

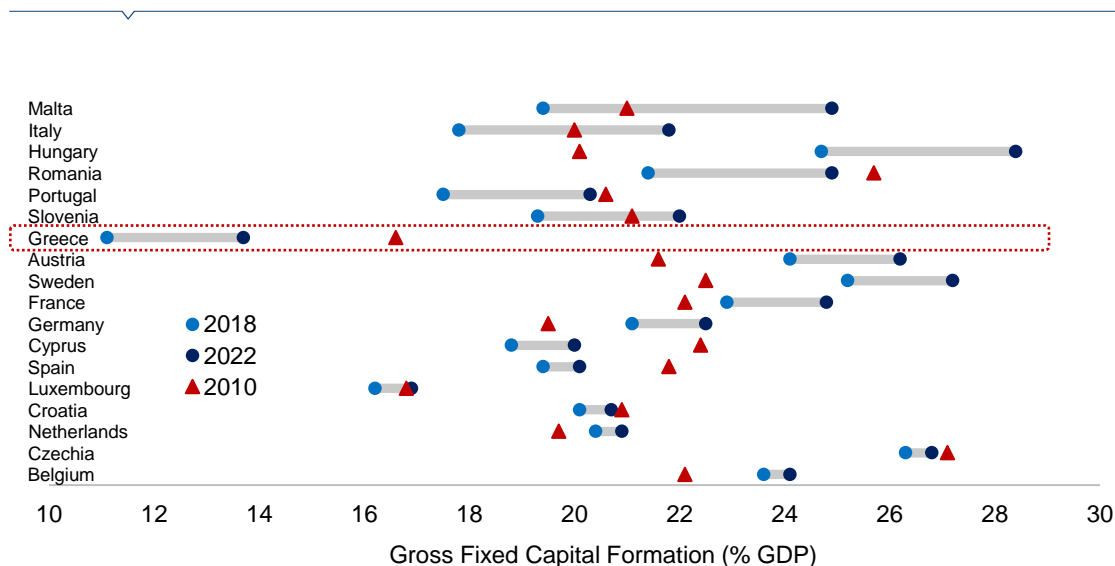
Reforms to stimulate business investment in Greece: Assessing the impact of judicial efficiency, governance quality and tax wedge reduction

1. Introduction

The long-lasting recession following the 2009 sovereign crisis in Greece left a harmful legacy, causing considerable impairments to capital stock. Disinvestment grew and fixed capital depreciation remained higher than fixed capital formation for a prolonged period, from 2010 to 2021, resulting in erosion of capital stock and the creation of an investment gap. At the same time, prolonged disinvestment posed obstacles to the uptake of new technologies, leading to productivity losses, as labour was combined with capital of lower quality. The investment gap defined as the "erosion" of the country's natural capital stock during the period when depreciation exceeded fresh investment was quite significant and measured close to €95 bn at current prices¹.

In the aftermath of the sovereign debt crisis, Greece adopted a sizeable fiscal consolidation plan, aiming to compress public expenditure and increase tax revenues to make its public debt sustainable in the medium term. However, the draconian fiscal consolidation, as well as the internal devaluation policy, pursued to restore competitiveness by compressing unit labour cost, resulted in a deep and prolonged recession². Apart from fiscal adjustment, the MoUs³-linked rescue plans required a series of structural reforms. To this end, Greece adopted a significant reform agenda aiming to address structural inefficiencies accumulated during the previous decades, enhance competitiveness and export orientation of Greek businesses and stimulate productivity and investment. A number of policies were adopted, delivering significant improvement in several areas.

Graph 1. Investment increased significantly since 2018 in terms of GDP but still lags behind its pre-crisis level and other EU countries



Source: Eurostat

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Specifically, Greece introduced a set of reforms⁴: (i) facilitating the entry of new firms (e.g., simplifying the provision of licensing for new start-ups), (ii) accelerating the opening-up of closed professions, abolishing the entry barriers in a broad set of professions, (iii) liberalising the energy market and privatising the State-owned energy enterprises, (iv) privatising parts of the transport sector and (v) privatising and/or utilising public real estate property.

The product and labour market reforms adopted, combined with the gradual return to fiscal discipline and the enhancement of debt sustainability, as well as the competitiveness gains recorded during the last few years, have led to a positive growth footprint from 2017 onwards. Although this output expansion was mainly driven by private consumption, the contribution of investment to overall GDP growth is gradually increasing, especially in the last two years. However, the share of investment to GDP remains well below its level before the outbreak of the sovereign debt crisis at the end of the previous decade. As depicted in Graph 1, despite the fact that Greece stands among the top-7 EU countries with the largest increase in investment as a share of GDP, between 2018-2022 (from 11.1% to 13.7%), this percentage remains the lowest in the EU and well below its pre-crisis levels (2010: 16.6%).

The improvement in public finances and debt sustainability is leading to the regaining of the investment grade status, a turning point for the Greek economy, not only because it repositions the country as a destination for long-term investment projects, but also because it creates particularly favourable liquidity conditions for the Greek State, banks, social security funds and, above all, for households and businesses.

Investment grade credit ratings may be a milestone but are not a panacea. It is important that, going forward, the promotion of reforms to address chronic structural obstacles and attract domestic and foreign investment is a priority. Further progress must be made in tackling bureaucracy, delays in the administration of justice, tax evasion (which remains sizeable), provision of additional basic infrastructure, as well as the existence of distortions in some goods and services markets. A critical element is, therefore, the efficacy of the public administration, which can be improved through systematic planning and investments both in physical and human capital.

