

Determinants of the Use of European Structural and Investment Funds

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Abstract:

We investigate the determinants of the effective use of European Structural and Investment Funds. We use a newly constructed database of the 1,024 programmes from the last two programme periods that started in 2007 and 2014, respectively. Our results show that virtually all programmes fail to meet the initial deadline and need the extension period to be able to spend the funds initially allocated. About 45% of EU funds allocated are not used by the initial deadline and a tenth of the programmes end up not using over 10% of the funds. Our econometric analysis shows that beyond institutional framework measures of accountability, law and order, corruption and public officials' attitudes, education and management capacity are key determinants in the efficient use of fund allocation. These findings are in line with previous work documenting that, as in the private sector, management capacity plays an important role in explaining government efficiency. In such circumstances, implementing measures that help bureaucracies deal with the lack of management skills and processing capacity –such as outsourcing fund management– may improve the efficient use of EU funds.

Keywords: government efficiency; European funds; economic policy; management.

JEL codes: F35, H11, O52

1. INTRODUCTION

Previous research has analysed government efficiency and its determining factors (La Porta et al. 1999; Treisman 2000; Svensson 2005; Kaufmann, Kraay, and Mastruzzi 2008; Chong et al. 2014). Low government productivity can impact a number of outcomes, including public worker absenteeism (Chaudhury et al. 2006), corruption and bureaucratic delays (Treisman 2000; Svensson 2005), or just low quality of public goods (La Porta et al. 1999). However, with rare exceptions, this research uses surveys to measure government quality. In this paper, we propose an objective measure of government efficiency using operational programme level data from European Structural and Investment Funds from 2007 to 2020, and we analyse its determinants.

European financial support has never been so large. In fact, in order to fund part of the EUR 2 trillion Next Generation EU Funds, the European Commission is borrowing from international capital markets, and about 30% of the funds for this programme will be raised through the issuance of bonds. How do countries manage to use European funds effectively? Our data allow us to distinguish between different theories of the determinants of government efficiency.

The literature has pointed to two broad reasons underlying government inefficiency. The first is institutional framework considerations. Governments in poor countries may be less accountable due to lack of effective checks and balances. Citizens in poor countries have few opportunities to exercise their voice (Hirschman 1970), and as countries become wealthier and more educated, government responsiveness improves because politics becomes more

democratic and transparent (Barro 1999; Glaeser, Ponzetto, and Shleifer 2007; Djankov et al. 2010; Botero, Ponce, and Shleifer 2013). The second reason behind government productivity argues that governments are similar to firms in the private sector (Chong et al. 2014). Poor levels of technology as well as human and physical capital, coupled with weak management capabilities,¹ may also be key determinants of government efficiency.

Our paper aims to expand current knowledge of the determinants of government efficiency. To achieve this objective, we construct a new database using data from the 1,024 operational programmes of the 28 EU countries in the last two programme periods that started in 2007 and 2014. We match these data with several datasets including Eurostat, the Quality of Government Expert Survey, Doing Business Reports, World Economic Forum Global Competitiveness Index dataset, and Worldwide Governance Indicators among others.

Our paper provides a systematic analysis of the allocation and use of European Structural and Investment Funds. We examine how these funds are initially allocated and ultimately spent at the initial deadline and after the extension period. We gather data for the 2007-13 programme period, which has already been spent in full. Additionally, we compile data for the 2014-20 period. Since the period of extension for the second wave concludes at the end of 2023, we take data until 2020, before the extension period begins. Differences between these two funding cycles allow us to draw some interesting comparisons.

¹ A recent strand of the literature has shown that management capabilities significantly impact private sector efficiency (Lewis 2005; Bloom and Van Reenen 2007; Bloom et al. 2010; Bloom and Van Reenen 2010; Bloom, Eifert, et al. 2012; Bloom, Sadun, and Van Reenen 2012),

Our measure of government efficiency is created with the two measures that characterise the opening and closure of the funding period. The first measure is the EU amount planned at the beginning of the programme period, which depends on the amounts initially allocated to the projects and the co-financing rate for each country and region.² The second measure is total net EU payments. This amount is the result of adding pre-financing amounts, interim payments, and closure payments (which are only available for the completed programme period of 2007-13). The difference between the two variables corresponds to de-commitments and to pre-financing and interim payments misused and recovered during the closure process. Our ratio of net payments over initial allocation thus allows us to empirically contrast the effective use of EU funds. This measure is highly correlated with other measures of government efficiency.

The paper starts by analysing the allocation of funds within the EU. Countries with the highest initial allocations for the two programme periods are Italy, Spain, and Poland. Poland is the most funded country, having obtained 18.5% of the 2007-13 funds and 18.8% of the 2014-20 initially planned amounts. At the other end, we find Luxembourg, Cyprus, and Malta which received the smallest allocation of funds. If we cut the data looking at the amount of funds allocated as a proportion of a country's GDP, we get a different picture. The countries with the highest amount / GDP allocation are Estonia, Hungary, Latvia, Lithuania, and the Slovak Republic. At the other end, we have Luxembourg and the Netherlands. Interestingly, Croatia

² This rate refers to the contribution that EU funding makes to a programme. It is usually subject to a maximum threshold established by the European Commission.

moves from receiving an amount equivalent to 0.8% of its GDP in the 2007-13 programme period to 10.7% in the last one.

Our initial analysis also shows that that virtually all countries need the extension period in order to use up the allocated funds. The data for the 2014-20 wave shows that about 45% of the allocated funds were not used by the initial deadline and that 99% of the operational programmes fail to meet the initial deadline and require the extension period to be able to spend the amounts initially approved. If we now compare these data with the 2007-13 period, including extension, we observe that the median programme managed to use 99% of the initial allocation. Still, over a quarter of the funds end up leaving 5% of the initial allocation on the table and one in ten funds do not use over 11% of the money granted.

Our ultimate goal is to analyse the determinants of the use of European Structural and Investment Funds, seeking to find the most relevant variables that explain a more effective use of these funds. We run multivariate regressions, analysing variables that proxy for the two broad theories of government efficiency described above. In order to test for institutional framework reasons, we gather data on country wealth, as well as various measures of voice and accountability, law and order, and control of corruption. To test for technology, human capital and management capacity reasons, we collect various proxies for technology availability, education, public administration characteristics and private sector management quality. Among the public administration variables, we follow Chong et al. (2014) and analyse the impact of the Weberian qualities of public administration as well as the attitudes and decision making by public sector employees. Some of the public administration quality variables capture

the assessment of citizens and may therefore also be influenced by politics and governance aspects. We run multivariate regressions using the data of the two waves of funds together and separately in an effort to find if there are significant differences among them.

Our first set of results connects government efficiency to the institutional framework. Moreover, broader factors, such as freedom of expression, freedom of association, and a free media, significantly determine government efficiency. Second, results show the key role played by the rule of law. A legal system capable of protecting property rights, preventing violence and criminal behaviour, and improving business ethics, promotes and enhances government efficiency. Third, results confirm the negative influence of corruption for the sound development of government performance and also reinforce the positive impact of transparency policies. These findings suggest the convenience of developing institutional controls and improving disclosure and transparency in order to achieve better results when managing European funds

The main result of our paper is to document that, beyond institutional framework factors, education and management capacity are key determinants of the efficient use of EU funds. The main factors that explain productivity in the private sector are also key determinants of government use of EU funds. Poor human capital resulting from low education levels is connected with poor government performance. An education system that meets the needs of a competitive economy, coupled with the availability of the latest technologies, seems to support government efficiency in the use of EU funds. Our findings with respect to public and private sector management characteristics suggest that public management features do not impact

government efficiency as significantly as private management characteristics. The results for Weberian public management variables show their relative ineffectiveness in the initial periods, and the negative influence of closed bureaucracies. As regards to the attitudes of public sector employees, our findings support the need to improve incentives that encourage public officers to contribute to government efficiency. Most importantly, we find that education and private sector management measures have a significant influence vis-à-vis improving government efficiency in the use of EU funds.

We believe our paper makes contributions to two different literatures. First, our results expand the findings of the literature addressing the determinants of government efficiency. We provide the government-efficiency research field with a new variable to measure the quality of government. The analysis of the effective use of European funds shows how member states need the extension period to be able to spend the funds initially allocated. Our estimations also point out that key determinants in the efficient use of allocation are corruption, education, public officials' attitudes, and management capabilities. As in Chong et al. (2014), our findings document that beyond institutional framework reasons, the management capacity and attitude of bureaucrats are important determinants of government efficiency in something as simple as spending money already allocated. In such a context, implementing measures that help bureaucracies deal with the lack of management skills and processing capacity –such as outsourcing fund management– may improve deficient use of EU funds.

Second, we contribute to the literature that analyses the absorption of EU funds (Tosun 2014; Zubek and Henning 2016; Kersan Škabić and Tijanić 2017; Incaltarau, Pascariu, and

Surubaru 2020) for three main reasons. First, we have a large comprehensive sample that includes all EU funds and covers two waves of funding. Second, our results show important differences in the efficiency of the use of funds at the initial deadline and after the extension period. These differences allow us to better understand the data. Finally, our approach allows us to differentiate between two different sets of theories underlying government efficiency; mainly, institutional framework reasons and management capacity.

We also make a small contribution to the literature of official development assistance in as much as we uncover some of the main determinants of the efficiency of aid coming from EU funds. Several papers studying economic growth have shown the positive repercussion of European funds particularly in terms of convergence between regions (Rodriguez-Pose and Fratesi 2004; Puigcerver-Peñalver 2007; Esposti and Bussoletti 2008; Becker, Egger, and Von Ehrlich 2010; Di Caro and Fratesi 2021), and there is an abundant literature showing how official development assistance may lead to economic growth (Boone 1996; Moreira 2005; Minoiu and Reddy 2010; Siddique, Kiani, and Batool 2017; Yiew and Lau 2018). Our paper provides a perspective similar to some of the papers reviewed in Pedrosa-Garcia (2017) in as much as it suggests that the effectiveness of aid in terms of growth is connected to good policies and an appropriate environment.

The rest of the paper is organized as follows. In the next section of the paper, we present our data and provide descriptive statistics about the allocation and use of EU funds. In section 3 we present our econometric results on the determinants of the use of funds. Finally, in section 4 we provide some conclusions and implications of our findings.

2. DATA

We collect data for the 1,024 operational programmes (547 for the period 2007-13 and 477 for 2014-20) distributed among the 28 member states of the European Union. To the best of our knowledge, this is the largest and most comprehensive sample used to analyse EU funds so far. These programmes are distributed among the following funds: Cohesion Fund (CF), Regional Development Fund (ERDF), Agricultural Fund for Rural Development (EAFRD), Maritime and Fisheries Fund (EMFF), and Social Fund (ESF). We exclude interregional programmes from the analysis because their nature does not allow us to perform a country level analysis.

