

**STRUCTURAL REFORM AND EFFICIENCY IN PUBLIC
ADMINISTRATION. MEASURING THE “PRODUCTIVITY POTENTIAL”
IN ITALY**

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ABSTRACT. This paper concerns the potential outcome of a structural reform of Public Administration aimed at increasing efficiency in human and technological resources use. In particular we analyze the Italian case after the reform introduced in 2009 and provide a tentative estimate of the potential increase in productivity stemming from the adoption of a comprehensive performance management cycle (productivity related pay, etc.) together with a widespread use of ICT. To this aim we devised both a logical scheme and an estimation procedure. A case study provided the heuristic background of our model. Specifically, we estimated the potential increase in labor productivity and the potential reduction in unit labor cost associated with the structural change. Our results show that the scope for efficiency gains may be quite wide.

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INTRODUCTION

The general strategy and guidelines to reform the Italian Public Administration were initially introduced in the policy debate in May 2008¹. The Public Administration reform scheme highlights the crucial role of the reform in raising the competitiveness and potential of growth of the Italian economy. By implementing the law 15/ 2009, the Italian Parliament approved on October 27, 2009 the legislative decree n. 150 on a Public Administration comprehensive reform scheme. It is a law of great complexity and relevance. It concerns all levels of the Public Administration for a total of 3.6 million civil servants and encompasses a revision of all aspects related to the civil service, with a view to improving labor productivity as well as efficiency and transparency. On December 2009, a legislative decree further implementing the law 15/2009, is approved establishing that, in case of inefficient provision of services, citizens and companies may take collective action suit against the relevant public administrations and public service providers. The legislative decree puts the citizens at the center of the Government's planning and evaluation of services while attempting to re-launch the efficiency and productivity in the whole country. It builds on the guidelines of the Public Administration reform issued by the Italian Minister for Public Administration and Innovation in 2008. This highlighted the need to improve the quality of public services, through a new management approach oriented towards a continuous improvement of the performance, the adoption of standards and benchmarking, and the measurement of customer satisfaction.

All these features justify the interpretation of such a reform as a structural change.

The overall picture of the Italian Public Administration in the recent years was characterized by managers that had progressively neglected their managerial responsibilities in the collective bargaining process, depriving themselves from the necessary flexibility in a fast-moving context; by an evaluation process, aimed at performance differentiation, which had been used in most of the cases to distribute incentives regardless of merit among managers; by a rate of growth of civil servants' wages that between 2000 and 2008 had by far exceeded that of the private sector in a period in which the economic effectiveness

of public labor was decreasing. Furthermore, despite the results achieved through previous reform efforts (1993, 1998), the leading legalistic approach and corporatist logic have remained intact and the expected improvement in Public Sector competitiveness and productivity had never materialized. Considering also that previous reforms had not substantially changed some signs of a malfunctioning Public Sector, i.e., high absenteeism, and very low customer satisfaction and citizen trust, the potential advantages of a structural reform were quite evident.

The three pillars of the reform scheme include i) modernization of the Public Administration, ii) innovation and digitalization within the Public Administration and the country, and iii) relationship between the Public Administration, citizens and business.

An organic design is established to introduce into the Public Administration the instruments to increase efficiency and productivity and to take into account most of the problems of the correct evaluation of performance and of the implications of a real pursuit of efficiency. The new performance framework defined by the reform aims at favoring a managerial approach within the public administrations. In order to safeguard the new framework, managers' prerogatives are reinforced by a limitation of collective bargaining, but they also face sanctions in case of failure to implement the new framework. As a response to the observed weak effects of collective bargaining in terms of productivity, a set of rules defining the consequences of evaluation that should safeguard the principle of selection and merit recognition are adopted. In particular, the reform designs a system of incentives and an evaluation system that determines the award of incentives. The incentive system is bound strictly to production results both for individuals and organizational units, to innovative capability, and to excellence. The entire system is based on the idea of a competitive selection of the worthy, who are rewarded in economic and non-economic terms. Additionally, the enhanced digitization of the Public Administration is also seen by the reform as a driving force for efficiency and productivity, to achieve a reduction in transaction costs but also to foster process and product innovation, as well as to engage and involve citizens and businesses in assessing Public Sector performance and in formulating solutions. Macroeconomic theory, supported by empirical analysis, holds

that investments in physical and human capital and a virtuous institutional platform are the main drivers of economic growth. Competitive markets, R&D activity, a sound macroeconomic environment (characterized by low inflation, non-excessive deficits, and moderate both government spending and fiscal pressure), trade openness and well-developed financial markets contribute to raising living standards. Public Administration reform can generate macroeconomic benefits and spillovers through four main levers that influence these drivers of growth: 1) Reductions in public spending, deficits and debts, 2) Increases in government productivity, 3) Reducing time and monetary costs to citizens and businesses for doing business with government, and 4) Improvements in governance that can lead to better outcomes in all policy sectors.

There are synergies between these levers and each may not work in isolation.

A first attempt in quantitatively assessing these macroeconomic effects for the Italian economy is provided by Felli et al. (2010). Felli et al (2010) performed a rerunning-history exercise using a structural dynamic supply-side oriented model of Italian economy and found that a given increase in the efficiency of Public Sector can have substantial effects on the rate and the shape of growth.

