0.00	0.00	30	0.00	0.00	30	0.00	0.00
17	SHIPPING & THE AEGEAN*	100	71	-0.29	31	-0.69	-0.56	64	-0.36	-0.10	32	-0.68	-0.55
18	MACEDONIA & THRACE	34	19	-0.44	34	0.00	0.79	34	0.00	0.79	34	0.00	0.79
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	33	20	-0.39	32	-0.03	0.60	33	0.00	0.65	17	-0.48	-0.15

Table 9 presents the number of sections for the 19 CGDs before and after the implementation of the AR2013. In addition, Table 9 illustrates the optimal number of sections obtained by the VRS DEA, Targeted DEA and Stochastic DEA programmes. According to these three programmes, the most significant reductions to the number of sections should be made to the Ministries of Education & Religion, and Culture & Sports. Drawing on the results obtained by the VRS DEA and Stochastic DEA programmes, the Ministries of Labour, Social Security & Welfare, and Rural Development also need to significantly adjust their number of sections to achieve efficiency.

It should be noted that the Targeted DEA programme identifies less restrictive optimal levels for the number of sections of the 19 CGDs compared to the VRS DEA and Stochastic DEA programmes. This is because the target budget for the CGDs, as determined by the AR2013 and established as a constraint to the optimisation problem of the Targeted DEA programme, is not optimal (minimal). On the contrary, the VRS DEA and Stochastic DEA programme define unconstrained optimal (minimal) budgets for the CGDs. Further discussion on the effect of introducing a target (constraint) in the evaluation follows in Tables 13 and 14.

Table 10. Optimal number of Sections (12 Central Government Departments)

ID	CGDs	Sections											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	175	175	0.00	175	0.00	0.00	175	0.00	0.00	175	0.00	0.00
2	FINANCE	410	285	-0.30	410	0.00	0.44	410	0.00	0.44	276	-0.33	-0.03
3	INTERIOR	75	48	-0.36	33	-0.56	-0.31	34	-0.55	-0.29	29	-0.61	-0.40
4	DEVELOPMENT & COMPETITIVENESS	257	132	-0.49	78	-0.70	-0.41	78	-0.70	-0.41	257	0.00	0.95
5	CULTURE & SPORTS	177	99	-0.44	34	-0.81	-0.66	118	-0.33	0.19	20	-0.89	-0.80
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	139	88	-0.37	43	-0.69	-0.51	52	-0.63	-0.41	40	-0.71	-0.55
7	RURAL DEVELOPMENT & FOOD	270	105	-0.61	50	-0.81	-0.52	50	-0.81	-0.52	57	-0.79	-0.46
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	160	134	-0.16	160	0.00	0.19	160	0.00	0.19	160	0.00	0.19
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	208	110	-0.47	208	0.00	0.89	208	0.00	0.89	208	0.00	0.89

10	TOURISM	30	30	0.00	30	0.00	0.00	30	0.00	0.00	30	0.00	0.00
11	MACEDONIA & THRACE	34	19	-0.44	34	0.00	0.79	34	0.00	0.79	34	0.00	0.79
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/ SECRETARIAT GENERAL OF MASS MEDIA	33	20	-0.39	32	-0.03	0.60	33	0.00	0.65	17	-0.48	-0.15

In the case of the 12-CGD sample, the Ministries that need the most significant adjustment to their number of sections are the Rural Development & Food, the Administrative Reform & E-Governance, and the Interior. In addition, the Ministries of Development & Competitiveness, and Culture & Sports should also significantly reduce the number of their sections. However, there is no consensus among the three DEA programmes on such significant reduction for these two Ministries. In particular, if a priority for the policy makers is control over the spending of the Ministries to the level defined by the AR2013, then the Ministry of Development & Competitiveness should reduce its sections to 78 from 132, which was the number of sections after the implementation of the AR2013. If policy makers admit a possible presence of ‘noise’ in the data of the CGDs, then the Ministry of Development & Competitiveness should increase the number of its sections from 132 to the amount that existed before the implementation of the AR2013 (i.e. 257). A similar analysis of the optimal number of sections applies to the Ministry of Culture & Sports.

It should not be ignored that for the majority of the 12 CGDs, the number of sections that were operating before the AR2013 is currently regarded by the three DEA programmes as the optimal amount. However, if the goal of the CGDs is the attainment of efficiency that is not restricted at the local level (sample-based efficiency measurement) but takes into account a global perspective (population-based efficiency estimation), then downward adjustments to the number of sections, compared to the number of sections operating before the AR2013, are needed. For the CGDs that were assigned the optimal number of sections equal to those before the implementation of the AR2013, such adjustments will not cause the former levels to be lower than the levels determined after the implementation of the AR2013.

Table 11. Optimal number of Staff (19 Central Government Departments)

ID	CGDs	Staff											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
		Actual	AR2013	Change	VRS	Actual	AR2013	Targeted	Actual	AR2013	Stochastic	Actual	AR2013
1	FOREIGN AFFAIRS	2004	1969	-0.02	2004	0.00	0.02	2004	0.00	0.02	2004	0.00	0.02
2	FINANCE	15836	15156	-0.04	15836	0.00	0.04	15836	0.00	0.04	14114	-0.11	-0.07
3	NATIONAL DEFENCE*	88347	87073	-0.01	88347	0.00	0.01	88347	0.00	0.01	88347	0.00	0.01
4	INTERIOR	654	642	-0.02	252	-0.61	-0.61	301	-0.54	-0.53	249	-0.62	-0.61
5	DEVELOPMENT & COMPETITIVENESS	1685	1683	0.00	1554	-0.08	-0.08	1109	-0.34	-0.34	1685	0.00	0.00
6	EDUCATION & RELIGION*	177547	171946	-0.03	19372	-0.89	-0.89	22297	-0.87	-0.87	21649	-0.88	-0.87
7	CULTURE & SPORTS	7563	7254	-0.04	1470	-0.81	-0.80	3781	-0.50	-0.48	1243	-0.84	-0.83
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	822	803	-0.02	255	-0.69	-0.68	307	-0.63	-0.62	276	-0.66	-0.66
9	HEALTH*	86063	80833	-0.06	86063	0.00	0.06	86063	0.00	0.06	86063	0.00	0.06
10	LABOUR, SOCIAL SECURITY & WELFARE*	17150	16757	-0.02	2736	-0.84	-0.84	8741	-0.49	-0.48	4734	-0.72	-0.72