Table 1 shows the distribution of the sample of programmes by country for each of the two programme periods (i.e., 2007-13 and 2014-20). The table compiles the number of programmes in each country, the initially planned amounts (EUR billion) and the proportion that these amounts represent over a country's GDP (in percentage points). We observe that the countries with the highest allocations in the two programme periods are Italy, Spain, and Poland. Poland is the most funded country, having been allocated 18.5% of the 2007-13 funds and 18.8% of the 2014-20 initially planned amounts. At the other end, we find Luxembourg, Cyprus, and Malta as the countries with the lowest allocation of funds. If we look at the allocation in terms of national GDP, Estonia, Hungary, Latvia, Lithuania, and the Slovak Republic are the countries that receive most funds, and we find Luxembourg and the Netherlands at the other end. Interestingly, Croatia moves from receiving an amount equivalent

to 0.8% of its GDP in the 2007-13 programme period to 10.7% in the last one. Maps showing initially planned amounts for each programme period are shown in Figures 1a and 1b.

Table 1. Distribution of the planned amounts by country

Figure 1a. Percentage of planned amounts by country for the 2007-13 programme period

Figure 1b. Percentage of planned amounts by country for the 2014-20 programme period

With a budget of EUR 647 billion, European Structural and Investment funds for the 2014-20 period increased by almost EUR 200 billion compared to the previous edition. The funds are managed by each country, through partnership agreements prepared in collaboration with the European Commission. These agreements establish how the funds are to be used during the funding period. These documents apply to several programmes, which are divided into projects. It is interesting to analyse the two different programme periods because the funds from the 2007-13 programme have concluded, while countries are still in the extension period of the second wave of funds until the end of 2023 and can therefore still make use and claim funds. Data for the last period show that 99% of the operational programmes in the second wave fail to meet the initial deadline and require the extension period in order to be able to spend the amounts initially approved.

Although a regional-level analysis could provide interesting insights, a country-level analysis evidences a number of advantages. First, it allows control over variables that are not available at regional levels, such as educational rates or institutional quality measures. Second, given that European Structural and Investment Funds are allocated to relatively poor regions

and that all countries have such regions, a regional analysis may pose some endogeneity problems that are much less evident in a country-level study. In addition, the analysis is less sensitive to spill-over effects, which could arise more easily among regions. Finally, the country level study is insensitive to changes by national government allocation of support to backward regions (Ederveen, de Groot, and Nahuis 2006).

Data from the European Commission show the amounts reported by national and regional programmes. Our measure of government efficiency in the use of funds is created with the two measures that characterise the opening and closure of the funding period. We first measure is the EU amount planned at the beginning of the programme period, which depends on the amounts initially allocated to the projects and the proportion supported by the EU. The second measure is total net EU payments. This amount is the result of the pre-financing amounts plus the interim payments; for the completed 2007-13 funds it also includes closure payments. Differences between the two variables correspond to de-commitments and to pre-financing as well as interim payments misused and recovered during the closure process. Our ratio of net payments over initial allocation thus allows us to empirically contrast the effective use of EU funds by countries.

Table 2 compiles the descriptive statistics of Net payments / Initial allocation by programme period, and its distribution is represented through histograms in Figures 2a and 2b. For the 2014-20 funds, we observe that about 45% of the allocated funds were not used by the initial deadline. As regards to the first wave of funds, we find that 3.6% of the allocated funds end up not being used by countries. These significant differences between the use of funds in

the two waves support the relevance of analysing both funding periods, considering the possibility that the latter may be spent up to the 31st December 2023. Econometric analysis for each programme period may also allow us to find if some variables have a smaller or larger impact in the normal and extension period.

Table 2. Descriptive statistics of Net payments / Initial allocation

Figure 2a. Distribution of Net payments / Initial allocation for 2007-13 funds

Figure 2b. Distribution of Net payments / Initial allocation for 2014-20 funds

As previously described, the funding of the different programmes is shared, and is determined by the co-financing rate. This rate refers to the contribution that EU funding makes to each operational programme. It is usually subject to a maximum threshold, and the European Commission establishes the final proportion. Assigning a financial path is carried out by a mixed commission that establishes objectives and priority axes. After its approval, national and regional committees are responsible for developing and specifying the programmes through calls for public procurements, grants, or requests for a quotation directly to the suppliers they regard as most capable of meeting the need. Finally, the expenditure is implemented, completing the initial goals. In this process, there are several agents with different tasks, and efficiency is not taken for granted, with bureaucratic issues and prerequisites for spending the funds figuring among the main obstacles encountered. Moreover, public sector employees must add the management of operational programmes to their daily tasks, and having some support for this would no doubt prove helpful.

Table 3 shows the average values for our measure of Net payments / Initial allocation by country for each programme period. It can clearly be seen that almost all countries need the extension period to fully spend the allocated funds. It is worth noting that Spain, despite being one of the countries with the highest proportion of funds allocated, has the lowest ratio of net payments over initial allocation. In contrast, Finland, Ireland, Luxembourg and Austria are those which have spent most of their approved allocations. Moreover, we see how the Czech Republic, the United Kingdom, Bulgaria, Slovak Republic and Italy do not reach 98% of Net payments / Initial allocation in the 2007-13 programme period. Even more noticeable is the 88% obtained for Romania and Croatia. These data are also represented in Figures 3a and 3b through maps of Europe.

Table 3. Average Net payments / Initial allocation by country

Figure 3a. Average Net payments / Initial allocation for 2007-13 funds

Figure 3b. Average Net payments / Initial allocation for 2014-20 funds

3. RESULTS

Table 4 correlates our measure of Net payments / Initial allocation with a number of other standard government efficiency measures used in the literature. These measures have been obtained from Doing Business Reports (the number of days and procedures required to start a business, the ease of doing business score, starting a business score, dealing with construction permits score, paying taxes score, enforcing contracts score) and from Worldwide Governance Indicators (their government effectiveness measure). On nearly every variable, a better

government efficiency indicator positively correlates with Net payments / Initial allocation for the 2014-20 programme period. This fact supports the notion that more responsive governments manage funds more effectively. The weaker results for the 2007-13 period could be explained by the fact that countries seem to be catching up during the extension period. Spending the allocated funds in a timely manner is an indicator of high efficiency. In sum, these results suggest that we have a valid measure of government efficiency. We next examine the determinants of the effective use of EU funds.

Table 4. Net payments / Initial allocation and other government efficiency measures

In order to estimate the effective use of EU funds, we run robust OLS regressions for Net payments / Initial allocation as a dependent variable, and control for the allocated amount through the proportion over the country's GDP, the logarithm of GDP per capita, and a government deficit variable. GDP per capita and government deficit have been measured as the average of their values in the three years before the funding programme. We proxy for government deficit through the ratio between net lending over borrowing. A definition of the variables and their main descriptive statistics is available in the Appendix.

In Table 5, we show their correlations and univariate regressions with Net payments / Initial allocation, and for all the explanatory variables. In the first panel of results, we can observe that our measure of efficiency in fund usage is slightly positively correlated to the measure of government indebtedness in the second wave, and with higher income per capita only in the completed 2007-2013 period.

Table 5. Correlation and univariate regressions between Net payments / Initial allocation and explanatory variables

3.1. Institutional framework

We want to analyse the effect of a country's institutional framework on the effective use of European Structural and Investment Funds. In Table 5, we start this analysis by looking at correlations and univariate regressions between Net payments / Initial allocation and the following three groups of variables: voice and accountability, law and order, and corruption. Bureaucratic processes can be lengthy and sometimes lead to resources being wasted, or even to corruption. In fact, the European Commission states on its website that 'fraud affects approximately 0.2% of the total EU budget' (European Commission 2020). Accordingly, in August 2018 the EU simplified the financial regulation applied to those receiving and managing EU funds. The literature has extensively examined the rule of law in terms of better country performance (Gennaioli et al. 2013; Chong et al. 2014), promoting the need to improve education and social capital (Ederveen, de Groot, and Nahuis 2006; Gennaioli et al. 2014), and alerting to the consequences of corruption and the increasing number of people who express distrust in politicians (Tomankova 2021). The following three tables in the paper carry out a multivariate analysis of the three groups of variables that proxy for voice and accountability, law and order and corruption.

In Table 6, we consider voice and accountability measures and analyse to what extent governments are responsive to their citizens and to what degree governments may be controlled. We empirically test the influence in Net payments / Initial allocation of the voice

and accountability Worldwide Governance Indicator, the index for the independence of the judicial system given by the Global Competitiveness Index dataset of the World Economic Forum, the index for the strength of auditing and reporting standards obtained from the same source, a democracy index from Polity V, and the measure for freedom of the press obtained from Freedom House database. Results in Table 6 show the positive and significant influence of these variables, except for the democracy index. These results support the need to enhance institutional controls, democracy, and freedom in order to achieve better results when managing European funds. These findings also suggest that accountability significantly determines government efficiency.

Table 6. Voice and accountability

Table 7 shows regressions for law and order variables. They measure countries' rule of law and show the quality of law enforcement. First, we include the rule of law Worldwide Governance Indicator reflecting perceptions of the extent to which people have confidence in and abide by the rules of society. Second, we use three indices from the Global Competitiveness Index dataset of the World Economic Forum: property rights, ethical behaviour of firms, and protection of minority shareholders' interests. Third, we measure creditors' rights through an index obtained from the Doing Business Reports. Results in Table 7 show the positive and significant influence of all the law and order variables. They reflect how important countries' rule of law is in terms of government efficiency, suggesting the need to improve these institutional aspects in order to ensure a more effective use of funds.

Table 7. Law and order

Corruption constitutes the last group of measures vis-à-vis gauging the influence of a country's institutional framework. These results are presented in Table 8. All of the following corruption proxies have been inversed, such that the higher the value of the variables, the less corrupt the environment. First, we consider the control of corruption Worldwide Governance Indicator. Second, we include several indices from the World Economic Forum Global Competitiveness Index dataset: the transparency of government policymaking, impartiality in government officials' decisions, absence of irregular payments and bribes, and public trust in politicians. Third, we add the corruption perceptions index from Transparency International. Results in Table 8 show a strong significant and positive relationship between these variables and Net payments / Initial allocation, suggesting the positive influence of transparency and control of corruption policies for a more effective use of funds.

It is worthwhile pointing out that Corruption may also be considered the consequence of failure in all of the previously considered measures in Tables 6 and 7. Poor government performance would manifest itself through less accountability, low protection and rule of law and, therefore, more corruption.

Table 8. Corruption

3.2. Education and management capabilities

In this section, we go beyond the characteristics of a country's institutional framework and consider education and management capacity as potential determinants of government efficiency by analysing their influence in the effective use of European Structural and

Investment Funds. We therefore present regression results establishing the relationship between Net payments / Initial allocation and the following four groups of variables: education and human capital, public sector management characteristics, attitudes and decision-making by public officials, and private sector management characteristics.