Lever 1 could be a non-secondary force in the mechanics of growth. Public Administration reforms that lead to efficiency gains can reduce public spending and promote fiscal consolidation, improving growth. Governments play a role in generating long-term growth through (de)regulations, policies promoting competition and programs on education, health, transportation and communication infrastructure, and research and development. These activities influence the quality and quantity of physical and human capital and provide complementary goods to the private sector, lubricating the production function. Overall, the size of the Public Sector is often a political, historical and cultural reflection on what should be the role of government in society and the economy. Reducing public expenditure relative to GDP may not be an absolute value, and, in any case, depends on the level reached by this ratio, which can be taken as a proxy of the size of the state. However, it seems that large amounts of government spending based on debt financing — particularly spending in areas outside the aforementioned sectors — could have harmful macroeconomic effects. First, government deficits that finance

consumption or transfers could crowd out private investment, thus decreasing growth. Second, the taxes necessary to finance government spending could distort private sector incentives, resulting in the inefficient allocation of resources and thus lower levels of growth or output. Third, a disproportionate “big government” may generate a non-linear relationship between government size and the rate of growth of GDP. The resulting distortions and inefficiencies may dampen the process of growth.

Public Administration reforms that focus on enhancing efficiency (and tackle the underlying causes of growth) can generate cost savings, which reduces deficits and potentially taxes, improving a country’s fiscal position and thus leading to macroeconomic benefits. In addition, a sustainable fiscal balance will help foster investment and GDP growth by reducing uncertainty for households and the private sector. Italian general government expenditures were almost 50% of GDP in 2008, somewhat above the OECD average of 44%.

FIGURE 1

Italian general government expenditures have exceeded revenues over the past 15 years, although the gap diminished due to government actions taken in the late 1990s and continuing through the 2000s. Decreases in public expenditures could lower the need for future tax increases to pay for deficits and debts, and could ease the burden of additional interest payments, which have hovered around 5% of GDP for the past 5-7 years.

Lever 2 provides a different channel for the transmission of macroeconomic effects of such a structural change. Public Administration reforms that lead to productivity gains can contribute to raising the productivity of the economy at large. At the same time, reforms that enhance the productivity, efficiency, and effectiveness of the Public Administration contribute to raising the productivity of the economy at large. In addition to the direct benefits of improved productivity on the economy, if productivity improvement in the Public Sector is brought about by a change in production technology (e.g, better use of ICT to digitalize processes), this could have positive knock on effects in private sector output. The technological change could lead to an increase in demand for certain inputs (or intermediate goods) purchased by government from the private sector, increasing private sector output.

Better measurement is needed to fully understand and track opportunities for productivity gains in Public Administration. Unfortunately, measuring government productivity is difficult due to a lack of data on the quality, price and quantity of outputs – data that are necessary to estimate productivity. Much of government production happens outside of a market, meaning that no price data exists for outputs. In addition, government outputs are often intangible, such as diplomacy or negotiations, making measurement difficult. As a result, government productivity change is often assumed to be zero as outputs are set equal to inputs.

Despite difficulties in measuring productivity, given that labor represents over 50% of the costs of public production in Italy, improvements in general government labor productivity could have substantial effects on government output and the larger macroeconomy.

FIGURE 2

In terms of the inputs used in the Italian public production process in 2008, compensation of employees (labor) accounts for just over 50% of total production costs, with capital accounting for about 9% and goods outsourced or purchased from the private sector accounting for the remaining 40%. Italy relies slightly more on labor than other OECD countries and less on outsourcing or goods purchased from the private sector. A productivity improvement brought about by a change in production technology as described above could be depicted in figure 2 by a switch to more goods and services purchased by general government.

Lever 3 and Lever 4 provide additional transmission channels for Public Administration reforms. First structural changes that reduce costs and red tape for citizens and the private sector – often through improvements in service quality – can also have positive macroeconomic benefits. Second, improving the quality of Public Administration (governance) can have positive macroeconomic benefits.

How it is noted above, a crucial point in the assessment of the macroeconomic dividends of such a structural change is represented by the measurement of productivity. In this paper we provide a simple approach for dealing with this issue and present some preliminary results.

The paper is organized as follows. Section 2 draws the state of the art in the measurement agenda; section 3 reviews the international evidence on the performance in the Public Sector; section 4 outlines the building blocks for the policies aimed to raise productivity in Public Administration; section 5 portrays our case study; section 6 sketches our principal results. As usual, a section of conclusions completes the paper.

MEASURING PUBLIC SECTOR PRODUCTIVITY: THE STATE OF THE ART

According to economic theory, productivity is the ratio of a volume measure of output to a volume measure of input. In the most comprehensive approach popularized by Robert Solow, it is defined and estimated (the so called Solow's residual) as total factor productivity (See Schreyer, 2001; Simpson, 2009 and Van Dooren et al, 2007 for the implications in Public Sector). National accounts measure private sector outputs and inputs on a regular basis, thus allowing to identify the specific contribution of each subsector to economic growth. However, despite the acknowledged role of government as a key input consumer and output producer, a reliable measurement of Public Sector productivity is still lacking. Moreover, given that most recent Public Sector reforms specifically target productivity improvement, it appears a difficult task to assess the overall results of such reforms without a reliable indicator for productivity in Public Sector. Therefore, productivity measurement is essential in order to fully account for the role of government in support of growth and to provide both an ex ante and ex post evaluation of the benefits arising from Public Administration reforms. Furthermore, in order to accomplish the difficult task of fiscal consolidation, most governments are willing to create public authorities in charge to perform comprehensive spending reviews so as to manage, reallocate and reduce public expenditure. The spending review approach is a set of methodologies aimed at regularly monitoring and assessing the efficiency and the effectiveness of public expenditure in order to reprioritize funds (HM Treasury, 2010; Ministero dell'Economia e delle Finanze, 2007). However, from a different viewpoint, a comprehensive spending review approach should assess the policy results achieved with each