11	RURAL DEVELOPMENT & FOOD	2155	2073	-0.04	635	-0.71	-0.69	2153	0.00	0.04	820	-0.62	-0.60
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	4597	4472	-0.03	4597	0.00	0.03	4597	0.00	0.03	4597	0.00	0.03
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	830	787	-0.05	830	0.00	0.05	830	0.00	0.05	830	0.00	0.05
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	15233	15726	0.03	15233	0.00	-0.03	15233	0.00	-0.03	15233	0.00	-0.03
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	62722	63003	0.00	62722	0.00	0.00	62722	0.00	0.00	62722	0.00	0.00
16	TOURISM	831	778	-0.06	831	0.00	0.07	831	0.00	0.07	831	0.00	0.07
17	SHIPPING & THE AEGEAN*	8124	8012	-0.01	3190	-0.61	-0.60	5215	-0.36	-0.35	4920	-0.39	-0.39
18	MACEDONIA & THRACE	132	123	-0.07	132	0.00	0.07	132	0.00	0.07	132	0.00	0.07
19	SECRETARIAT GENERAL OF INFORMATION & COM- MUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	449	435	-0.03	439	-0.02	0.01	449	0.00	0.03	397	-0.12	-0.09

In Tables 11 and 12, adjustments are being examined which were made to the number of tenured staff employed in the 19- and 12-CGDs samples, respectively, towards the attainment of efficiency.

Drawing on the results displayed in Table 11, the Ministries that should considerably reduce their staff are the Education & Religion, Labour, Social Security & Welfare, Culture & Sports, Administrative Reform & E-Governance, and the Interior. These significant reductions are supported by all three DEA programmes. The Ministry of Rural Development & Food should also decrease its number of tenured staff. However, this adjustment is supported by the VRS DEA and Stochastic DEA programmes while the Targeted DEA programme regards as optimal the number of tenured staff in this Ministry before the implementation of the AR2013 (i.e. 2155). The most noticeable adjustments for the tenured staff, which are directed to the Ministry of Education & Religion, and the Ministry of Labour, Social Security & Welfare, should not be taken into account since the number of staff introduced in the DEA programmes included employees who are appointed in decentralised offices or distinct public legal entities of the two Ministries. As already mentioned (ante, page 66), quite distinct is the case of the Ministry of Shipping & the Aegean.

Table 12. Optimal number of Staff (12 Central Government Departments)

ID	CGDs	Staff											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
		2004	1969	-0.02	2004	0.00	0.02	2004	0.00	0.02	2004	0.00	0.02
1	FOREIGN AFFAIRS	2004	1969	-0.02	2004	0.00	0.02	2004	0.00	0.02	2004	0.00	0.02
2	FINANCE	15836	15156	-0.04	15836	0.00	0.04	15836	0.00	0.04	4446	-0.72	-0.71
3	INTERIOR	654	642	-0.02	252	-0.61	-0.61	301	-0.54	-0.53	124	-0.81	-0.81
4	DEVELOPMENT & COMPETITIVENESS	1685	1683	0.00	307	-0.82	-0.82	307	-0.82	-0.82	1685	0.00	0.00
5	CULTURE & SPORTS	7563	7254	-0.04	132	-0.98	-0.98	1388	-0.82	-0.81	383	-0.95	-0.95
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	822	803	-0.02	255	-0.69	-0.68	307	-0.63	-0.62	276	-0.66	-0.66
7	RURAL DEVELOPMENT & FOOD	2155	2073	-0.04	635	-0.71	-0.69	635	-0.71	-0.69	820	-0.62	-0.60
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	4597	4472	-0.03	4597	0.00	0.03	4597	0.00	0.03	4597	0.00	0.03
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	830	787	-0.05	830	0.00	0.05	830	0.00	0.05	830	0.00	0.05

10	TOURISM	831	778	-0.06	831	0.00	0.07	831	0.00	0.07	831	0.00	0.07
11	MACEDONIA & THRACE	132	123	-0.07	132	0.00	0.07	132	0.00	0.07	132	0.00	0.07
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/ SECRETARIAT GENERAL OF MASS MEDIA	449	435	-0.03	439	-0.02	0.01	449	0.00	0.03	365	-0.19	-0.16

Focusing on the reduced sample of 12 CGDs (Table 12), the Ministries that should make the most significant modifications to their number of staff are the Culture & Sports, Development & Competitiveness, Rural Development & Food, Administrative Reform & E-Governance, and the Interior. The only Ministry for which there is no consensus among the three DEA programmes about the need for a decrease in staff is the Development & Competitiveness. The remaining CGDs, with the exception of the Secretariat General of Information & Communication/Secretariat General of Mass Media, which should make minor adjustments to its number of employees, should increase their number of staff to the levels that were in place before the implementation of the AR2013.

The average reduction of staff in the 12 CGDs that was realised by the AR2013 was 4% (Table 13). Based on the VRS DEA, Targeted DEA and Stochastic DEA programmes, the optimal number of staff would be much lower than the number of staff before the implementation of the AR2013.

Concerning the issue of further reduction of the size of the personnel of civil service, it ought to be noted that it results and originates from the fact of the primacy and preponderance of financial indicators in the assessment of efficiency and effectiveness of public services. If, however, a shift of emphasis was attempted – for instance, in the reshaping of administrative structures – it is likely that other considerations would deserve attention, especially those contributing to greater effectiveness, and not simply efficiency or cost reduction (*infra*, pages 108 ff.). Thus, the total size of the civil service personnel, and especially its better allocation along the administrative space, might be positively affected by transfers and a radical policy of replacements, rather than outright dismissals and disbandments. The latter as such can hardly be seen as a measure of creative reconstruction of administrative performance.

Nevertheless, the above mentioned significant inconsistency between the AR2013 level and the optimal levels for the number of staff of the 12 CGDs is not found in other input variables (i.e. general directorates, directorates, sections, and budget). It should also be pointed out that the 4% cut of the number of staff, which was implemented by the AR2013, differs greatly from the reductions in the number of general directorates (i.e. -14%), the number of directorates (i.e. -36%), the number of

sections (i.e. -34%) and the budget (i.e. -15%), which were also applied by the AR2013.