In Table 9, we test the influence of education and human capital measures. First, we include three variables from Eurostat: the educational attainment level as a percentage of the population aged 15 to 64, the share of population aged 18 to 24 not involved in education or training, and the percentage of young people (aged 15 to 29) neither in employment nor in education and training (NEET). Second, we consider the following indices from the World Economic Forum Global Competitiveness Index dataset: the secondary education enrolment total ratio, the quality of education to meet the needs of a competitive economy, availability of the latest technologies, an index for business adoption of the latest technologies, and the percentage of people using internet. Finally, we include the average years of schooling from Gennaioli et al. (2013).

The results of Table 9 show significant and positive relationships between human capital and Net payments / Initial allocation. The negative coefficients for early leavers from education and NEET confirm the importance of this concern, which constitutes one of today's major challenges. These findings show the compelling need for greater levels of human capital if we are to improve government efficiency.

Table 9. Education and human capital

Following Weber (1968), professional bureaucracies are needed in order to accomplish social goals. Updated and refined measures of Weberian bureaucracy indices based on expert surveys have been developed in recent years. They cover such aspects as skill and merit as opposed to patronage-based hiring, career employment, civil service protection, and relative pay.

We use the two first datasets of the Quality of Government Expert Survey (Teorell, Dahlström, and Dahlberg 2011; Dahlström et al. 2015), following the structure of Chong et al. (2014). We thus first consider public sector management quality through the following indices: Weberian qualities of public administration, professional and non-political public administration, the influence of political connections when recruiting public sector employees, and the closedness of bureaucracy. Interestingly, we find a negative and significant relationship for the closed public administration index in Table 10, suggesting the barrier that this poses to the effective use of funds. We do not find a significant coefficient for the Weberian public administration index.

Table 10. Public sector management

Dahlström et al. (2015) also collect data on objectives and attitudes of public sector employees: whether they strive to be efficient, implement policies decided by top politicians, help citizens, follow rules, and fulfil the ideology of the parties in government. In addition, we built an index for public official impartiality, and also include the variable that ranks the impartial behaviour of public sector officials when deciding to implement a policy in an individual case. We examine the relationship between these attitudes and funds efficiency in

Table 11. We find positive and significant results for the measures more directly linked with efficacy and corruption, suggesting the positive influence of good attitudes by public employees in the effective use of European funds. Nevertheless, there is the exception of the variables measuring public employees' effort to help citizens and to fulfil the ideology of the parties in government. One possible explanation behind these results is that these two measures are linked to social and political ideologies.

Table 11. Attitudes and decision-making by public officials

The literature shows that management quality is a key determinant of productivity in the private sector (Bloom, Genakos, et al. 2012; Bloom, Eifert, et al. 2012; Gennaioli et al. 2013; Bloom, Sadun, and Van Reenen 2016). To empirically test the quality of private sector management, we include the following five ranks, ranging from 1 to 7, obtained from the World Economic Forum Global Competitiveness Index dataset: flexibility of wage determination, quality of management schools, cooperation in labour-employer relations, capacity for innovation, and willingness to delegate authority. Results in Table 12 show the positive and significant influence of all the measures of the quality of private sector management (except quality of management schools) in the effective use of European funds. These findings support the need for a qualified managers in the aspects that measure private sector management capacity in order to effectively manage funds.

Table 12. Private sector management

3.3. Robustness check

Although the statistics of the ordinary least squares regressions support our results, given that our dependent variable is a censored measure, we run tobit regressions (Tobin 1958) to ensure robustness. The upper limit is set at 1, as the maximum value for Net payments / Initial allocation. The first six columns show the results of pooled regressions of the two programme periods together, while the last six columns show results separating programme waves. The last column of the table presents the p-values of the test of differences in coefficients across the two waves.

Results in Table 13 confirm the previous findings and if anything, show higher significance levels for many of our variables. Comparisons of coefficients across waves show that, with the exception of corruption measures, the impact of all the other groups of variables is substantially lower in the first wave than in the second wave. These results suggest that a better institutional framework, education as well as public and private sector management characteristics, help explain more prominently the efficiency of funds in the normal period. A good illustration of this pattern is the Weberian “closed public administration” sub-index, which switches signs. This suggests that public administrators, who have special hiring procedures and who have secured jobs for life, significantly lag on the efficacy of funds in the normal programme period, and only catch up during the extension period. The last column of Table 13 shows that when there are differences across waves, they are statistically significant.

Finally, although it has not been tabulated in Table 13 for space reasons, it is interesting to note how the effect of GDP per capita switches between periods. GDP per capita has a negative effect for the 2014-20 programme period, which does not include the extension period.

This relationship is positive for 2007-13 funds, for which the data includes the extension period. The ability of wealthy countries to catch up at the extension period may explain this difference.

Table 13. Tobit estimation

4. CONCLUSIONS

This paper makes two contributions. First, our results contribute to the literature addressing the determinants of government efficiency. We provide the government efficiency research field with a new variable to measure the quality of government. Our measure of the effective use of European funds also shows how member states need the extension period in order to spend the funds initially allocated. Our econometric estimations also uncover that key determinants in the efficient use of allocation are not only institutional framework characteristics such as corruption, but also education, public officials' attitudes, and management capabilities. As in Chong et al. (2014), our findings document that beyond institutional framework reasons, the management capacity and attitude of bureaucrats are important determinants of government efficiency in something as simple as spending already allocated funds. In such circumstances, implementing measures that help bureaucracies deal with the lack of management skills and processing capacity –such as outsourcing fund management– may improve the deficient use of EU funds.

Second, we contribute to the literature analysing the absorption of EU funds. We put together a large comprehensive sample that includes all EU funds and covers two waves of funding and analyse how they are used. Our results uncover important differences in the

efficiency of the use of funds at the initial deadline and after the extension period. These differences allow us to better understand the data. Finally, our approach enables us to differentiate between two different sets of theories behind government efficiency; mainly, institutional framework reasons and management capacity.

Third, we also contribute to the literature on development assistance. Our results imply that proposals aimed at improving the efficacy of official development assistance should take into account the improvement of management capacity and management incentives. Our findings on this specific economic aid suggest that improving the institutional framework and productivity may lead recipient countries to manage development assistance more effectively.

Our results highlight certain government efficiency problems. The first point to emerge from our findings –and in line with previous research (Botero, Ponce, and Shleifer 2013; Chong et al. 2014)– is that government efficiency improves as countries become more accountable and as corruption concerns decrease. This is consistent with recognising that public sector management and productivity is subject to the same aspects as that of the private sector. This analysis suggests that government efficiency, in addition to political aspects such as disorder and corruption, may be driven by problems similar to those of the private sector, such as poor management. In fact, corruption may show the inadequate monitoring and incentive system.

Finally, this paper suggests the need to improve fund absorption by countries. Efforts designing operational programmes often take long time and involve complicated documents establishing priorities and objectives. However, to the extent that management capacity is a constraint, these efforts may not lead to an efficient use of the allocated funds. There are several

potential avenues for improvement suggested by our findings. Public employees should probably add the management of funds to their daily tasks and avoid delays in the spending of funds. Proportionality between fund programming and assimilation could perhaps be achieved by improving the support given to public officers responsible for managing EU funds. Specific amounts could also be allocated for hiring support staff, and the European Commission might even consider providing countries with trained personnel that could also perform monitoring and supervisory tasks.

Our findings shed light on one potential channel that might explain differences in determinants of government efficiency. Further work could also explore the connection between effectiveness in the use of funds and the actual effectiveness of the projects financed by these funds. In a broader context, and given the collapse of development financing in the past 50 years³, our results may provide useful insights for a better management of the still available financial support. Our findings imply that efforts to design complicated operational programmes with long documents and cumbersome processes may prevent governments from quickly accessing fund allocation. It may be worth exploring alternative avenues to help governments improve the pace of expenditure. Specific amounts could be allocated for hiring supporting staff, and the granting parties should consider providing recipient countries with trained personnel that could help process and perform monitoring and supervisory tasks. Taking into account the importance of European funds for member states' economic

³ Alonso, Aguirre, and Santander (2019) highlight the evolution of development financing, moving from 77% of official sources in 1970 to 14% in 2017.

development and the urgent need to improve their management, there is still a long way to go in order to achieve better fund management. Although the execution of the Next Generation EU Funds has started to take steps in this direction⁴, our results show that thinking further about how to improve management capacity and incentives may prove fruitful.

5. REFERENCES

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⁴ These include the availability of the direct management option, and the measuring of execution not by declaring expenses but by measuring results through milestones and objectives' achievement.

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6. APPENDIX. Definition of variables

Name	Definition and sources	Obs	Mean	SD	Min	Max
Allocation/GDP	The total amount planned for each country over its GDP (percentage).	1,024	3.03	3.50	0.00	11.52
Ln (GDP per capita)	The logarithm of the average of the GDP per capita in the three years before the funding programme. PPP (constant 2017 international \$). Source: World Development Indicators.	1,024	10.52	0.29	9.68	11.65
Government net lending/borrowing	The average in the three years before the funding programme of general government net lending over borrowing ratio. Percent of GDP. Source: International Monetary Fund.	1,024	-2.69	2.71	-8.03	4.99
Government efficiency						
Government Effectiveness	Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance). Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Years: 2019, 2012. Source: Worldwide Governance Indicators.	1,024	1.03	0.51	-0.31	2.22
Ln No. procedures to start a business	Logarithm of the number of procedures required to start a business. Years: 2018, 2012. Source: Doing Business Reports.	1,019	6.38	2.38	2.00	15.00
Ln No. days to start a business	Logarithm of the number of days required to start a business. Years: 2018, 2012. Source: Doing Business Reports.	1,019	13.89	11.83	3.00	47.00
Ease of doing business	The simple average of the scores for each of the Doing Business topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. Years: 2019, 2012. Source: Doing Business Reports.	1,024	73.75	5.57	60.05	85.16
Starting a business	The simple average of the scores for each of the component indicators: the procedures, time and cost required for an entrepreneur to start and formally operate a business, as well as the paid-in minimum capital requirement. Years: 2019, 2012. Source: Doing Business Reports.	1,024	86.47	5.21	75.60	95.30
Dealing with construction permits	The simple average of the scores for each of the component indicators: the procedures, time and cost required to build a warehouse –including obtaining the necessary licences and permits, submitting all required notifications, requesting and receiving all necessary inspections and obtaining utility connections. Years: 2019, 2012. Source: Doing Business Reports.	1,024	70.56	8.60	24.40	91.60
Paying taxes	The simple average of the scores for each of the component indicators, payments, time and total tax and contribution rate for a company to comply with tax laws in an economy, as well as the	1,024	76.92	8.85	49.30	95.30