Euro raised from taxpayers. As a consequence, productivity measurement together with spending review allow policy makers to identify the marginal social benefit of each Euro of public spending, thus making possible, in principle, an optimal allocation of resources. After a comprehensive spending review the policy maker faces the alternative: (efficiently and not linearly) reallocate or cut expenditures. Two major problems arise when estimating Public Sector productivity. First of all, the outputs of the Public Sector are immaterial non market services, in some cases pure public goods. Thus, in case of individual services (e.g, health care services) it is difficult to identify their value for beneficiaries (in other words, their “price”); in case of collective services (e.g, defense) it is also difficult to identify the actual nature of output (Atkinson, 2005; Simpson, 2009). In order to deal with such difficulties, many countries have adopted the simplification “output=input”: total value of output equal total value of inputs (Atkinson, 2005; Simpson, 2009). Thus, this convention implies a constant Public Sector productivity. After the publication of the United Nations System of National Accounts in 1993 (SNA 1993), the effort to develop direct measures of Public Sector output and productivity has increased everywhere. (Atkinson, 2005). In Europe, the Eurostat Handbook (2001) establishes the reference principles in order to measure non-market output. According to Eurostat (2001), output value at constant prices should be calculated with direct volume measures, instead of deflating inputs. In particular, there are four possible direct output indicators:

- Input volumes: a volume increase in inputs (e.g, public employees) reflects a volume increase in output. This method is relatively easy to implement due to readily available data. However it ignores changes in input productivity;
- Activity volumes: a given increase in the activities performed by a non-market unit (e.g, number of procedures, number of operations in a hospital, etc.) reflects an increase in output. The data on activities are often available, though administrative workload is somehow different from output. An improvement in output quality could also reduce administrative activities;
- Output volumes. For individual services, due to the presence of a delivery procedure, it is often possible to directly measure

output volumes. For collective services, activity volumes may be the only indicators available;

- Outcome measures. These indicators (e.g, literacy rate, life expectancy, etc.) are not strictly related to activities or outputs as they are also influenced a by other relevant external factors. However they could be used to measure output quality.

According to Eurostat (2001) output indicators approach should be preferred in order to measure output volume at constant prices. As a consequence, output indicators should be the reference measure when productivity in the Public Sector is estimated, whereas outcome indicators could be a better approach when Public Sector effectiveness is involved.

According to Simpson (2009), economic literature provides at least four major classes of methodologies in order to measure Public Sector productivity:

- index number techniques;
- parametric techniques;
- non-parametric techniques;
- partial efficiency measures.

One of the most relevant index number approach measures productivity growth in th Public Sector as a ratio of a Laspeyres output quantity index and a Laspeyres input quantity index. However, this approach requires an accurate measurement of prices in order to build the Laspeyres indexes, thus leading to major problems provided the lack of market prices for Public Sector outputs.

The parametric techniques are based on the estimation of a production function. In this case, information about the share of each input is not required. Actually, those shares are the parameters of the equation to be estimated. Thus, assuming competitive input and output markets, the TFP is captured by the equations residuals. One of the major parametric technique used in public productivity measurement is the Stochastic Frontier Analysis (SFA). SFA models the productivity frontier splitting the residuals into two components: a (casual) error component, and an inefficiency error-component as a deviation from the frontier.

The SFA requires assumptions on the functional form of the frontier and on the joint distributions of the two residual components. Parametric techniques, including SFA, allow productivity measurement based also on the estimation of a cost function (cost frontier for SFA). Another relevant methodology used to measure public productivity is the non-parametric technique Data Enveloped Analysis (DEA). DEA models the production frontier on the basis of the data obtained from public organizations, thus avoiding to gather information about prices in order to weight outputs and inputs. However, as it relies on extreme observations, it is very sensitive to mismeasurement. It is also necessary to provide assumptions about returns to scale, assumptions that can significantly influence estimation results.

Finally, public productivity can be measured also with indicators that take into account only one single output. Such techniques eliminate the problem of output aggregation, but raise the problem of properly identify the input related to the single output measured. Moreover, these methodologies could not proxy a comprehensive productivity measurement (in particular when the variance in productivity among different output production processes is high).

INTERNATIONAL EVIDENCE ON PUBLIC SECTOR PERFORMANCE

The OECD Government at a Glance (2011), far from being a comprehensive comparison among OECD member states in terms of public productivity, although represents an in depth benchmarking exercise concerning national implementation of policies aimed at improving public performance. In particular the OECD Government at a Glance (2011) exercise provides some evidence helpful to evaluate progress achieved by the Italian Public Administration with reference to the three main pillars of the reform mentioned in section 1.

FIGURE 3

In 2010 the Italian central government is characterized by an extensive adoption of performance-related pay schemes, in line with the new regulatory provisions of the Legislative Decree 150/2009 (Article 19), concerning the improvement of fairness and selectivity in performance assessment and rewarding (the PRP schemes have been extended to all public employees, while previously they concerned only executives). However, it should be noted that the Legislative Decree 141/2011 (Article 6),

emphasizing the strict connection between performance-related pay schemes and collective bargaining cycles for public employees, has delayed the full implementation of the new rules. Indeed, until the end of the collective bargaining freeze for public employees, Article 19 Legislative Decree 150/2009 applies only to the distribution of the so called “efficiency dividend” (possible spending savings resulting from productivity improvements), thus not affecting the whole performance related component of public salaries. Therefore, for the next years it is possible to forecast some major improvements for the Italian administration, due to the completion of the reform process.

The Italian central government shows also a good performance, as compared to OECD average, in the following areas: extent of the use of strategic human resources management and the use of performance assessments in human resources decisions. These results could be considered as direct consequences of the recent reform process. Indeed, the Legislative Decree provided new general rules concerning public employment, although connecting them with a renewed framework for performance measurement and improvement, thus allowing each public entity to manage personnel issues in accordance with the strategic objectives provided in their Performance Improvement Plans (Article 10). Moreover, the comprehensive performance management cycle established by Articles 4 to 10 of the Decree is aimed at introducing in each Italian Public Administration a strong connection between performance and HRM practices – not only performance-related pay, but also access to professional training, promotions, etc.