Table 13. Average change of inputs before and after the adjustments
(12 Central Government Departments)

Inputs	Change			
	AR2013	VRS	Targeted	Stochastic
General Directorates	-0.14	-0.36	-0.26	-0.30
Directorates	-0.36	-0.31	-0.25	-0.29
Sections	-0.34	-0.30	-0.25	-0.32
Staff	-0.04	-0.32	-0.29	-0.33
Budget	-0.15	-0.33	-0.15	-0.30

Results similar to those in Table 13 are presented in Table 14, which refers to the sample of 19 CGDs.

Table 14. Average change of inputs before and after the adjustments
(19 Central Government Departments)

Inputs	Change			
	AR2013	VRS	Targeted	Stochastic
General Directorates	-0.13	-0.35	-0.23	-0.31
Directorates	-0.33	-0.32	-0.22	-0.31
Sections	-0.29	-0.31	-0.21	-0.34
Staff	-0.03	-0.28	-0.20	-0.26
Budget	-0.13	-0.32	-0.13	-0.34

According to the results presented in Table 15 regarding the optimal budget allocated to the 19 CGDs, the VRS DEA and Stochastic DEA programmes identify significant reductions to the budget of the Ministries of Rural Development & Food, Culture & Sports, Education & Religion, and Labour, Social Security & Welfare. In contrast, the VRS DEA programme assigns a higher optimal budget than that defined by the AR2013 to 11 of the 19 CGDs in the sample. According to the VRS DEA

programme, a significantly higher budget than that defined by the AR2013 should be allocated to the Ministry of Justice, Transparency & Human Rights, the Ministry of Infrastructure, Transport & Networks, and the Ministry of Macedonia & Thrace. For these three Ministries, the 2014 budget should have remained the same as that of the previous year (i.e. actual budget displayed in column 3 of Table 15). It should also be noted that the VRS DEA regards the 2013 budget as optimal for 2014 for the Ministry of Health. Consequently, the budget reduction introduced by the AR2013 for this Ministry was unnecessary from the perspective of efficiency.

The Stochastic DEA programme identifies 10 out of the 19 CGDs in the sample that can be allocated a higher budget than that defined by the AR2013. The most significant budget increase beyond that defined by the AR2013 was found in the Ministry of Justice, Transparency & Human Rights, the Ministry of Infrastructure, Transport & Networks, and the Ministry of Macedonia & Thrace. As in the VRS DEA programme, the budget of the Ministry of Health should not have been reduced from the 2013 level since this Ministry was already efficient. The Ministry of Health was mentioned due to its crucial role in public health and society. In this context, unnecessary budget reductions and public health reforms in general are likely to have a significant impact on society.

Table 15. Optimal Budget (19 Central Government Departments)

ID	CGDs	Budget											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013			
				Actual								AR2013	Actual
1	FOREIGN AFFAIRS	308759655	292808000	-0.05	308759655	0.00	0.05	292808000	-0.05	0.00	308759655	0.00	0.05
2	FINANCE	613304369	585185000	-0.05	613304369	0.00	0.05	585185000	-0.05	0.00	538733747	-0.12	-0.08
3	NATIONAL DEFENCE*	3321263558	3067296000	-0.08	3321263558	0.00	0.08	3067296000	-0.08	0.00	3321263556	0.00	0.08
4	INTERIOR	25783721	30181000	0.17	11453002	-0.56	-0.62	30181000	0.17	0.00	9816658	-0.62	-0.67
5	DEVELOPMENT & COMPETITIVENESS	23650714	19387000	-0.18	21811921	-0.08	0.13	19387000	-0.18	0.00	23650714	0.00	0.22
6	EDUCATION & RELIGION*	3885112755	3682781000	-0.05	656002291	-0.83	-0.82	3682781000	-0.05	0.00	700595199	-0.82	-0.81
7	CULTURE & SPORTS	334617636	297950000	-0.11	44121179	-0.87	-0.85	297950000	-0.11	0.00	24002146	-0.93	-0.92
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	81603046.3	32998000	-0.60	13548212	-0.83	-0.59	32998000	-0.60	0.00	17223636	-0.79	-0.48
9	HEALTH*	23403726.2	20841000	-0.11	23403726	0.00	0.12	20841000	-0.11	0.00	23403726	0.00	0.12
10	LABOUR, SOCIAL SECURITY & WELFARE*	512313541	536940000	0.05	104589111	-0.80	-0.81	536940000	0.05	0.00	27006497	-0.95	-0.95
11	RURAL DEVELOPMENT & FOOD	722813921	506317000	-0.30	34269389	-0.95	-0.93	506317000	-0.30	0.00	84693214	-0.88	-0.83
12	INFRASTRUCTURE, TRANSPORT	774554245	560737000	-0.28	774554245	0.00	0.38	560737000	-0.28	0.00	774554244	0.00	0.38

& NETWORKS													
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	70393146	70230000	0.00	70393146	0.00	0.00	70230000	0.00	0.00	70393146	0.00	0.00
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	36781173.6	25965000	-0.29	36781174	0.00	0.42	25965000	-0.29	0.00	36781174	0.00	0.42
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1789703385	1742378000	-0.03	1789703385	0.00	0.03	1742378000	-0.03	0.00	1789703383	0.00	0.03
16	TOURISM	32804872.4	26966000	-0.18	32804872	0.00	0.22	26966000	-0.18	0.00	32804872	0.00	0.22
17	SHIPPING & THE AEGEAN*	317228294	295243000	-0.07	121477126	-0.62	-0.59	295243000	-0.07	0.00	44990368	-0.86	-0.85
18	MACEDONIA & THRACE	7038063	5597000	-0.20	7038063	0.00	0.26	5597000	-0.20	0.00	7038063	0.00	0.26
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	42952755.6	41570000	-0.03	18344659	-0.57	-0.56	41570000	-0.03	0.00	23213683	-0.46	-0.44

Focusing on the sample of 12 CGDs (Table 16), in order to attain efficiency, the Ministries of Rural Development & Food, Culture & Sports, and Administrative Reform & E-Governance should significantly reduce their budget from the level defined by AR2013 and also from the actual level (i.e. 2013 budget). Respecting the criterion of efficiency, the VRS DEA programme identifies unnecessary budget cuts for half of the sample CGDs, which were decided by AR2013. According to the Stochastic DEA programme, unnecessary budget cuts were implemented in 7 of the 12 CGDs in the sample (e.g. Ministry of Infrastructure, Transport & Networks, Ministry of Macedonia & Thrace, Ministry of Tourism).