Name	Definition and sources	Obs	Mean	SD	Min	Max
Enforcing contracts	post-filing procedures to request and process a VAT refund claim and to comply with and complete a corporate income tax correction. Years: 2019, 2012. Source: Doing Business Reports. The simple average of the scores for each of the component indicators: the time and cost for resolving a commercial dispute through a local first-instance court, as well as the quality of judicial processes that promotes quality and efficiency in the court system. Years: 2019, 2012. Source: Doing Business Reports.	1,024	64.59	10.39	42.20	85.70
Voice and accountability						
Voice and Accountability	Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Years: 2019, 2012. Source: Worldwide Governance Indicators.	1,024	1.08	0.28	0.22	1.69
Judicial independence	Rates for how independent the judicial system is from influences of the government, individuals, or companies. Ranges from 1 to 7 (entirely independent). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.60	1.08	2.66	6.82
Strength of auditing and reporting standards	Strength of financial auditing and reporting standards. Ranges from 1 to 7 (extremely strong). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	5.08	0.64	3.89	6.58
Democracy index	The Democracy index is an additive eleven-point scale (0-10). The operational indicator of democracy is derived from codings of the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive. Years: 2017, 2010. Source: Polity V.	1,013	9.89	0.51	8	10
Freedom of the press	Index for the freedom and independence of the media. Years: 2020, 2013. Source: Freedom House database.	1,024	3.53	0.55	2	4
Law and order						
Rule of Law	Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance). Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Years: 2019, 2012. Source: Worldwide Governance Indicators.	1,024	1.03	0.56	-0.09	2.02
Property rights	The extent to which property rights are protected. Ranges from 1 to 7 (best). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.91	0.81	3.29	6.57

Name	Definition and sources	Obs	Mean	SD	Min	Max
Ethical behaviour of firms	Rates for companies' corporate ethics (ethical behaviour in interactions with public officials, politicians and other firms). Ranges from 1 to 7 (excellent). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.51	1.01	2.90	6.73
Protection of minority shareholders' interests	The extent to which the interests of minority shareholders are protected by the legal system. Ranges from 1 to 7 (fully protected). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.39	0.66	3.10	6.20
Creditors' rights	This legal rights index measures the degree to which collateral and bankruptcy laws protect borrowers' and lenders' rights, thus facilitating lending. Ranges from 0 to 10 (best). Years: 2018, 2012. Source: Doing Business Reports.	1,019	5.58	2.19	2.00	10.00
Corruption						
Control of Corruption	Estimate of governance performance (ranges from approximately -2.5 (weak) to 2.5 (strong)) to avoid the use of public power for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests. Years: 2019, 2012. Source: Worldwide Governance Indicators.	1,024	0.91	0.73	-0.26	2.38
Transparency of government policymaking	How easy it is for companies to obtain information about changes in government policies and regulations that affect their activities. Ranges from 1 to 7 (extremely easy). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.26	0.81	2.87	5.97
Corruption perceptions index	Corruption perceptions index. Years: 2019, 2012. Source: Transparency International.	1,024	62.24	13.59	36.00	90.00
Impartiality in decisions of government officials	To what extent government officials show favouritism to well-connected firms and individuals when deciding upon policies and contracts. Ranges from 1 to 7 (never show favouritism). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	3.37	0.97	1.91	5.81
Absence of irregular payments and bribes	Average score for how often firms make undocumented extra payments or bribes connected with (a) imports and exports; (b) public utilities; (c) annual tax payments; (d) awarding of public contracts and licences; (e) obtaining favourable judicial decisions. Ranges from 1 to 7 (never occurs). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.96	0.82	3.46	6.76
Public trust in politicians	Rates for the ethical standards of politicians. Ranges from 1 to 7 (best). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	3.00	1.14	1.73	5.80
Education and human capital						
Educational attainment level	The educational attainment level from 15 to 64 years (upper secondary, post-secondary non-tertiary and tertiary education). Years: 2019, 2012. Source: Eurostat.	1,024	70.73	12.08	38.40	88.90

Name	Definition and sources	Obs	Mean	SD	Min	Max
Early leavers from education and training	Share of the population aged 18 to 24 with, at most, lower secondary education who were not involved in any education or training during the four weeks preceding the survey. Years: 2019, 2012. Source: Eurostat.	1,024	12.11	5.37	3.00	24.70
NEET	Percentage of the population aged 15 to 29 neither in employment nor in education and training. Years: 2019, 2012. Source: Eurostat.	1,024	15.48	5.51	5.70	26.80
Secondary education enrolment	The reported value corresponds to the ratio of total secondary enrolment, regardless of age, to the population of the age group that officially corresponds to the secondary education level. Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	108.48	13.16	88.64	166.81
Quality of the education system	How well the education system meets the needs of a competitive economy. Ranges from 1 to 7 (extremely well). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.03	0.79	2.77	5.85
Years of education	The average years of schooling from primary school onward for the population aged 15 years or older. Years: 2005. Source: Gennaioli et al. (2013)	1,024	9.99	1.21	6.58	12.14
Availability of latest technologies	To what extent the latest technologies are available. Ranges from 1 to 7 (to a great extent). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	5.68	0.61	4.24	6.87
Firm-level technology absorption	To what extent businesses adopt the latest technologies. Ranges from 1 to 7 (to a great extent). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	5.07	0.59	3.88	6.46
Individuals using Internet	Percentage of people who used the Internet from any location and for any purpose, irrespective of the device and network used, in the last three months. Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	72.75	13.35	39.93	97.49
Public sector management						
Weberian public administration	Index of “Weberian” qualities of public administration. Each expert was asked to provide a quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to each question included in the Quality of Government Survey. The questions included in the Weberian index are: (1) When recruiting public sector employees, the skills and merits of the applicants decide who gets the job; (2) When recruiting public sector employees, the political connections of the applicants decide who gets the job (we inverted the scale for this question); (3) Top political leadership hires and fires senior public officials (we inverted the scale for this question); (4) Senior public officials are recruited from within the ranks of the public sector; (5) Public sector employees are hired via a formal examination exam; (6) Once one is recruited as a public sector employee, one stays a public sector employee for the rest of one's career; (7) The terms of employment for public sector employees are regulated by special laws that do not apply to private	1,020	4.45	0.43	3.29	5.68

Name	Definition and sources	Obs	Mean	SD	Min	Max
	sector employees; (8) Senior officials have salaries that are comparable with the salaries of private sector managers with roughly similar training and responsibilities; and (9) The salaries of public sector employees are linked to appraisals of their performance. To construct the index for each country, we average the responses of all country experts to each question and then average the scores of the nine questions. Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).					
Professional & non-political public administration	Sub-index of "Weberian" qualities of the public administration that refer to the professionalism and non-political interference in hiring of the bureaucracy. This sub-index covers questions (1), (2), (3) and (4) of the Weberian public administration index described above. Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	4.38	0.68	2.96	6.32
Hired for skills and merits	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: When recruiting public sector employees, the political connections of the applicants decide who gets the job. We have inverted this scale for interpretation reasons. Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	4.76	0.93	2.67	6.64
Closed public administration	Sub-index of "Weberian" qualities of public administration that refer to meritocratic recruitment and the closedness of bureaucracy. This sub-index covers questions (5), (6) and (7) of the Weberian public administration index described above. Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	5.41	0.72	3.31	6.27
Attitudes and decision-making by public officials						
Public sector employees strive to be efficient	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: To what extent would you say that public sector employees strive to be efficient? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	4.35	0.81	2.00	6.09
Public sector employees strive to implement policies decided by top politicians	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: To what extent would you say that public sector employees strive to implement the policies decided upon by top political leadership? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	4.84	0.54	3.86	6.25

Name	Definition and sources	Obs	Mean	SD	Min	Max
Public sector employees strive to help citizens	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: To what extent would you say that public sector employees strive to help citizens? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	3.74	0.98	2.05	5.69
Public sector employees strive to follow rules	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: To what extent would you say that public sector employees strive to follow rules? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	5.42	0.70	4.00	7.00
Public sector employees strive to fulfil the ideology of the parties in government	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: To what extent would you say that public sector employees strive to fulfil the ideology of the party/parties in government? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,017	3.61	0.65	2.36	5.43
Impartiality of public sector employees	Index of the impartiality of the bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to each question included in the Quality of Government Survey. The questions included in the impartiality index are: (1) Firms that provide the most favourable kickbacks to senior officials are awarded public procurement contracts in favour of firms making the lowest bid? (We inverted the scale for this question); (2) When deciding how to implement policies in individual cases, public sector employees treat some groups in society unfairly? (We inverted the scale for this question); and (3) When granting licences to start up private firms, public sector employees favour applicants with whom they have strong personal contacts? (we inverted the scale for this question). The methodology is identical to the one used in the construction of the Weberian public administration index described above. Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,017	4.62	0.95	2.67	6.38
Public sector officials act impartially when deciding to implement a policy in a case	Quantitative answer on a scale from 1 (hardly ever) to 7 (almost always) to the following question included in the Quality of Government Survey: Generally speaking, how often would you say that public employees today act impartially when deciding how to implement a policy in an individual case? Years: 2015, 2012. Source: Own calculation based on expert data from Teorell, Dahlström, and Dahlberg (2011); Dahlström et al. (2015).	1,020	4.97	0.71	3.40	6.20
Private sector management						

Name	Definition and sources	Obs	Mean	SD	Min	Max
Flexibility of wage determination	This rates whether wages are generally set by a centralized bargaining process or by each individual company. Ranges from 1 to 7 (by each individual company). Years: 2018, 2012. Source: World Economic Forum Global Competitiveness Index dataset.	1,024	4.37	0.95	2.24	6.18
Quality of management schools	This rates the quality of business schools. Ranges from 1 to 7 (excellent). Years: 2018, 2012. Source: World Economic Forum.	1,024	4.97	0.74	3.27	6.12
Cooperation in labour-employer relations	This rates whether labour-employer relations are generally confrontational or cooperative. Ranges from 1 to 7 (generally cooperative). Years: 2018, 2012. Source: World Economic Forum.	1,024	4.35	0.66	3.29	5.97
Capacity for innovation	The extent to which companies have the capacity to innovate. Ranges from 1 to 7 (to a great extent). Years: 2018, 2012. Source: World Economic Forum.	1,024	4.47	0.91	2.71	5.79
Will to delegate authority	The extent to which senior management delegate authority to subordinates. Ranges from 1 to 7 (To a great extent). Years: 2018, 2012. Source: World Economic Forum.	1,024	3.96	0.75	2.96	6.31

7. TABLES

Table 1. Distribution of the planned amounts by country

This table shows country level data for the two different programme periods of EU fund allocations. For each wave, the table shows the number of programmes, the percentage of the number of programmes over the total programmes in the wave, the amount of the programmes in EUR billion, the percentage of this amount over the total amount in the wave, and the ratio (in percentage points) of this amount over the country's GDP (measured as the average of the three years before the start of the programme period).