FIGURE 4

The simple qualitative analysis provided by the OECD shows some relevant efforts of the Italian Public Administration in order to simplify access to e-government services and e-procurement. Even if not allowing for a clear international comparison, OECD Government at a Glance (2011) underlines the actions taken by the Italian Public Administration in order to: promote the use of digital signatures and electronic filing; allow public-private partnerships to run e-government projects. Moreover, the Italian single-entry procurement website and the opportunity for businesses to track the outcomes of e-procurement contracts are considered best practices.

FIGURE 5

FIGURE 6

The study “Digitizing public services in Europe: putting ambition into action” (Capgemini et al, 2010) shows a very good performance of the Italian administration in terms of e-government services sophistication and availability. In particular, in 2010 Italy is placed seventh among the European Union member states in terms of e-government services sophistication (this indicator measures service delivery of selected e-government services against a five stage maturity model: 1 information; 2 one-way interaction; 3 two-way interaction; 4 transaction; 5 automation). Instead, the Italian Public Administration is placed first, together with other 5 countries, in terms of full online availability (this indicator measures the services that are above maturity level 4 or 5 depending on the specific service).

These international benchmarking appraisals detect some initial positive effects of the Italian reform, however, they cannot shed enough light on the issue of public productivity and efficiency, whose measurement requires direct indicators.

POLICIES TO IMPROVE PUBLIC SECTOR PRODUCTIVITY: BUILDING BLOCKS

Most reforms of the Public Administration aimed at increasing productivity are based almost on the same building blocks, as they refer to governance arrangements and management practices that are expressed in different strands of economic or management literature. According to Van Dooren et al (2007), these building blocks can be grouped into four big categories: results orientation; strengthening competitive pressures; increased flexibility; workforce issues.

“Results orientation” encompasses: performance measurement and management; new budget practices (e.g, result based budgeting, accrual accounting).

“Increased flexibility” encompasses: devolution; agentification; intra-governmental coordination; human resources management arrangements; E-Government.

“Strengthening competitive pressures” encompasses: privatization; competition.

“Workforce issues” encompasses: workforce size; workforce composition; unionization; attractiveness of the Public Sector.

These factors are commonly recognized as the institutional drivers of efficiency in the Public Administration. As a consequence each attempt to improve public productivity has often relied on policy interventions in one or more of those areas. However, little empirical evidence exists on the actual influence of these institutional drivers on productivity. Only scale of operations (workforce size), political and functional devolution and human resources management arrangements were found to have a clear positive impact on productivity under certain conditions (Van Dooren et al, 2007). Therefore, the reforms of Public Administration seem to be discretionary in nature as they are set up basically on policy maker preferences. Thus, the measurement of Public Sector productivity, offering an estimation of the potential benefits arising from reforms, could be an essential step in improving policy action together with the advancements of empirical research on the effectiveness of the different institutional drivers of efficiency.

A PRODUCTIVITY DIVIDE: THE INPS–INPDAP CASE

While, on one hand, INPDAP represents in our study the less performing entity in that it was late in applying performance measurement systems and digitalization, INPS, on the other hand, represents the best performer. Effective since 2012 and as a result of the Law Decree 201/2011, all public pension funds previously managed by INPDAP were transferred to INPS, in order to optimize the resources of those public institutes.

INPS is Italy’s major social security institute, whose function is to collect social security contributions, provide payment of pensions to both private and (since 2012) public employees and self employed; it is also in charge of paying other social benefits. What follows is a brief overview of the reasons why we chose INPS as the best performer.

Beginning with the 1970s, the institute invested in ICT technology and in the subsequent decade it developed an organizational structure and a culture environment capable of measuring the effective quality of its services. The next phase was the company

restructuring under the Law 88/1989. From then on, the management's strategy was to speed up and improve the quality of the services rendered, resulting in an increased customer satisfaction. Evidence of this is found in official documents of the early 1990s². It is in this time period that a new professional figure comes into existence, whose role was to interface with INPS users, providing them with all the necessary information and try to get a "feel" of customers' satisfaction. In an attempt to optimize resources, the customers were divided into two basic groups: the single user, and the institutional user who had access to more sophisticated and elaborate channels of supplied service. An initial customer satisfaction level analysis was carried out in 1994. Its scope was to gather and integrate qualitative as well as quantitative data from the company's planning and control system together with customer feedback. In addition, the medium-longer period target was that of constantly monitoring customer satisfaction by setting up a "customer satisfaction permanent observatory". With the 2001-2003 plan, a new planning and control system was introduced.

The more recent documents highlight the improvements achieved by INPS with regards to the three fundamental pillars of the Public Administration reform process.

TABLE 1

MEASUREMENT EXERCISE AND RESULTS

The aim of this paper is to provide some guess on the potential productivity gain due to a comprehensive reform of Public Administration. Here, for "comprehensive" reform we think of a development that leads to a structural change. For this to be the case, the Public Administration reform must encompass at least three main policy areas: better governance, introduction of performance management and HRM practices, investment in ICT and e-government.

Our exercise in measurement refers in particular to the potential effects of the Italian reform introduced with Legislative Decree 150/2009 and Legislative Decree 235/2010 (see section 1).

Italian policy action covered each of the three areas mentioned above. Better governance initiatives were aimed at increasing the quality of institutions in terms of effectiveness in rulemaking and enforcement together with greater accountability and integrity; a comprehensive performance management cycle was introduced together with the reinforcement of the performance related pay schemes, while improving ICT adoption in each public administration, ensuring interoperability within the Public Sector and enlarging the availability of on line public services. However, the potential microeconomic effects of this reform are still unclear.