Table 16. Optimal Budget (12 Central Government Departments)

ID	CGDs	Budget											
		Actual	AR2013	Change	VRS	Change		Targeted	Change		Stochastic	Change	
						Actual	AR2013		Actual	AR2013		Actual	AR2013
1	FOREIGN AFFAIRS	308759655	292808000	-0.05	308759655	0.00	0.05	292808000	-0.05	0.00	308759655	0.00	0.05
2	FINANCE	613304369	585185000	-0.05	613304369	0.00	0.05	585185000	-0.05	0.00	597115698	-0.03	0.02
3	INTERIOR	25783721	30181000	0.17	11453002	-0.56	-0.62	30181000	0.17	0.00	10044113	-0.61	-0.67
4	DEVELOPMENT & COMPETITIVENESS	23650714	19387000	-0.18	22876834	-0.03	0.18	19387000	-0.18	0.00	23650714	0.00	0.22
5	CULTURE & SPORTS	334617636	297950000	-0.11	7038063	-0.98	-0.98	297950000	-0.11	0.00	48611514	-0.85	-0.84
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	81603046	32998000	-0.60	13548212	-0.83	-0.59	32998000	-0.60	0.00	17223636	-0.79	-0.48
7	RURAL DEVELOPMENT & FOOD	722813921	506317000	-0.30	34269389	-0.95	-0.93	506317000	-0.30	0.00	84693214	-0.88	-0.83
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	774554245	560737000	-0.28	774554245	0.00	0.38	560737000	-0.28	0.00	774554244	0.00	0.38
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	70393146	70230000	0.00	70393146	0.00	0.00	70230000	0.00	0.00	70393146	0.00	0.00
10	TOURISM	32804872	26966000	-0.18	32804872	0.00	0.22	26966000	-0.18	0.00	32804872	0.00	0.22
11	MACEDONIA & THRACE	7038063	5597000	-0.20	7038063	0.00	0.26	5597000	-0.20	0.00	7038063	0.00	0.26

12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	42952756	41570000	-0.03	18344659	-0.57	-0.56	41570000	-0.03	0.00	22386450	-0.48	-0.46
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6.2. Measurement of effectiveness

The VRS DEA, Targeted DEA and Stochastic DEA programmes measure efficiency while taking into account only operational variables (i.e. inputs and outputs). In the case of implementing an input-oriented strategy (i.e. minimisation of resources), the attainment of efficiency is associated with control over spending (i.e. economy).

The QE-DEA method incorporated both efficiency and users' perspective about the operation of the units under evaluation (e.g. CGDs). Users' perspective is measured by questionnaires. In the case of the CGDs, the users who participated in the satisfaction survey were only civil servants. We conducted one independent satisfaction survey for each CGD. The surveys were solely directed to civil servants since citizens interact not often directly with the ministries, but primarily with their decentralised units, and with public bodies and legal entities supervised by them (e.g. tax offices, police stations, citizen service centres, hospitals), or with local agencies and authorities.

The determinants of satisfaction that we incorporated in the survey were as follows: i) workload, ii) professional development, iii) team spirit, iv) organisational structure, and (v) infrastructure. Users' responses were measured on a five-point Likert scale, which stands for: 1 – very dissatisfied, 2 – dissatisfied, 3 – neither satisfied nor dissatisfied, 4 – satisfied and 5 – very satisfied.

According to the results of the users' satisfaction survey (Table 17), the civil servants of any CGD are not satisfied. In particular, there is no average satisfaction score at least equal to 4 that denotes satisfaction in the five-point Likert scale. The highest satisfaction scores were assigned to the Ministry of Health (3.5333), the Ministry of Public Order & Citizen's Protection (3.4667), and the Ministry of Administrative Reform & E-Governance (3.2250). The CGDs that were assigned the lowest satisfaction scores were the Secretariat General of Information & Communication/Secretariat General of Mass Media (1.7500), the Ministry of Environment, Energy & Climate Change (2.2083) and the Ministry of Culture & Sports (2.5500).

Table 17. Employees' satisfaction scores

ID	CGDs	Satisfaction determinants					Average
		Workload	Professional development	Team spirit	Organisational structure	Infrastructure	
1	FOREIGN AFFAIRS	3.4444	2.6667	3.3333	2.6667	3.5000	3.1222
2	FINANCE	3.3590	1.9615	3.1731	2.6154	2.8846	2.7987
3	NATIONAL DEFENCE*	3.0000	1.7500	3.3333	2.5000	2.8333	2.6833
4	INTERIOR	3.3030	1.9773	3.4318	2.7727	2.5909	2.8152
5	DEVELOPMENT & COMPETITIVENESS	2.7500	2.3125	3.7500	2.6250	3.5000	2.9875
6	EDUCATION & RELIGION*	3.2500	2.0417	3.2917	2.2083	3.2500	2.8083
7	CULTURE & SPORTS	2.5000	1.7500	3.0000	2.7500	2.7500	2.5500
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	3.5000	2.2500	3.3750	2.9167	4.0833	3.2250
9	HEALTH*	4.6667	1.7500	4.2500	3.0000	4.0000	3.5333
10	LABOUR, SOCIAL SECURITY & WELFARE*	3.3333	2.2500	3.4167	3.1667	2.5000	2.9333
11	RURAL DEVELOPMENT & FOOD	3.6667	2.6250	3.5000	2.7500	3.5000	3.2083
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	3.3333	1.6667	3.2500	3.3333	3.8333	3.0833
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	2.1667	1.2500	3.6250	1.0000	3.0000	2.2083
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	2.7778	1.5000	3.6667	2.1667	3.0000	2.6222
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	3.8333	2.8750	4.1250	3.0000	3.5000	3.4667
16	TOURISM	3.0000	1.5000	3.0000	2.5000	1.0000	2.2000
17	SHIPPING & THE AEGEAN*	3.6667	2.3333	2.8333	2.6667	3.5000	3.0000
18	MACEDONIA & THRACE	3.6667	1.5000	3.5000	1.0000	5.0000	2.9333
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	3.0000	2.7500	1.0000	1.0000	1.0000	1.7500