	2014-20					2007-13				
	Amount	%	Amount / GDP	Number of programmes	%	Amount	%	Amount / GDP	Number of programmes	%
Poland	87.13	18.76	8.8	25	5.24	81.32	18.46	10.6	24	4.39
Italy	47.24	10.17	1.9	76	15.93	37.41	8.49	1.4	76	13.89
Spain	43.35	9.34	2.6	64	13.42	43.86	9.96	2.5	72	13.16
Romania	31.63	6.81	7.1	9	1.89	27.57	6.26	7.1	11	2.01
France	28.83	6.21	1.0	66	13.84	21.35	4.85	0.8	46	8.41
Germany	28.01	6.03	0.7	48	10.06	34.72	7.88	0.9	54	9.87
Portugal	26.49	5.70	8.4	17	3.56	25.72	5.84	7.7	24	4.39
Hungary	25.21	5.43	10.0	10	2.10	28.82	6.54	11.4	23	4.2
Czech Rep.	23.92	5.15	6.7	11	2.31	29.42	6.68	8.9	25	4.57
Greece	22.18	4.78	7.2	21	4.40	24.32	5.52	6.1	24	4.39
United Kingdom	16.80	3.62	0.6	18	3.77	14.64	3.32	0.6	29	5.3
Slovak Rep.	15.41	3.32	10.6	9	1.89	13.51	3.07	11.4	19	3.47
Bulgaria	10.09	2.17	7.3	11	2.31	9.40	2.13	7.8	11	2.01
Croatia	10.97	2.36	10.7	5	1.05	0.89	0.20	0.8	5	0.91
Lithuania	8.58	1.85	10.1	4	0.84	8.60	1.95	11.3	8	1.46
Latvia	5.73	1.23	11.5	4	0.84	5.71	1.30	11.2	6	1.1
Austria	4.94	1.06	1.1	5	1.05	5.24	1.19	1.2	14	2.56
Estonia	4.43	0.95	11.3	4	0.84	4.21	0.96	10.9	7	1.28
Slovenia	3.97	0.85	5.9	4	0.84	5.04	1.14	7.6	6	1.1
Finland	3.79	0.82	1.5	7	1.47	3.79	0.86	1.5	10	1.83
Sweden	3.72	0.80	0.8	14	2.94	3.63	0.83	0.8	11	2.01
Ireland	3.52	0.76	1.4	6	1.26	3.29	0.75	1.3	5	0.91
Belgium	2.95	0.63	0.5	11	2.31	2.58	0.59	0.5	13	2.38
Netherlands	1.95	0.42	0.2	8	1.68	2.30	0.52	0.3	7	1.28
Denmark	1.55	0.33	0.5	5	1.05	1.22	0.28	0.4	4	0.73
Cyprus	0.96	0.21	3.3	5	1.05	0.80	0.18	2.7	5	0.91
Malta	0.83	0.18	5.5	6	1.26	0.93	0.21	7.7	5	0.91
Luxembourg	0.14	0.03	0.2	4	0.84	0.15	0.03	0.3	3	0.55
Total	464.32	100		477	100	440.42	100		547	100
Average			4.9					4.9		

Table 2. Descriptive statistics of Net payments / Initial allocation

This table shows country level data for the two different programme periods of EU fund allocations. For each wave, the table shows the number of observations and the main descriptive statistics: mean, standard deviation, and percentiles 10, 25, 50, 75, and 90. The test for equality of means is also displayed showing difference of means, standard deviation, and significance.

	Net payments / Initial allocation	
	2014-20	2007-13
Obs.	477	547
Mean	0.5472	0.9641
Std. Dev.	0.1509	0.0776
Perc. 10%	0.3663	0.8903
Perc. 25%	0.4512	0.9596
Perc. 50%	0.5376	0.9998
Perc. 75%	0.6357	1.0000
Perc. 90%	0.7510	1.0000
	Diff.	0.4169
t-test	Std. Err.	0.0074
	p-value	0.0000

Table 3. Average of Net payments / Initial allocation by country

This table shows country level data for the two different programme periods of EU fund allocations. For each wave, the table shows the average of Net payments / Initial allocation.

	Net payments / Initial allocation	
	2014-20	2007-13
Finland	0.79	0.99
Ireland	0.77	1.00
Austria	0.70	0.99
Luxembourg	0.71	1.00
Estonia	0.65	1.00
Greece	0.64	0.98
Sweden	0.63	0.98
Portugal	0.63	1.00
Lithuania	0.63	1.00
Hungary	0.61	0.99
France	0.61	0.98
Latvia	0.60	1.00
Poland	0.59	1.00
Czech Republic	0.58	0.96
Slovenia	0.58	1.00
Cyprus	0.57	1.00
Germany	0.55	0.98
United Kingdom	0.54	0.96
Netherlands	0.53	0.99
Denmark	0.52	0.98
Belgium	0.52	0.99
Bulgaria	0.50	0.95
Romania	0.50	0.88
Slovak Republic	0.47	0.96
Malta	0.47	1.00
Croatia	0.46	0.88
Italy	0.46	0.95
Spain	0.46	0.98

Table 4. Net payments / Initial allocation and other government efficiency measures

This table shows country level data for the two different programme periods of EU fund allocations. For each wave, the table shows correlations, robust OLS regressions, robust standard errors, and number of observations. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	2014-20				2007-13			
	Corr	Reg	SD	Obs	Corr	Reg	SD	Obs
Government Effectiveness	0.187 ^a	0.0569 ^a	[0.014]	477	0.1031 ^b	0.0152 ^b	[0.006]	547
Ln No. of procedures to start a business	-0.1526 ^a	-0.0757 ^a	[0.022]	477	-0.0566	-0.0112 ^c	[0.007]	542
Ln No. of days to start a business	0.0310	0.0073	[0.001]	477	-0.0319	-0.0033	[0.004]	542
Ease of doing business	0.0881 ^c	0.0035 ^c	[0.002]	477	0.0432	0.0006	[0.001]	547
Starting a business	0.1098 ^b	0.0040 ^b	[0.002]	477	0.0792 ^c	0.0011 ^c	[0.001]	547
Dealing with construction permits	0.1819 ^a	0.0046 ^a	[0.001]	477	0.1560 ^b	0.0012 ^a	[0.000]	547
Paying taxes	0.2102 ^a	0.0045 ^a	[0.001]	477	0.1177 ^a	0.0009 ^a	[0.000]	547
Enforcing contracts	0.1106 ^b	0.0020 ^b	[0.001]	477	0.0025	0.0000	[0.000]	547

Table 5. Correlation and univariate regressions between Net payments / Initial allocation and explanatory variables

This table shows country level data for the two different programme periods of EU fund allocations. For each wave, the table shows correlations, robust OLS regressions, robust standard errors, and number of observations. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	2014-20				2007-13			
	Corr	Reg	SD	Obs	Corr	Reg	SD	Obs
Allocation/GDP	0.0070	0.0004	[0.003]	477	-0.0635	-0.0012	[0.001]	547
Ln (GDP per capita)	0.0369	0.0207	[0.026]	477	0.1145 ^a	0.0286 ^a	[0.011]	547
Government net lending/borrowing	0.0852 ^c	0.0054 ^c	[0.003]	477	-0.0012	-0.0000	[0.001]	547
Voice and accountability								
Voice and Accountability	0.1082 ^b	0.0578 ^b	[0.024]	477	0.1332 ^a	0.0360 ^a	[0.011]	547
Judicial independence	0.1631 ^a	0.0244 ^a	[0.007]	477	0.1462 ^a	0.0100 ^a	[0.003]	547
Strength of auditing and reporting standards	0.1586 ^a	0.0333 ^a	[0.010]	477	0.1190 ^a	0.0167 ^a	[0.006]	547
Democracy index	-0.0435	-0.0117	[0.012]	471	0.1018 ^b	0.0170 ^b	[0.007]	542
Freedom of the press	0.1579 ^a	0.0394 ^a	[0.011]	477	0.0334	0.0054	[0.007]	547
Law and order								
Rule of Law	0.1874 ^a	0.0497 ^a	[0.012]	477	0.1127 ^a	0.0160 ^a	[0.006]	547
Property rights	0.1686 ^a	0.0309 ^a	[0.008]	477	0.1465 ^a	0.0145 ^a	[0.004]	547
Ethical behaviour of firms	0.2144 ^a	0.0360 ^a	[0.008]	477	0.1223 ^a	0.0088 ^a	[0.003]	547
Protection of minority shareholders' interests	0.208 ^a	0.0433 ^a	[0.009]	477	0.1235 ^a	0.0163 ^a	[0.006]	547
Creditors' rights	0.1184 ^a	0.0082 ^a	[0.003]	477	-0.0344	-0.0013	[0.002]	542
Corruption								
Control of Corruption	0.1786 ^b	0.0384 ^a	[0.010]	477	0.1302 ^a	0.0135 ^a	[0.004]	547
Transparency of government policymaking	0.1808 ^b	0.0302 ^a	[0.008]	477	0.1144 ^a	0.0123 ^a	[0.005]	547
Corruption perceptions index	0.1648 ^b	0.0021 ^a	[0.001]	477	0.1158 ^a	0.0006 ^a	[0.000]	547
Impartiality in decisions of government officials	0.2057 ^b	0.0286 ^a	[0.006]	477	0.1408 ^a	0.0126 ^a	[0.004]	547
Absence of irregular payments and bribes	0.2027 ^b	0.0409 ^a	[0.009]	477	0.1481 ^a	0.0131 ^a	[0.004]	547
Public trust in politicians	0.2113 ^b	0.0253 ^a	[0.005]	477	0.1269 ^a	0.0099 ^a	[0.003]	547
Education and human capital								
Educational attainment level	0.2113 ^b	0.0031 ^a	[0.001]	477	-0.0506	-0.0003	[0.000]	547
Early leavers from education and training	-0.2366 ^c	-0.0090 ^a	[0.002]	477	0.0208	0.0003	[0.001]	547
NEET	-0.2537 ^c	-0.0080 ^a	[0.001]	477	-0.0342	-0.0005	[0.001]	547
Secondary education enrolment	0.0846 ^a	0.0008 ^c	[0.000]	477	0.1168 ^a	0.0010 ^a	[0.000]	547
Quality of the education system	0.1706 ^b	0.0340 ^a	[0.009]	477	0.0958 ^b	0.0092 ^b	[0.004]	547
Years of education	0.18 ^b	0.0228 ^a	[0.006]	477	0.0331	0.0021	[0.003]	547
Availability of latest technologies	0.1586 ^b	0.0449 ^a	[0.013]	477	0.0804 ^c	0.0095 ^c	[0.005]	547