Due to the absence of data in order to conduct a direct measurement of actual improvements in Public Administration productivity, we utilized the insight provided by the case study described in detail in the previous section.

In particular, we proxy the potential productivity gain due to the reform observing and measuring the gap in productivity and unit labor cost between two major Italian public administrations, one identified as the best performer and the other as the less performing entity.

For representing these “dual agents”, we selected the two main Italian Institutes for Social Security: INPS (private sector pensions) and INPDAP (Public Sector pensions).

There are several reasons for this choice.

First, these bodies deliver administrative services, thus they are a suitable proxy for a general purpose Public Administration other than health care and education institutions.

Second, they are characterized by almost the same nature of output, as both INPS and INPDAP are in charge of collecting social contributions and paying retirement benefits, thus delivering almost the same administrative services.

Third, unless INPS is involved also in unemployment benefits, social assistance pensions and severance pay and INPDAP provides also severance pay for public employees, the core output of these two institutes are pensions, given that their institutional expenditure on retirement benefits is over 80% of the total institutional expenditure. As a consequence, we decided to focus on the labor input relative to pension delivered (and on the corresponding productivity and unit labor cost), thus avoiding

complex comparison and computation in dealing with multiple outputs.

Fourth, the two administrations are similar in terms of average gross wage per capita, as they belong to the same public contracting area (“comparto di contrattazione”). Therefore the observed discrepancy in unit labor cost is strictly related to the discrepancy in labor productivity.

The most important divergence between INPS and INPDAP is the size (output scale): in 2009 INPS was in charge of a stock of 18.6 million pensions while for INPDAP they were only 2.7 million (INPDAP, 2010; INPS, 2010), thus the observed divergence in productivity could be explained partly by efficiency gains/losses due to scale.

One of the main consequences of such difference in scale is the difference in terms of personnel size.

FIGURE 7

According to the data from the “Conto Annuale” (Ministero dell’Economia e delle Finanze –Ragioneria Generale dello Stato, 2002-11), for the 2001- 2010 period the number of permanent employees of INPS had been around 4 times greater than the corresponding INPDAP figure. During this period, both the institutes had shown a decrease in personnel size. However INPS’ employees had decreased by 17.9%, while INPDAP’s employees by 13.9%. This could be interpreted as implying a possible improvement in relative labor productivity for INPS (assuming that during this period the output size has not significantly changed in both the institutes).

In our measurement exercise, INPS is identified as best performer. Indeed, as explained in section 5, INPS is characterized by early investments - in respect to the average score in Italian Public Administration - in Ict and e-government, advanced and well established schemes for performance management and HRM, effective governance rules. Therefore, due to an early adoption of best practices, INPS is a suitable proxy of the benchmark Public Administration in terms of labor productivity.

Instead INPDAP is identified as a less performing entity. Unquestionably, INPDAP has begun later to introduce major innovations in the three main policy areas interested by Public

Administration reform. As a consequence, INPDAP could be deemed as a proxy of the average performance in the Italian Public Administration: not a first mover in terms of best practices, therefore a follower.

In order to perform our measurement exercise we extracted data from annual budgets for the two companies (INPDAP, 2010; INPS, 2010). At the end of 2009 the best performer showed a stock of about 18.6 million pensions, while the less performing entity showed a stock of about 2.7 million pensions. We decided to use the stock of pensions at the end of the year as a proxy for output in order to take into account the actual volume of the administrative services related to paying pensions. Indeed, such net output volume can be calculated as the stock of pensions at the beginning of the year plus new pensions delivered minus expired pensions. After conceptualizing and measuring output, we identified the total permanent personnel and relative budget expenditure for INPS and INPDAP. However, as mentioned above, not all personnel is directly employed in pension paying activities, but the share of personnel directly related to pension paying services is not (statistically) observed. Then, to the aim of grasp this share we used the ratio between the (institutional) expenditure for pension and the total (institutional) expenditure. Labor productivity is obtained by the ratio of our output measure to this measure of labor input.

Summing up, our measuring procedure can be modeled as follows:

Output

$$Q_t = Q_{t-1} + \Delta Q_t - X_t \quad (1)$$

where Q_t is the stock (number) of pensions at the end of year t , Q_{t-1} the stock of pensions at the end of year $t-1$, ΔQ_t the flow of new pensions in year t , and X_t the number of expired pensions in year t ;

Labor Input

$$L_t = \alpha N_t, \quad \text{with} \quad (2)$$

$$\alpha = \frac{E_t}{C_t}$$

(2.1)

where L_t is personnel devoted to pensions paying activities in year t , E_t is total pensions expenditure in year t , C_t is institutional expenditure in year t , and N_t are total permanent employees in year t ;

Labor productivity

$$A_t = \frac{Q_t}{L_t}$$

(3)

Wage Sum

$$W_t = \alpha PY_t$$

(4)

where W_t = personnel expenditure devoted to pensions paying activities in year t , and PY_t = total expenditure on personnel in year t

Unit Labor Cost

$$ULC = \frac{(W_t / L_t)}{A_t} = \frac{W_t}{Q_t}$$

(5)

For the year 2009 our model (estimation procedure) produced the results depicted in table 2.

TABLE 2

As table 2 shows, the productivity gap, and therefore the ULC gap, is quite large. The normalized productivity gap is about 46 per cent. The normalized ULC gap is even greater (62 per cent). Thus, if our conceptual procedure and estimating model are acceptable, there is a broad scope for a productivity-enhancing reform of Public Administration in Italy. Obviously, benchmarking points out a mere potential and implementing is another story. Anyway, we think we have provided a noticeable evidence for the “productivity potential” of a structural (efficiency-improving)

reform of Public Administration. In Felli et Al. (2010, see Section 1 above) it is shown that a sizeable increase in the Italian Public Administration efficiency generates a significant macroeconomic dividend.