The incorporation of users' perspective in the evaluation of the units is crucial for the overall performance of units. The input-oriented VRS DEA, Targeted DEA and Stochastic DEA programmes regard the outputs (i.e. laws) produced by every CGD as fixed. However, focusing on the minimisation of inputs while neglecting employees' morale and perception of the work environment may lead to violation of the assumption of fixed outputs. In service units, such as the CGDs, employees are a fundamental resource for the production process. Therefore, omitting employees' perspective from the evaluation of CGDs may lead to infeasible results in practice. It should also be noted that users' perspective is inversely related to efficiency, and thus to economy (De Bruijn, 2007; Sherman and Zhu, 2006a, 2006b; Athanassopoulos, 1997; Anderson and Fornell, 1994). In this context, the QE-DEA method yields 'balanced' results, which are regarded as an equilibrium between the attainment of efficiency through an input-oriented perspective and users' satisfaction. The levels of inputs defined by the QE-DEA method are expected to be less restrictive than those obtained by the VRS DEA, Targeted DEA and Stochastic DEA programmes. In addition, the levels of inputs obtained by the QE-DEA may violate the criterion of economy.

According to the results of the QE-DEA method, 7 out of 19 CGDs need further downward adjustment to their inputs compared to those determined by the AR2013 (Tables 18-20). Significant adjustments should be made to the Ministry of Education & Religion, the Ministry of Culture & Sports, the Ministry of Labour, Social Security & Welfare, the Ministry of Administrative Reform & E-Governance, the Ministry of the Interior, and the Ministry of Rural Development & Food. When the users' perspective is introduced in the evaluation, a significant increase in inputs is needed for several CGDs (e.g. Ministry of Infrastructure, Transport & Networks, Ministry of Tourism, Ministry of Finance) to attain the optimal state, which balances efficiency and employees' satisfaction.

Table 18. QE-DEA optimal number of General Directorates and Directorates (19 Central Government Departments)

ID	CGDs	General Directorates						Directorates					
		Actual	AR2013	Change	QE-DEA	Change		Actual	AR2013	Change	QE-DEA	Change	
		Actual			Actual			Actual			Actual		
		Actual	AR2013	Change	Actual	AR2013	Change	Actual	AR2013	Change	Actual	AR2013	Change
1	FOREIGN AFFAIRS	8	8	0.00	12	0.50	0.50	56	56	0.00	82	0.46	0.46
2	FINANCE	16	13	-0.19	27	0.69	1.08	119	73	-0.39	201	0.69	1.75
3	NATIONAL DEFENCE*	4	4	0.00	7	0.75	0.75	15	15	0.00	27	0.80	0.80
4	INTERIOR	6	5	-0.17	2	-0.67	-0.60	22	14	-0.36	12	-0.45	-0.14
5	DEVELOPMENT & COMPETITIVENESS	14	13	-0.07	14	0.00	0.08	78	36	-0.54	78	0.00	1.17
6	EDUCATION & RELIGION*	11	10	-0.09	3	-0.73	-0.70	57	31	-0.46	16	-0.72	-0.48
7	CULTURE & SPORTS	7	6	-0.14	2	-0.71	-0.67	41	32	-0.22	11	-0.73	-0.66
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	9	5	-0.44	3	-0.67	-0.40	35	22	-0.37	19	-0.46	-0.14
9	HEALTH*	5	4	-0.20	6	0.20	0.50	27	19	-0.30	33	0.22	0.74
10	LABOUR, SOCIAL SECURITY & WELFARE*	8	7	-0.13	3	-0.63	-0.57	53	21	-0.60	16	-0.70	-0.24
11	RURAL DEVELOPMENT & FOOD	9	6	-0.33	4	-0.56	-0.33	49	29	-0.41	27	-0.45	-0.07

12	INFRASTRUCTURE, TRANSPORT & NETWORKS	10	9	-0.10	15	0.50	0.67	60	36	-0.40	90	0.50	1.50
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	9	-0.25	27	1.25	2.00	58	30	-0.48	129	1.22	3.30
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	4	3	-0.25	7	0.75	1.33	13	9	-0.31	24	0.85	1.67
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1	1	0.00	1	0.00	0.00	6	6	0.00	8	0.33	0.33
16	TOURISM	2	2	0.00	4	1.00	1.00	10	8	-0.20	22	1.20	1.75
17	SHIPPING & THE AEGEAN*	5	4	-0.20	4	-0.20	0.00	27	19	-0.30	21	-0.22	0.11
18	MACEDONIA & THRACE	1	1	0.00	2	1.00	1.00	8	4	-0.50	13	0.63	2.25
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	2	2	0.00	2	0.00	0.00	10	5	-0.50	10	0.00	1.00

Table 19. QE-DEA optimal number of Sections and Staff (19 Central Government Departments)

ID	CGDs	Sections						Staff					
		Actual	AR2013	Change	QE-DEA	Change		Actual	AR2013	Change	QE-DEA	Change	
		Actual			Actual			Actual			Actual		
1	FOREIGN AFFAIRS	175	175	0.00	257	0.47	0.47	2004	1969	-0.02	2946	0.47	0.50
2	FINANCE	410	285	-0.30	693	0.69	1.43	15836	15156	-0.04	26756	0.69	0.77
3	NATIONAL DEFENCE*	60	60	0.00	107	0.78	0.78	88347	87073	-0.01	157044	0.78	0.80
4	INTERIOR	75	48	-0.36	50	-0.33	0.04	654	642	-0.02	256	-0.61	-0.60
5	DEVELOPMENT & COMPETITIVENESS	257	132	-0.49	257	0.00	0.95	1685	1683	0.00	1685	0.00	0.00
6	EDUCATION & RELIGION*	209	115	-0.45	59	-0.72	-0.49	177547	171946	-0.03	31202	-0.82	-0.82
7	CULTURE & SPORTS	177	99	-0.44	40	-0.77	-0.60	7563	7254	-0.04	2009	-0.73	-0.72
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	139	88	-0.37	73	-0.47	-0.17	822	803	-0.02	444	-0.46	-0.45
9	HEALTH*	92	63	-0.32	113	0.23	0.79	86063	80833	-0.06	106142	0.23	0.31
10	LABOUR, SOCIAL SECURITY & WELFARE*	161	79	-0.51	58	-0.64	-0.27	17150	16757	-0.02	6530	-0.62	-0.61
11	RURAL DEVELOPMENT & FOOD	270	105	-0.61	86	-0.68	-0.18	2155	2073	-0.04	1195	-0.45	-0.42