Firm-level technology absorption	0.1811 ^b	0.0530 ^a	[0.013]	477	0.0646	0.0079	[0.005]	547
Individuals using Internet	0.1806 ^b	0.0025 ^a	[0.001]	477	0.0440	0.0003	[0.000]	547
Public sector management								
Weberian public administration	0.0075 ^a	0.0023	[0.014]	473	0.1455 ^a	0.0313 ^a	[0.009]	547
Professional & non-political public administration	0.1287 ^b	0.0264 ^a	[0.009]	473	0.1008 ^b	0.0128 ^b	[0.005]	547
Hired for skills and merits	0.1882 ^b	0.0269 ^a	[0.006]	473	0.0416	0.0040	[0.004]	547
Closed public administration	-0.1335 ^b	-0.0251 ^a	[0.009]	473	0.1130 ^a	0.0136 ^a	[0.005]	547
Attitudes and decision making by public officials								
Public sector employees strive to be efficient	0.1778 ^b	0.0361 ^a	[0.009]	473	0.0697	0.0063	[0.004]	547
Public sector employees strive to implement policies decided by top politicians	0.1439 ^b	0.0419 ^a	[0.013]	473	0.0747 ^c	0.0106 ^c	[0.006]	547
Public sector employees strive to help citizens	-0.0524 ^a	-0.0194	[0.017]	473	0.0462	0.0059	[0.005]	547
Public sector employees strive to follow rules	0.1955 ^b	0.0436 ^a	[0.010]	473	0.0445	0.0048	[0.005]	547
Public sector employees strive to fulfil the ideology of the parties in government	-0.0672 ^a	-0.0157	[0.011]	473	-0.0288	-0.0047	[0.007]	544
Impartiality of public sector employees	0.183 ^b	0.0268 ^a	[0.007]	473	0.0835 ^c	0.0076 ^c	[0.004]	544
Public sector officials act impartially when deciding to implement a policy in a case	0.1472 ^b	0.0288 ^a	[0.009]	473	0.1545 ^a	0.0214 ^a	[0.006]	547
Private sector management								
Flexibility of wage determination	0.0771 ^a	0.0142 ^c	[0.008]	477	-0.0483	-0.0037	[0.003]	547
Quality of management schools	-0.0398 ^a	-0.0087	[0.010]	477	0.1123 ^a	0.0115 ^a	[0.004]	547
Cooperation in labour-employer relations	0.1675 ^b	0.0418 ^a	[0.011]	477	0.0475	0.0054	[0.005]	547
Capacity for innovation	0.0884 ^a	0.0200 ^c	[0.010]	477	0.0823 ^c	0.0069 ^c	[0.004]	547
Will to delegate authority	0.2098 ^b	0.0404 ^a	[0.009]	477	0.0659	0.0071	[0.005]	547

Table 6. Voice and accountability

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation				
Allocation/GDP	0.0024 [0.002]	0.0038 ^b [0.002]	0.0024 [0.002]	0.0032 ^c [0.002]	0.0021 [0.002]
Ln (GDP per capita)	-0.0161 [0.024]	-0.0182 [0.024]	0.0045 [0.023]	0.0410 ^c [0.022]	0.0161 [0.022]
Government net lending/borrowing	0.0013 [0.001]	0.0012 [0.001]	0.0010 [0.001]	0.0019 [0.001]	0.0009 [0.002]
Voice and Accountability	0.0694 ^a [0.017]				
Judicial independence		0.0246 ^a [0.005]			
Strength of auditing and reporting standards			0.0306 ^a [0.007]		
Democracy index				-0.0042 [0.010]	
Freedom of the press					0.0217 ^a [0.008]
Constant	0.6372 ^b [0.254]	0.6219 ^b [0.249]	0.3368 [0.239]	0.1534 [0.242]	0.3016 [0.232]
Fund dummies	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	Yes
Observations	1,024	1,024	1,024	1,013	1,024
R-squared	0.784	0.787	0.786	0.782	0.783

Table 7. Law and order

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation				
Allocation/GDP	0.0027 [0.002]	0.0038 ^b [0.002]	0.0051 ^a [0.002]	0.0026 [0.002]	0.0040 ^b [0.002]
Ln (GDP per capita)	-0.0182 [0.024]	-0.0255 [0.024]	-0.0120 [0.023]	-0.0133 [0.023]	0.0631 ^a [0.022]
Government net lending/borrowing	0.0008 [0.001]	0.0014 [0.001]	-0.0012 [0.002]	0.0004 [0.001]	0.0005 [0.002]
Rule of Law	0.0449 ^a [0.008]				
Property rights	0.0367 ^a [0.007]				
Ethical behaviour of firms	0.0322 ^a [0.005]				
Protection of minority shareholders' interests	0.0410 ^a [0.007]				
Creditors' rights	0.0070 ^a [0.002]				
Constant	0.6892 ^a [0.253]	0.6320 ^b [0.247]	0.5264 ^b [0.240]	0.5021 ^b [0.244]	-0.1614 [0.244]
Fund dummies	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	Yes
Observations	1,024	1,024	1,024	1,024	1,019
R-squared	0.788	0.789	0.790	0.790	0.784

Table 8. Corruption

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation					
Allocation/GDP	0.0033 ^c [0.002]	0.0018 [0.002]	0.0034 ^c [0.002]	0.0031 ^c [0.002]	0.0038 ^b [0.002]	0.0027 [0.002]
Ln (GDP per capita)	-0.0123 [0.023]	-0.0135 [0.024]	0.0040 [0.022]	-0.0146 [0.023]	-0.0127 [0.022]	-0.0219 [0.024]
Government net lending/borrowing	-0.0005 [0.002]	0.0003 [0.002]	0.0001 [0.002]	-0.0010 [0.002]	0.0002 [0.002]	-0.0022 [0.002]
Control of Corruption	0.0355 ^a [0.006]					
Transparency of government policymaking		0.0297 ^a [0.006]				
Corruption perceptions index			0.0015 ^a [0.000]			
Impartiality in decisions of government officials				0.0303 ^a [0.005]		
Absence of irregular payments and bribes					0.0340 ^a [0.006]	
Public trust in politicians						0.0286 ^a [0.004]
Constant	0.6338 ^b [0.247]	0.5477 ^b [0.248]	0.4017 ^c [0.239]	0.5853 ^b [0.247]	0.5086 ^b [0.236]	0.6677 ^a [0.250]
Fund dummies	Yes	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,024	1,024	1,024	1,024	1,024	1,024
R-squared	0.787	0.788	0.785	0.790	0.789	0.791

Table 9. Education and human capital

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation								
Allocation/GDP	0.0025 [0.002]	0.0013 [0.002]	0.0020 [0.002]	0.0039 ^b [0.002]	0.0031 ^c [0.002]	0.0020 [0.002]	0.0030 [0.002]	0.0025 [0.002]	0.0031 ^c [0.002]
Ln (GDP per capita)	0.0407 ^c [0.022]	0.0257 [0.022]	0.0112 [0.022]	0.0301 [0.022]	-0.0012 [0.024]	0.0188 [0.022]	-0.0003 [0.024]	-0.0018 [0.024]	0.0153 [0.022]
Government net lending/borrowing	0.0009 [0.001]	0.0021 [0.001]	0.0008 [0.001]	0.0027 ^b [0.001]	0.0006 [0.001]	0.0010 [0.001]	0.0016 [0.001]	0.0008 [0.001]	0.0013 [0.001]
Educational attainment level	0.0012 ^a [0.000]								
Early leavers from education and training		-0.0032 ^a [0.001]							
NEET			-0.0039 ^a [0.001]						
Secondary education enrolment				0.0010 ^a [0.000]					
Quality of the education system					0.0264 ^a [0.005]				
Years of education						0.0119 ^a [0.003]			
Availability of latest technologies							0.0283 ^a [0.007]		
Firm-level technology absorption								0.0310 ^a [0.007]	
Individuals using Internet									0.0012 ^a [0.000]
Constant	0.0314 [0.236]	0.3220 [0.237]	0.4807 ^b [0.244]	0.1161 [0.238]	0.4424 ^c [0.250]	0.2276 [0.236]	0.3926 [0.248]	0.4073 [0.249]	0.2928 [0.237]
Fund dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024
R-squared	0.784	0.785	0.787	0.783	0.786	0.784	0.784	0.785	0.784

Table 10. Public sector management

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation			
Allocation/GDP	0.0027	0.0029	0.0026	0.0009
	[0.002]	[0.002]	[0.002]	[0.002]
Ln (GDP per capita)	0.0234	-0.0033	0.0051	0.0259
	[0.023]	[0.023]	[0.023]	[0.023]
Government net lending/borrowing	0.0017	0.0009	0.0003	0.0012
	[0.001]	[0.001]	[0.002]	[0.001]
Weberian public administration	0.0056			
	[0.011]			
Professional & non-political public administration		0.0268 ^a		
		[0.006]		
Hired for skills and merits			0.0200 ^a	
			[0.004]	
Closed public administration				-0.0176 ^a
				[0.006]
Constant	0.2740	0.4584 ^c	0.3905	0.3623
	[0.246]	[0.247]	[0.250]	[0.252]
Fund dummies	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes
Observations	1,020	1,020	1,020	1,020
R-squared	0.782	0.786	0.787	0.784

Table 11. Attitudes and decision-making by public officials

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation						
Allocation/GDP	0.0039 ^b [0.002]	0.0031 ^c [0.002]	0.0027 [0.002]	0.0022 [0.002]	0.0027 [0.002]	0.0026 [0.002]	0.0033 ^c [0.002]
Ln (GDP per capita)	0.0140 [0.023]	0.0169 [0.024]	0.0279 [0.023]	0.0010 [0.024]	0.0245 [0.024]	-0.0132 [0.025]	-0.0113 [0.023]
Government net lending/borrowing	0.0015 [0.001]	0.0021 [0.001]	0.0018 [0.001]	0.0012 [0.001]	0.0017 [0.001]	-0.0005 [0.002]	0.0015 [0.001]
Public sector employees strive to be efficient	0.0228 ^a [0.004]						
Public sector employees strive to implement policies decided by top politicians		0.0312 ^a [0.006]					
Public sector employees strive to help citizens			0.0033 [0.006]				
Public sector employees strive to follow rules				0.0243 ^a [0.005]			
Public sector employees strive to fulfil the ideology of the parties in government					-0.0060 [0.008]		
Impartiality of public sector employees						0.0255 ^a [0.004]	
Public sector officials act impartially when deciding to implement a policy in a case							0.0342 ^a [0.007]
Constant	0.3012 [0.252]	0.2163 [0.247]	0.2425 [0.243]	0.4016 [0.250]	0.3088 [0.262]	0.5581 ^b [0.269]	0.4887 ^b [0.249]
Fund dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,020	1,020	1,020	1,020	1,017	1,017	1,020
R-squared	0.787	0.786	0.782	0.786	0.782	0.788	0.788

Table 12. Private sector management

This table shows country level data for the two programme periods of EU fund allocations. The table shows robust OLS regressions. Robust standard errors in brackets under each coefficient. Significance levels: ^a if $p < 0.01$; ^b if $p < 0.05$; and ^c if $p < 0.10$.