A cross check of the robustness of our estimates for the best performing entity is possible if we compare our time series of output, personnel and productivity with the data provided by INPS in its annual report (INPS, 2011).

TABLE 3

INPS measures the output of its primary processes (as well as the output of its pensions area) as standardized output, in order to assure full comparability among products (e.g, administrative services) characterized by a different level of input consumption (INPS, 2011). Therefore, the absolute value (scale) of the labor productivity resulting from our estimates is not directly comparable with the standardized productivity level measures provided by INPS. However, if we establish 2006 as the base year, the progress of the index built from our productivity estimates is nearly the same of the two productivity indexes derived from INPS data (in particular Pensions area) – see figure 8 which compares our productivity measure with the data from INPS estimates. As a consequence, even if we do not consider the different input intensity of the various pensions paying activities - in other words, if we assume that each pension creates nearly the same workload with the same input consumption- our measure provides a suitable indicator for INPS labor productivity dynamics. FIGURE 8

The two estimates are converging, even if a minor deviation in 2009 emerges.

CONCLUSIONS

The structural reform of Public Administration has become a key-point in the Policy Agenda of several European and overseas countries.

The central purpose of such a reform is to resolve the fundamental problem of a democracy, namely how to ensure that the state, in its political and administrative organization, answers to the citizens for what it does. This is a key principle of the liberal-

democratic state, whose primary foundation is the defence of liberty and of the legitimate interests of individuals. The second purpose of the reform is to foster faster economic growth by boosting the efficiency and productivity of a sector that accounts for about 20 per cent of many European countries payroll employment and whose interdependence with the private sector produces a decisive impact on the overall dynamism of the economy. For when we speak of the efficiency of the Public Administration or of general government, we are not referring only to the general services of the bureaucracy but also to such key sectors as healthcare and education, which affect the growth of human capital; civil justice, which is essential to the proper working of markets; or the criminal justice system and internal and external security, as law and order is crucial not only to the direct welfare of citizens but also to economic and financial activity. Each of these state functions requires specific policies of its own, but all suffer, across the board, from administrative inefficiency, which is an obstacle to the efficacy of any and all policy measures.

The deterioration of public finances in many advanced countries, partly as a consequence of the Global Macroeconomic Recession and of the stabilization policies that have followed, made the need for such a reform even more urgent.

In this paper we provide for the case of Italy a first step in evaluating the magnitude of the possible primary economic effect of an administrative reform. In particular, we build up a logical scheme together with an estimation procedure to assess the “productivity potential” of an efficiency-improving reform of Public Administration. We showed that this potential is significantly wide.

According to our estimates, in Italian Public Administration there exists a productivity gap of about 46 per cent which could be removed, i.e. average labor productivity might increase, as effect of the structural reform, up to this limit. As a consequence, the unit labor cost could be reduced for an even larger amount (about 60 per cent).

NOTES

¹See OECD (2010) and Brunetta (2009) for a closer examination of this reform.

²See INPS budgets and annual reports, various years.

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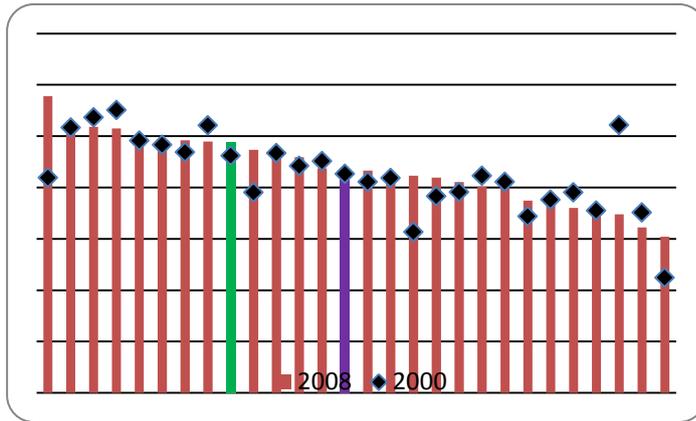
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FIGURES

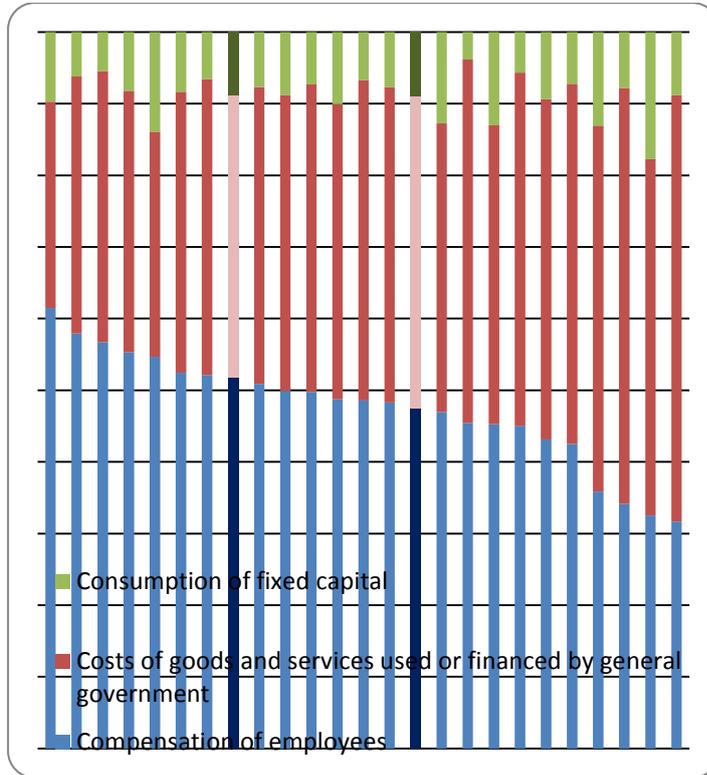
Figure 1: General government expenditures as a share of GDP, 2000 and 2008



Note: data for Japan and United States are from 2007.