12	INFRASTRUCTURE, TRANSPORT & NETWORKS	160	134	-0.16	239	0.49	0.78	4597	4472	-0.03	6871	0.49	0.54
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	208	110	-0.47	461	1.22	3.19	830	787	-0.05	1841	1.22	1.34
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	31	31	0.00	57	0.84	0.84	15233	15726	0.03	27827	0.83	0.77
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	25	25	0.00	32	0.28	0.28	62722	63003	0.00	79609	0.27	0.26
16	TOURISM	30	30	0.00	67	1.23	1.23	831	778	-0.06	1851	1.23	1.38
17	SHIPPING & THE AEGEAN*	100	71	-0.29	71	-0.29	0.00	8124	8012	-0.01	6446	-0.21	-0.20
18	MACEDONIA & THRACE	34	19	-0.44	54	0.59	1.84	132	123	-0.07	210	0.59	0.71
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	33	20	-0.39	33	0.00	0.65	449	435	-0.03	449	0.00	0.03

Table 20. QE-DEA optimal Budget (19 Central Government Departments)

ID	CGDs	Budget					
		Actual	AR2013	Change	QE-DEA	Change	
						Actual	AR2013
1	FOREIGN AFFAIRS	308759655	292808000	-0.05	453883932.2	0.47	0.55
2	FINANCE	613304369	585185000	-0.05	1036201555	0.69	0.77
3	NATIONAL DEFENCE*	3321263558	3067296000	-0.08	5903818073	0.78	0.92
4	INTERIOR	25783721	30181000	0.17	17245299.43	-0.33	-0.43
5	DEVELOPMENT & COMPETITIVENESS	23650714	19387000	-0.18	23650714	0.00	0.22
6	EDUCATION & RELIGION*	3885112755	3682781000	-0.05	1105695473	-0.72	-0.70
7	CULTURE & SPORTS	334617636	297950000	-0.11	80591940.58	-0.76	-0.73
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	81603046.3	32998000	-0.60	44062582.65	-0.46	0.34
9	HEALTH*	23403726.2	20841000	-0.11	28863914.36	0.23	0.38
10	LABOUR, SOCIAL SECURITY & WELFARE*	512313541	536940000	0.05	30626639.68	-0.94	-0.94
11	RURAL DEVELOPMENT & FOOD	722813921	506317000	-0.30	134321651.1	-0.81	-0.73
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	774554245	560737000	-0.28	1157641808	0.49	1.06
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	70393146	70230000	0.00	156176483.4	1.22	1.22
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	36781173.6	25965000	-0.29	67189192.44	0.83	1.59
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1789703385	1742378000	-0.03	2271562587	0.27	0.30
16	TOURISM	32804872.4	26966000	-0.18	73083495.87	1.23	1.71
17	SHIPPING & THE AEGEAN*	317228294	295243000	-0.07	63676031.57	-0.80	-0.78
18	MACEDONIA & THRACE	7038063	5597000	-0.20	11217027.52	0.59	1.00
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	42952755.6	41570000	-0.03	42952755.57	0.00	0.03

In the case of the reduced sample of 12 CGDs (Tables 21-23), 4 CGDs should decrease their inputs from the levels determined by AR2013 (i.e. Ministry of Culture & Sports, Ministry of Administrative Reform & E-Governance, Ministry of Rural Development & Food, and Ministry of the Interior). On the contrary, the remaining 8 CGDs should significantly increase their resources to attain the optimal balance between efficiency and employees' satisfaction.

Table 21. QE-DEA optimal number of General Directorates and Directorates (12 Central Government Departments)

ID	CGDs	General Directorates						Directorates					
		Actual	AR2013	Change	QE-DEA	Change	Actual	AR2013	Change	QE-DEA	Change		
		Actual			Actual			Actual			Actual		
		Actual	AR2013	Change	Actual	AR2013	Change	Actual	AR2013	Change	Actual	AR2013	Change
1	FOREIGN AFFAIRS	8	8	0.00	12	0.50	0.50	56	56	0.00	82	0.46	0.46
2	FINANCE	16	13	-0.19	27	0.69	1.08	119	73	-0.39	201	0.69	1.75
3	INTERIOR	6	5	-0.17	2	-0.67	-0.60	22	14	-0.36	12	-0.45	-0.14
4	DEVELOPMENT & COMPETITIVENESS	14	13	-0.07	14	0.00	0.08	78	36	-0.54	78	0.00	1.17
5	CULTURE & SPORTS	7	6	-0.14	2	-0.71	-0.67	41	32	-0.22	11	-0.73	-0.66
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	9	5	-0.44	3	-0.67	-0.40	35	22	-0.37	19	-0.46	-0.14
7	RURAL DEVELOPMENT & FOOD	9	6	-0.33	4	-0.56	-0.33	49	29	-0.41	27	-0.45	-0.07
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	10	9	-0.10	15	0.50	0.67	60	36	-0.40	90	0.50	1.50
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	9	-0.25	27	1.25	2.00	58	30	-0.48	129	1.22	3.30
10	TOURISM	2	2	0.00	4	1.00	1.00	10	8	-0.20	22	1.20	1.75

11	MACEDONIA & THRACE	1	1	0.00	2	1.00	1.00	8	4	-0.50	13	0.63	2.25
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/ SECRETARIAT GENERAL OF MASS MEDIA	2	2	0.00	2	0.00	0.00	10	5	-0.50	10	0.00	1.00

Table 22. QE-DEA optimal number of Sections and Staff (12 Central Government Departments)