	Net payments / Initial allocation				
Allocation/GDP	0.0030 ^c [0.002]	0.0028 [0.002]	0.0017 [0.002]	0.0041 ^b [0.002]	0.0027 [0.002]
Ln (GDP per capita)	0.0522 ^b [0.022]	0.0456 ^b [0.020]	0.0045 [0.024]	0.0214 [0.023]	-0.0064 [0.023]
Government net lending/borrowing	0.0025 ^c [0.001]	0.0021 [0.001]	0.0002 [0.002]	0.0017 [0.001]	-0.0012 [0.002]
Flexibility of wage determination	0.0110 ^b [0.005]				
Quality of management schools		-0.0068 [0.007]			
Cooperation in labour-employer relations			0.0252 ^a [0.006]		
Capacity for innovation				0.0121 ^b [0.005]	
Will to delegate authority					0.0342 ^a [0.006]
Constant	-0.0509 [0.244]	0.1033 [0.226]	0.3759 [0.247]	0.2623 [0.241]	0.4638 ^c [0.243]
Fund dummies	Yes	Yes	Yes	Yes	Yes
Programme period dummy	Yes	Yes	Yes	Yes	yes
Observations	1,024	1,024	1,024	1,024	1,024
R-squared	0.782	0.781	0.784	0.782	0.788

Table 13. Tobit regressions

This table shows country level data for the two different programme periods of EU fund allocations. The table shows tobit regressions with upper level censored at 1. Standard errors and the number of observations are shown for each regression. We run regressions with the same controls (Allocation/GDP, Ln (GDP per capita), and Government net lending/borrowing), which are not displayed in the table. The first six columns show the results of pooled regressions of both programme periods together, while the last six columns show results separating programme waves. The last column of the table presents the p-values of the test of differences in coefficients across the two waves. Significance levels: ^a if p<0.01; ^b if p<0.05; and ^c if p<0.10.

	First and second waves together						2014-20 wave			2007-13wave			Test of difference in coefficients (p-value)
	Wave and fund dummies included			Wave dummy included			Fund dummies included						
	Reg	SD	Obs	Reg	SD	Obs	Reg	SD	Obs	Reg	SD	Obs	
Voice and accountability													
Voice and Accountability	0.0781 ^a	[0.024]	1024	0.0620 ^b	[0.025]	1024	0.1622 ^a	[0.039]	477	0.0336	[0.027]	547	0.0047
Judicial independence	0.0307 ^a	[0.006]	1024	0.0263 ^a	[0.006]	1024	0.0590 ^a	[0.010]	477	0.0162 ^a	[0.006]	547	0.0012
Strength of auditing and reporting standards	0.0359 ^a	[0.008]	1024	0.0315 ^a	[0.008]	1024	0.0494 ^a	[0.011]	477	0.0187 ^c	[0.010]	547	0.0412
Democracy index	-0.0011	[0.009]	1013	0.0009	[0.009]	1013	-0.0204 ^c	[0.012]	477	0.0202 ^c	[0.012]	547	0.0584
Freedom of the press	0.0292 ^a	[0.010]	1024	0.0280 ^a	[0.010]	1024	0.0588 ^a	[0.014]	477	0.0078	[0.013]	547	0.0054
Law and order													
Rule of Law	0.0537 ^a	[0.010]	1024	0.0460 ^a	[0.011]	1024	0.0867 ^a	[0.015]	477	0.0180	[0.013]	547	0.0001
Property rights	0.0445 ^a	[0.008]	1024	0.0385 ^a	[0.008]	1024	0.0677 ^a	[0.011]	477	0.0264 ^a	[0.009]	547	0.0077
Ethical behaviour of firms	0.0384 ^a	[0.006]	1024	0.0321 ^a	[0.006]	1024	0.0677 ^a	[0.010]	477	0.0171 ^b	[0.007]	547	0.0001
Protection of minority shareholders' interests	0.0487 ^a	[0.008]	1024	0.0432 ^a	[0.008]	1024	0.0678 ^a	[0.011]	477	0.0253 ^b	[0.010]	547	0.0057
Creditors' rights	0.0068 ^a	[0.002]	1019	0.0055 ^b	[0.002]	1019	0.0122 ^a	[0.003]	477	-0.0009	[0.003]	542	0.0026
Corruption													
Control of Corruption	0.0445 ^a	[0.008]	1024	0.0394 ^a	[0.009]	1024	0.0774 ^a	[0.013]	477	0.0251 ^a	[0.009]	547	0.0011
Transparency of government policymaking	0.0332 ^a	[0.007]	1024	0.0278 ^a	[0.007]	1024	0.0537 ^a	[0.009]	477	0.0165 ^b	[0.008]	547	0.0021
Corruption perceptions index	0.0019 ^a	[0.000]	1024	0.0016 ^a	[0.000]	1024	0.0045 ^a	[0.001]	477	0.0010 ^b	[0.000]	547	0.0001
Impartiality in decisions of government officials	0.0348 ^a	[0.006]	1024	0.0311 ^a	[0.006]	1024	0.0484 ^a	[0.008]	477	0.0238 ^a	[0.008]	547	0.0210
Absence of irregular payments and bribes	0.0443 ^a	[0.007]	1024	0.0384 ^a	[0.007]	1024	0.0859 ^a	[0.012]	477	0.0261 ^a	[0.008]	547	0.0001

Public trust in politicians	0.0328 ^a	[0.005]	1024	0.0286 ^a	[0.005]	1024	0.0450 ^a	[0.007]	477	0.0201 ^a	[0.007]	547	0.0134
Education and human capital													
Educational attainment level	0.0010 ^b	[0.000]	1024	0.0007 ^c	[0.000]	1024	0.0037 ^a	[0.001]	477	-0.0010 ^b	[0.000]	547	0.0000
Early leavers from education and training	-0.0032 ^a	[0.001]	1024	-0.0022 ^b	[0.001]	1024	-0.0102 ^a	[0.002]	477	0.0015	[0.001]	547	0.0000
NEET	-0.0043 ^a	[0.001]	1024	-0.0035 ^a	[0.001]	1024	-0.0088 ^a	[0.001]	477	0.0004	[0.001]	547	0.0000
Secondary education enrolment	0.0013 ^a	[0.000]	1024	0.0012 ^a	[0.000]	1024	0.0022 ^a	[0.000]	477	0.0030 ^a	[0.001]	547	0.4519
Quality of the education system	0.0294 ^a	[0.007]	1024	0.0244 ^a	[0.008]	1024	0.0647 ^a	[0.012]	477	0.0077	[0.008]	547	0.0003
Years of education	0.0119 ^a	[0.004]	1024	0.0105 ^b	[0.004]	1024	0.0274 ^a	[0.006]	477	-0.0048	[0.005]	547	0.0000
Availability of latest technologies	0.0348 ^a	[0.010]	1024	0.0288 ^a	[0.010]	1024	0.0831 ^a	[0.017]	477	0.0040	[0.010]	547	0.0001
Firm-level technology absorption	0.0348 ^a	[0.010]	1024	0.0282 ^a	[0.010]	1024	0.0969 ^a	[0.017]	477	-0.0020	[0.010]	547	0.0000
Individuals using Internet	0.0010 ^b	[0.000]	1024	0.0007 ^c	[0.000]	1024	0.0036 ^a	[0.001]	477	-0.0007	[0.000]	547	0.0000
Public sector management													
Weberian public administration	0.0136	[0.014]	1020	0.0148	[0.015]	1020	-0.0089	[0.019]	473	0.1040 ^a	[0.023]	547	0.0002
Professional & non-political public administration	0.0290 ^a	[0.008]	1020	0.0247 ^a	[0.008]	1020	0.0490 ^a	[0.011]	473	0.0193 ^c	[0.011]	547	0.0308
Hired for skills and merits	0.0210 ^a	[0.005]	1020	0.0190 ^a	[0.005]	1020	0.0402 ^a	[0.007]	473	0.0066	[0.008]	547	0.0003
Closed public administration	-0.0106	[0.007]	1020	-0.0051	[0.007]	1020	-0.0370 ^a	[0.009]	473	0.0419 ^a	[0.010]	547	0.0000
Attitudes and decision-making by public officials													
Public sector employees strive to be efficient	0.0243 ^a	[0.006]	1020	0.0196 ^a	[0.006]	1020	0.0543 ^a	[0.010]	473	0.0088	[0.007]	547	0.0001
Public sector employees strive to implement policies decided by top politicians	0.0327 ^a	[0.009]	1020	0.0236 ^a	[0.009]	1020	0.0609 ^a	[0.013]	473	0.0020	[0.011]	547	0.0002
Public sector employees strive to help citizens	0.0005	[0.009]	1020	-0.0038	[0.009]	1020	-0.0329 ^c	[0.018]	473	0.0011	[0.010]	547	0.1023
Public sector employees strive to follow rules	0.0258 ^a	[0.007]	1020	0.0226 ^a	[0.007]	1020	0.0521 ^a	[0.010]	473	-0.0043	[0.008]	547	0.0000
Public sector employees strive to fulfil the ideology of the parties in government	-0.0086	[0.009]	1017	-0.0114	[0.009]	1017	-0.0087	[0.012]	473	-0.0046	[0.013]	544	0.8140
Impartiality of public sector employees	0.0276 ^a	[0.006]	1017	0.0235 ^a	[0.006]	1017	0.0420 ^a	[0.008]	473	0.0075	[0.008]	544	0.0004
Public sector officials act impartially when deciding to implement a policy in a case	0.0409 ^a	[0.008]	1020	0.0372 ^a	[0.008]	1020	0.0503 ^a	[0.010]	473	0.0656 ^a	[0.014]	547	0.3935
Private sector management													
Flexibility of wage determination	0.0118 ^b	[0.006]	1024	0.0105 ^c	[0.006]	1024	0.0200 ^b	[0.009]	477	-0.0006	[0.007]	547	0.0939
Quality of management schools	-0.0053	[0.009]	1024	-0.0017	[0.009]	1024	-0.0223	[0.019]	477	0.0270 ^a	[0.010]	547	0.0088