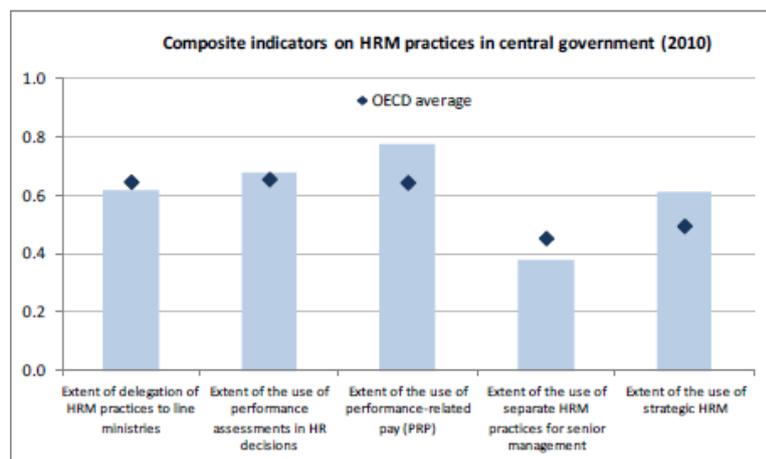
Source: OECD National Accounts

Figure 2: Structure of production costs



Source: OECD National Accounts

Figure 3: Composite indicators on HRM practices in central government (2010)



Source: OECD Government at a glance 2011

Figure 4: e-Government building blocks and e-procurement, 2010

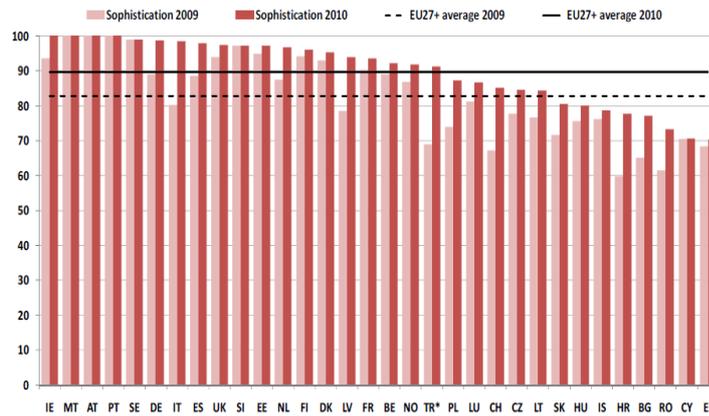
E-Government building blocks and e-procurement, 2010

| e-enabling laws and policies | Italy | OECD25 |
|---|--------------|---------------|
| Recognition & use of digital signature | ● | 100% |
| Electronic filing within the public sector | ● | 88% |
| Administering PPPs for e-government projects | ● | 64% |
| Services offered on single-entry procurement website | Italy | OECD34 |
| Tender searches | ● | 62% |
| Tracking of outcomes of contracts | ● | 32% |
| OECD percentages refer to percentage of responding countries answering in the affirmative. ● Yes ○ No .. Data unavailable | | |

Source: OECD Government at a glance 2011

Figure 5: Services' sophistication ranking, 2009-2010 (in %)

Figure 1.2: Services' sophistication ranking, 2009-2010 (in %)

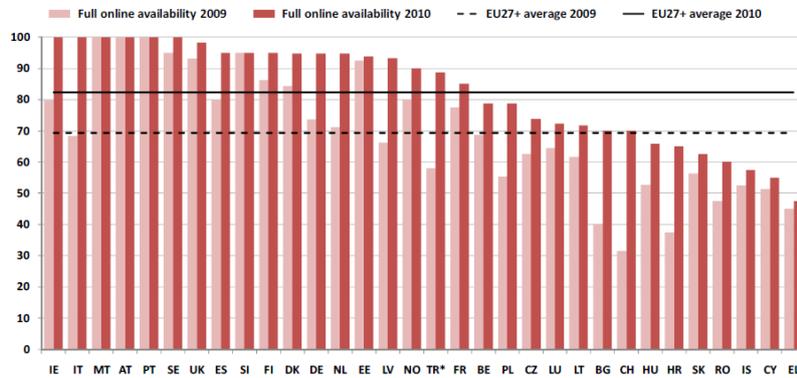


* Survey not implemented in 2009. The score of 2007 is used in the graph.

Source: Capgemini et al (2010)

Figure 6: Full online availability ranking, 2009-2010 (in %)

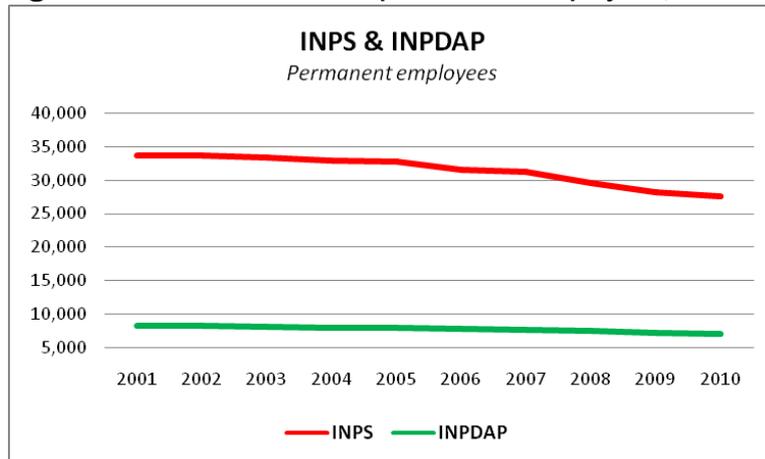
Figure 1.3: Full Online availability ranking, 2009-2010 (in %)



* Survey not implemented in 2009. The score of 2007 is used in the graph.