ID	CGDs	Sections						Staff					
		Actual		Change	QE-DEA	Change		Actual		Change	QE-DEA	Change	
		AR2013	Actual			AR2013	Actual	AR2013					
		Actual	AR2013	Change	QE-DEA	Change	Actual	AR2013	Change	QE-DEA	Change		
1	FOREIGN AFFAIRS	175	175	0.00	257	0.47	0.47	2004	1969	-0.02	2946	0.47	0.50
2	FINANCE	410	285	-0.30	693	0.69	1.43	15836	15156	-0.04	26756	0.69	0.77
3	INTERIOR	75	48	-0.36	50	-0.33	0.04	654	642	-0.02	256	-0.61	-0.60
4	DEVELOPMENT & COMPETITIVENESS	257	132	-0.49	257	0.00	0.95	1685	1683	0.00	1685	0.00	0.00
5	CULTURE & SPORTS	177	99	-0.44	40	-0.77	-0.60	7563	7254	-0.04	2009	-0.73	-0.72
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	139	88	-0.37	73	-0.47	-0.17	822	803	-0.02	444	-0.46	-0.45

7	RURAL DEVELOPMENT & FOOD	270	105	-0.61	86	-0.68	-0.18	2155	2073	-0.04	1195	-0.45	-0.42
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	160	134	-0.16	239	0.49	0.78	4597	4472	-0.03	6871	0.49	0.54
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	208	110	-0.47	461	1.22	3.19	830	787	-0.05	1841	1.22	1.34
10	TOURISM	30	30	0.00	67	1.23	1.23	831	778	-0.06	1851	1.23	1.38
11	MACEDONIA & THRACE	34	19	-0.44	54	0.59	1.84	132	123	-0.07	210	0.59	0.71
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/ SECRETARIAT GENERAL OF MASS MEDIA	33	20	-0.39	33	0.00	0.65	449	435	-0.03	449	0.00	0.03

Table 23. QE-DEA optimal Budget (12 Central Government Departments)

ID	CGDs	Budget					
		Actual	AR2013	Change	QE-DEA	Change	
				Actual		Actual	AR2013
1	FOREIGN AFFAIRS	308759655	292808000	-0.05	453883932	0.47	0.55
2	FINANCE	613304369	585185000	-0.05	1036201555	0.69	0.77
3	INTERIOR	25783721	30181000	0.17	17245299.4	-0.33	-0.43
4	DEVELOPMENT & COMPETITIVENESS	23650714	19387000	-0.18	23650714	0.00	0.22
5	CULTURE & SPORTS	334617636	297950000	-0.11	80591940.6	-0.76	-0.73
6	ADMINISTRATIVE REFORM & E-GOVERNANCE	81603046	32998000	-0.60	44062582.7	-0.46	0.34
7	RURAL DEVELOPMENT & FOOD	722813921	506317000	-0.30	134321651	-0.81	-0.73
8	INFRASTRUCTURE, TRANSPORT & NETWORKS	774554245	560737000	-0.28	1157641808	0.49	1.06
9	ENVIRONMENT, ENERGY & CLIMATE CHANGE	70393146	70230000	0.00	156176483	1.22	1.22
10	TOURISM	32804872	26966000	-0.18	73083495.9	1.23	1.71
11	MACEDONIA & THRACE	7038063	5597000	-0.20	11217027.5	0.59	1.00
12	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	42952756	41570000	-0.03	42952755.6	0.00	0.03

Unlike the VRS DEA, Targeted DEA and Stochastic DEA programmes, the QE-DEA method identifies positive average adjustments to the inputs of the 19 and 12 CGDs (Tables 24 and 25).

Table 24. Average change of inputs for the attainment of efficiency and effectiveness (19 Central Government Departments)

Inputs	Change				
	AR2013	VRS	Targeted	Stochastic	QE-DEA
General Directorates	-0.13	-0.35	-0.23	-0.31	0.13
Directorates	-0.33	-0.32	-0.22	-0.31	0.17
Sections	-0.29	-0.31	-0.21	-0.34	0.15
Staff	-0.03	-0.28	-0.20	-0.26	0.15
Budget	-0.13	-0.32	-0.13	-0.34	0.10

Table 25. Average change of inputs for the attainment of efficiency and effectiveness (12 Central Government Departments)

Inputs	Change				
	AR2013	VRS	Targeted	Stochastic	QE-DEA
General Directorates	-0.14	-0.36	-0.26	-0.30	0.19
Directorates	-0.36	-0.31	-0.25	-0.29	0.22
Sections	-0.34	-0.30	-0.25	-0.32	0.20
Staff	-0.04	-0.32	-0.29	-0.33	0.20
Budget	-0.15	-0.33	-0.15	-0.30	0.19

The results of the QE-DEA method, which express a balance between efficiency and users' satisfaction, satisfy the criterion of effectiveness and also the mid- to long-run operability of the CGDs. However, the results obtained by the QE-DEA methods are not considered to be appropriate for short-run strategies, which focus on the attainment of efficiency and economy.

Comparing the results of all of the DEA-based approaches with those of the AR2013, it is clear that deviations are present, which reveal the difficulty of the AR2013 to lead the CGDs to either efficiency or effectiveness. That concurs to the fact that AR2013 objectives have not been fully achieved. It is explicit that the AR2013 is oriented towards efficiency and economy rather than effectiveness. However, the AR2013 fails to attain the goal of efficiency and optimal economy since

there is room for further adjustments to the resources engaged by the CGDs. As a result, the AR2013 could be regarded as a step towards the attainment of efficiency and optimal economy, which would be followed by further administrative reform frameworks.

7. Concluding remarks

The expansion of the organisational layout of ministries could be explained, among others, through the gradual increase of citizens' needs during the years or through the effort of the Greek central government to respond to funding opportunities. Whereas it was not accompanied with the respective reduction of other structures (OECD, 2011: 57).

As it was seen in the preceding analysis, the structural reform of Central Government Departments that took place by recent reform effort did indeed produce certain results especially in the reduction of the overall size of central ministerial units, but leaves much to be desired in terms of more qualitative standards and criteria of efficiency and effectiveness of central government administration and management.

Furthermore, the recent government change, i.e. the succession of the Government of Mr. Ant. Samaras by that of Mr. Al. Tsipras, as a result of the general election of 25th January 2015, has seriously affected the ministerial landscape of central government. As it has already been mentioned, the new Prime Minister of the country has announced and indeed decided the creation of new 'giant' departments, which emerged after the merger of previously independent ministerial structures in respective areas of public policy.