Cooperation in labour-employer relations	0.0223 ^a	[0.008]	1024	0.0147 ^c	[0.009]	1024	0.0668 ^a	[0.013]	477	-0.0072	[0.009]	547	0.0000
Capacity for innovation	0.0086	[0.009]	1024	0.0069	[0.009]	1024	0.0455 ^b	[0.019]	477	-0.0054	[0.008]	547	0.0219
Will to delegate authority	0.0336 ^a	[0.007]	1024	0.0261 ^a	[0.008]	1024	0.0653 ^a	[0.010]	477	-0.0014	[0.009]	547	0.0000

8. FIGURES

Figure 1a. Percentage of planned amounts by country for the 2014-20 programme period

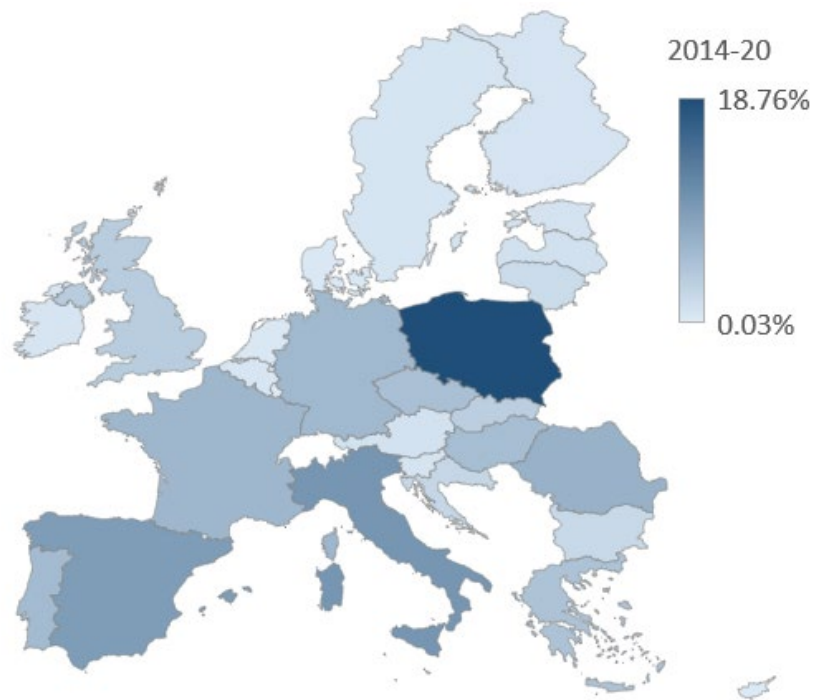


Figure 1b. Percentage of planned amounts by country for the 2007-13 programme period

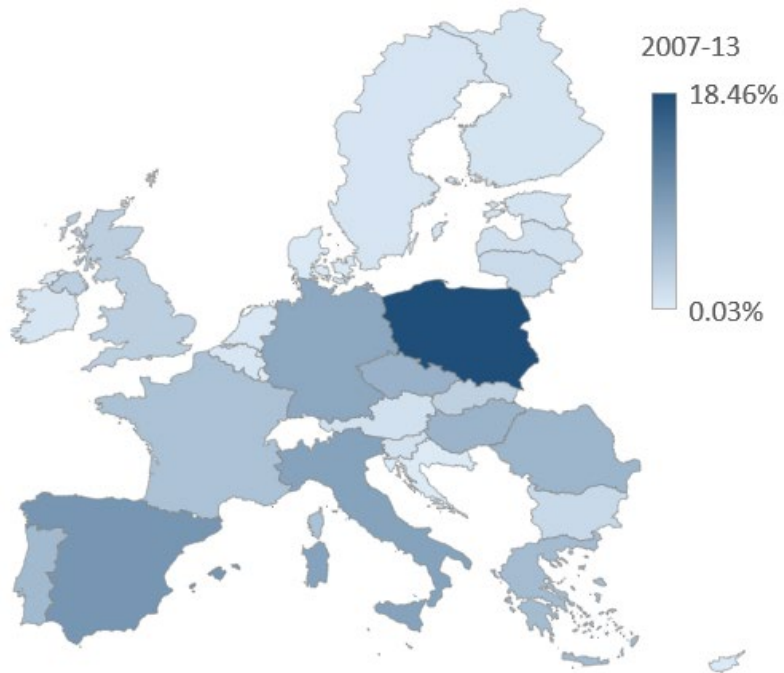


Figure 2a. Distribution of Net payments / Initial allocation for 2014-20 funds

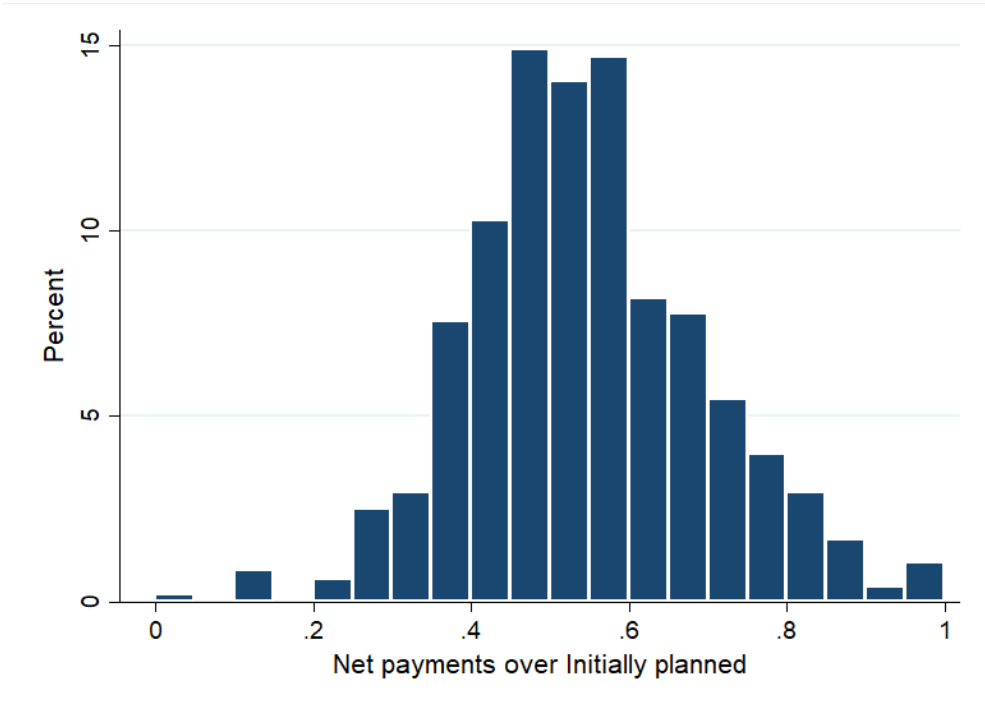


Figure 2b. Distribution of Net payments / Initial allocation for 2007-13 funds

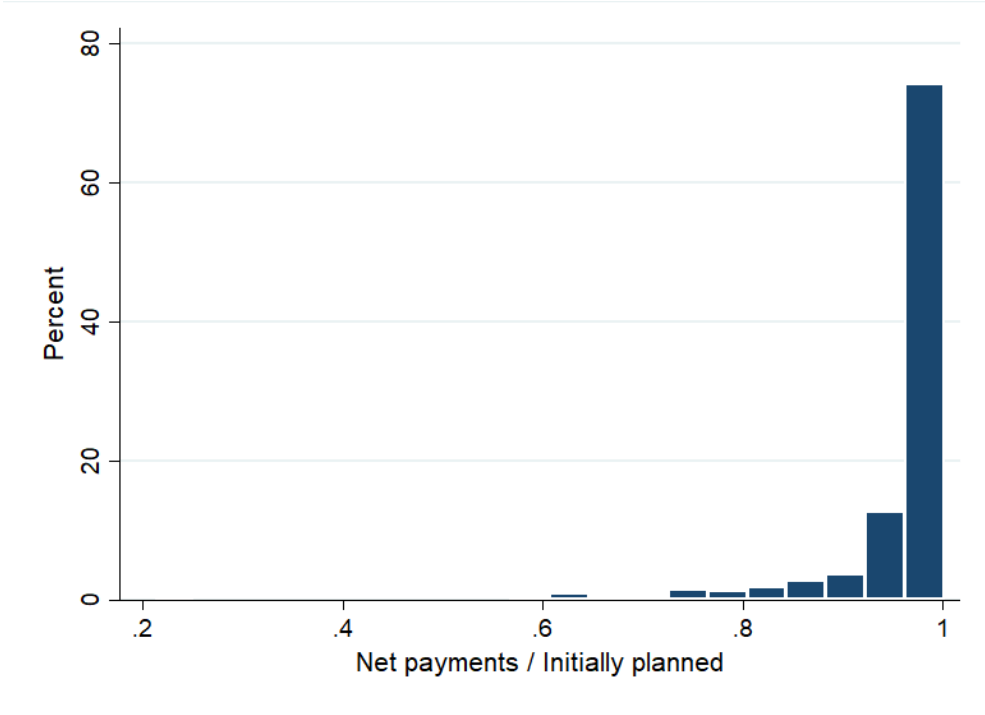


Figure 3a. Average of Net payments / Initial allocation for 2014-20 funds

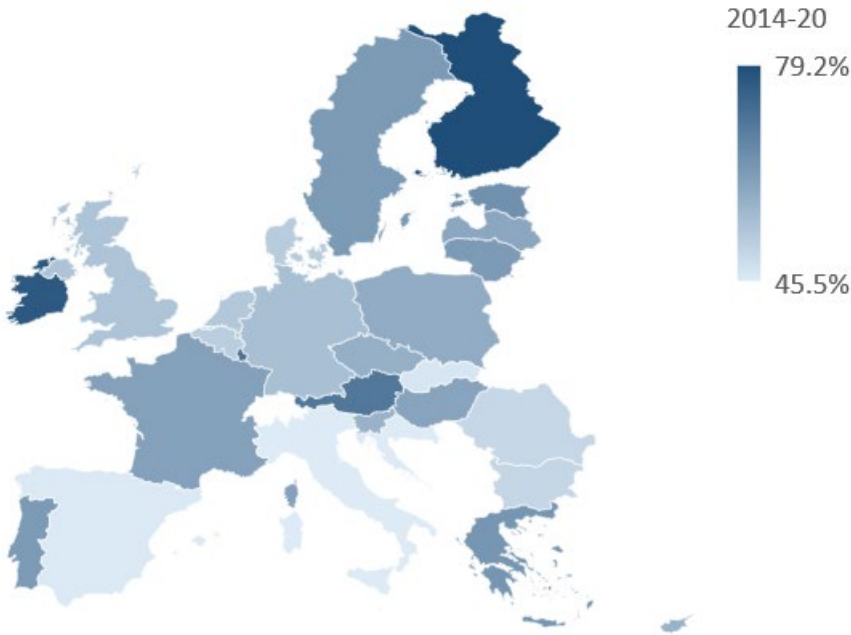


Figure 3b. Average of Net payments / Initial allocation for 2007-13 funds