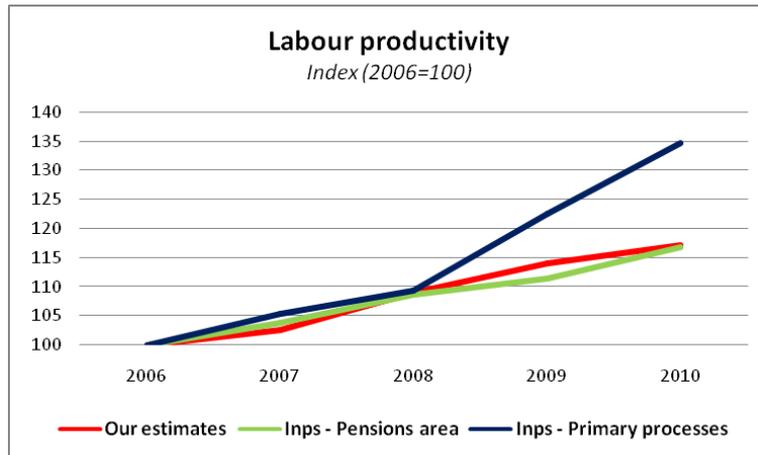
Source: Capgemini et al (2010)

Figure 7: INPS and INPDAP permanent employees, 2001-2010



Source: Our elaboration from Ministero delle Economia e delle Finanze – Ragioneria Generale dello Stato (2002)

Figure 8: Labor productivity index comparison, 2006-2010



Source: Our elaborations from INPS (2011)

TABLES

Table 1: INPS as best performer in the light of the Italian reform

| The three pillars | INPS |
|--|--|
| Modernization of public administration (complete performance management cycle; dematerialization process of documents) | A new organizational model based on an advanced monitoring and control software system. A performance management cycle - including a performance related wages scheme - now supported by a new analytical accounting system. |
| Digitalisation | Open access data system; 98,9% of services available on line; 5.5 mln PIN assigned |
| Customer relations | Social budget; 24.5 mln calls to the contact center received a year; 106.6 mln of website users a year |

Source: INPS (2011)

Table 2: Estimation results

| 2009 | Best performer – INPS | Less performing entity – INPDAP |
|--|-----------------------|---------------------------------|
| Output | 18,648,938 | 2,690,513 |
| Institutional expenditure devoted to pensions – share of total* | 83.07% | 86.34% |
| Total permanent employees** | 28,250 | 7,281 |
| Total expenditure on personnel** | € 1,927,722,139 | € 435,020,505 |
| Personnel devoted to pensions | 23,467 | 6,286 |
| Personnel expenditure devoted to pensions | € 1,601,358,781 | € 375,596,704 |
| Labor productivity | 795 | 428 |
| Unit labor cost | € 85.87 | € 139.6 |
| <p>The best performing entity shows a productivity in pension paying activity that is 1.9 times the productivity of the less performing entity. As a consequence the less performing entity shows a unit labor cost that is 1.6 times the unit labor cost of the best performer.</p> | | |
| *Source: Our elaborations from INPS (2010) | | |
| **Source: Ministero dell'Economia e delle Finanze – Ragioneria Generale dello Stato (2002) | | |

Table 3: Labor productivity – Our estimations and INPS accounts

| Years (t) | Total permanent employees (N _t) | Output (Q _t) | Personnel devoted to pensions* (L _t) | Labor productivity (A _t) | INPS - Productivity** – Pensions area | INPS - Productivity* ** – Primary processes |
|-----------|---|--------------------------|--|--------------------------------------|---------------------------------------|---|
| 2001 | 33,664 | 17,209,156 | 27,965 | 615 | - | - |
| 2002 | 33,611 | 17,449,034 | 27,921 | 625 | - | - |
| 2003 | 33,372 | 17,704,756 | 27,722 | 639 | - | - |

STRUCTURAL REFORM AND EFFICIENCY IN PUBLIC ADMINISTRATION

1863

| | | | | | | |
|--|--------|------------|--------|-----|------|------|
| 2004 | 32,971 | 17,976,649 | 27,389 | 656 | - | - |
| 2005 | 32,774 | 18,018,599 | 27,225 | 662 | - | - |
| 2006 | 31,562 | 18,274,926 | 26,219 | 697 | 49 | 66.9 |
| 2007 | 31,172 | 18,500,686 | 25,895 | 714 | 50.8 | 70.4 |
| 2008 | 29,498 | 18,608,132 | 24,504 | 759 | 53.2 | 73.1 |
| 2009 | 28,250 | 18,648,938 | 23,467 | 795 | 54.6 | 81.9 |
| 2010 | 27,640 | 18,755,642 | 22,961 | 817 | 57.2 | 90.1 |
| *We assumed the ratio α as constant and equal to 83.07% in the period 2001-2010 | | | | | | |
| **Source: Inps (2011). This measure refers to the personnel and output of the Pensions business area | | | | | | |
| ***Source: Inps (2011). This measure refers to the personnel and output of primary institutional processes (in other words to the labor productivity of the 3 main institutional "business areas") | | | | | | |