That development raises in turn once again the issue of the restructuring of the ministerial domains in the newly expanded policy areas, which has certainly to be reflected in new organisational charts. It can be envisaged that this process will be in dire need of some period of time to be realised and completed.

One may also hope and wish that in the new, and hopefully more substantial, effort of ministerial restructuring and reform, there will be paid more thought and attention not only to the results and suggestions of the present analysis and research, but even more necessarily to standard rules, techniques and principles of applied administrative and management science (some of which, nonetheless, have been

already taken into account). These are the following – presented indicatively and only for practical purposes, namely to assist reformers who will perhaps be willing to take advantage of them:

(a) In the novel redrafting of the organisational structure of Central Government Departments need to be included especially:

- the mission statement and definition concerning the particular ministry in strategic and operational terms
- the internal structuring and differentiation of administrative services, which ought to take place on the basis of standard and vertically integrated units (directorates general, directorates, sections and special offices)
- the allocation of competences and jurisdictions for the implementation of respective areas of public policy that ought to take place in the above standard administrative units within the government departments, and not outside or alongside them, as it has been usually the practice in the past
- in an analogous manner would then take place the allocation and assignment of personnel posts and positions within the above structural cells of central administration, taking account of structural management ‘tools’, such as the requisite span of control, the unity of direction and unity of command (to name and specify just a few of them)
- the qualification and specialism of personnel in terms of job description and most certainly description and specification of responsibilities and duties of the heads of section, at least, would necessarily be reflected and included in the new organisational charts in each giant or not department of State.

(b) In the process of ministerial restructuring attention ought to be paid, especially to:

- the staff organisation of each government department, in the sense that its mission statement would include and contain itself mainly to matters of policy design, strategic orientation, coordination, control and evaluation
- executive or simply operational activities and responsibilities ought to be delegated to decentralised units and independent agencies and authorities
- economy and efficiency in central government structural reform entails the drastic merger of alike or indistinguishable services and units that serve

similar purposes in the same manner across the administrative landscape of central government

- equally necessary looks like the containment if not the abolishment altogether of consultative committees and councils, so that the dispersal of responsibility is avoided
- the treatment of administrative staff on an equal and objective manner regardless of political preferences and affiliations can hardly be stressed as a sine qua non condition to move beyond clientelism to a new era of more meritocratic management and administration in the central government of the State.

(c) A number of more concrete and specific indications and suggestions of structural reform in central government would perhaps include the following:

- the abolishment or immediate mergers of directorates without any staff or with minimal staff
- immediate abolishment of sections without any staff
- merger of sections with a small number of staff (2 or 3 persons)
- merger or abolishment of the multitude of separate or semi-autonomous units (sections or offices) that are excluded from the standard vertical hierarchy of the department and are put under immediate control of the political élite of the ministries; they ought, on the contrary, to be assimilated in the command structure of the line administration of the ministry
- any section and directorate in the new ministerial structuring would have to exhibit unity and specificity of direction and orientation (management by objectives and qualitative results), so that dispersal and overlapping of authority and responsibility is avoided as much as possible; in that spirit, no sectional unit would be staffed with less than 5 to 7 persons (civil servants), and no directorate of central administration of the government would be comprised of with less than 5 sections
- in each department of central government needs to be set up an organisation and methods special unit with staff responsibility to assist and encourage line units in the job description and mission statement for each post of responsibility; the Ministry of the Interior has to support the rest of the

ministries in this process providing them with technical support, manuals and material

- the design of a system of amalgamation of the multitude of branches and pseudo-specialisms of central government personnel is highly advisable as a precondition of breaking up the practice and tradition of excessive fragmentation within central government administration of the country, also useful in the promoting process of civil servants.

The aforementioned general principles of administrative practice do not only find support in various textbooks of administrative and management science, but they have been identified as absolutely vital and necessary standards of administrative organisation by repeated ruling of the Supreme Administrative Court of the country (the Conseil d'Etat). It is, therefore, very likely that sooner or later drafts of central government structural reform reflected in respective organisational charts will be reviewed by the Supreme Court and perhaps be declared void, if and to the extent they depart from or violate the above standards and principles of good administrative practice.

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Table A1. Dataset

ID	CGDs	General Directorates	Directorates	Sections	Staff	Budget	Laws
1	FOREIGN AFFAIRS	8	56	175	2004	308759655.00	13
2	FINANCE	16	119	410	15836	613304369.37	22
3	NATIONAL DEFENCE*	4	15	60	88347	3321263557.79	14
4	INTERIOR	6	22	75	654	25783721.00	1
5	DEVELOPMENT & COMPETITIVENESS	14	78	257	1685	23650714.00	4
6	EDUCATION & RELIGION*	11	57	209	177547	3885112754.78	4
7	CULTURE & SPORTS	7	41	177	7563	334617635.87	1
8	ADMINISTRATIVE REFORM & E-GOVERNANCE	9	35	139	822	81603046.32	2
9	HEALTH*	5	27	92	86063	23403726.16	6
10	LABOUR, SOCIAL SECURITY & WELFARE*	8	53	161	17150	512313541.14	3
11	RURAL DEVELOPMENT & FOOD	9	49	270	2155	722813921.04	4
12	INFRASTRUCTURE, TRANSPORT & NETWORKS	10	60	160	4597	774554245.30	16
13	ENVIRONMENT, ENERGY & CLIMATE CHANGE	12	58	208	830	70393146.00	13
14	JUSTICE, TRANSPARENCY & HUMAN RIGHTS*	4	13	31	15233	36781173.60	9
15	PUBLIC ORDER & CITIZEN'S PROTECTION*	1	6	25	62722	1789703384.70	0
16	TOURISM	2	10	30	831	32804872.35	4
17	SHIPPING & THE AEGEAN*	5	27	100	8124	317228294.00	4
18	MACEDONIA & THRACE	1	8	34	132	7038063.00	1
19	SECRETARIAT GENERAL OF INFORMATION & COMMUNICATION/SECRETARIAT GENERAL OF MASS MEDIA	2	10	33	449	42952755.57	1