Investment remains the key prerequisite for future sustainable economic growth. A more investment driven growth model compared to the past is expected to accelerate economic convergence with the European Union. Greece's GDP per capita lags behind EU members. As depicted in Graph 2a the degree of convergence with the European average, i.e., Greece's GDP per capita as a percentage of the EU average was in 2022 among the bottom two in the EU-27, above Bulgaria's. Despite the fact that GDP per capita increased by 15% in 2022 (based on Purchasing Power Parities (PPPs), rebounding to its 2008 level, i.e., the year the global financial crisis began, the convergence rate stood at 68%, whereas in 2002 Greece's GDP per capita was equal to 93.3% of the EU-27 average (Graph 2b).

This paper examines the potential impact of three specific areas of reforms, which are either in a process of implementation but subject to delay or in the phase of designing. These reforms consist of an improvement in judicial efficiency the quality of governance and the further reduction of the labour tax wedge for employers and employees (see definition in §2.3). The reason why we focus on these three areas is that they are major building blocks of the business environment of a country because they determine the main parameters considered by domestic or foreign investors before proceeding with the implementation of a new investment project (e.g., operational costs and in particular cost of labour, regulatory barriers and rules and the institutional framework). Therefore, the implementation of these three building blocks of reforms is expected not only to speed up domestic and foreign investment, with multiplying positive effects on the formation of new capital stock and the closing of the income gap with EU economies, but also to pave the way for sustainable growth over a long-term horizon.

Cross-country differences in investment and economic growth rates are driven by both economic and institutional factors. Economic theory has recognised human capital, physical capital, and technology (which measures how efficient the use of capital and labour inputs in production are) as the main drivers of per

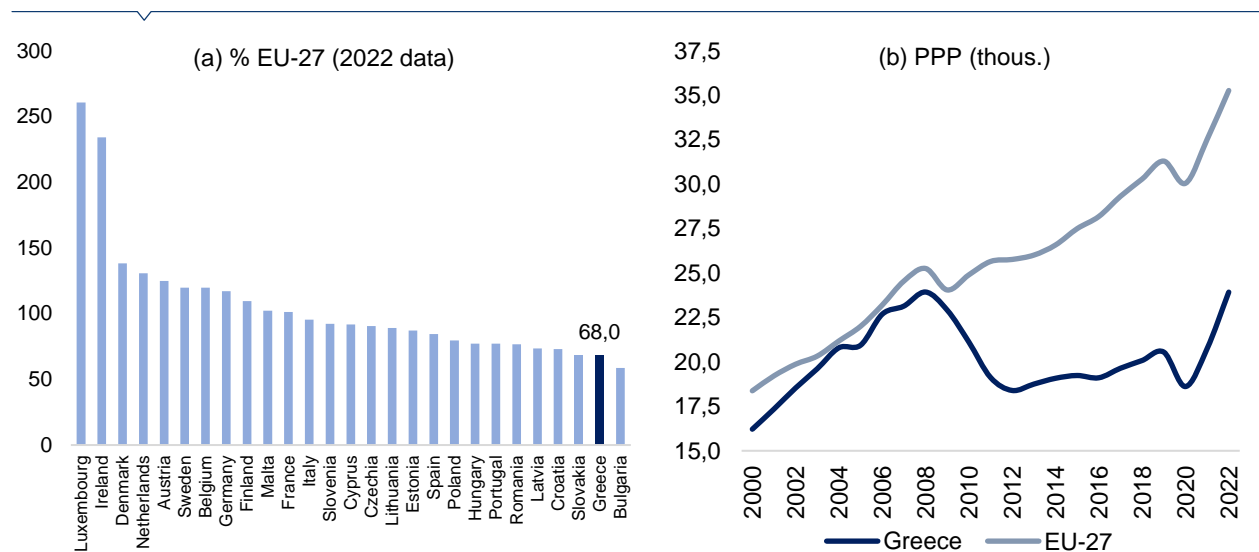
capita output. Thus, higher levels of human and physical capital and the adoption of technological advances lead to higher levels of economic development, through the acceleration of investment.

Efficient and quality institutions seem to play a crucial role in accelerating investment and, thus, determining the level of economic development in economies around the world (see, e.g., Hall and Jones, 1999; Acemoglu, Johnson and Robinson, 2001). The overwhelming significance of institutions for investment and, consequently, economic growth has been widely examined and recognised by the related academic literature (since the seminal papers by Coase, 1960, and Olson, 1982, to North, 1990, and Acemoglu and Robinson, 2008 and 2012) as well as by several international organisations (see, e.g., Bassanini et al., 2001, and Bodmer et al., 2004, for OECD, and Masuch et al., 2017 for ECB). The role of governance quality and judicial efficiency will be analysed comprehensively in the paper in hands.

Taxes on labour have also been criticised for their distortionary impact on labour markets (see, e.g., Fiorito and Padrini, 2001; Economides and Rizos, 2018; 2021). Social security contributions and personal income taxes create a wedge between the labour costs for employers and the actual payoff to employees. Higher labour cost reduces the pace of job creation or even demand for labour and the profitability of investment schemes, while high tax wedges discourage labour supply. Empirical studies (Elmeskov et al. (1998), Nickell and Layard (1999), Blanchard and Wolfers (2000), Daveri and Tabellini (2000), Fiorito and Padrini (2001), Nickell et al. (2001), Nickell (2003), de Haan et al. (2003), OECD (2006), Festa (2015)) consistently find that large tax wedges⁵ reduce countries' employment levels. In addition, a high tax wedge may weaken labour productivity by discouraging training and induce on one hand young and/or low skilled workers to work informally and on the other hand skilled workers to migrate abroad.

Consequently, the adoption of a business-friendly tax mix may have positive effects on investment in Greece and accelerate the attraction of fresh capital from abroad. Specifically, the reduction in the tax wedge on labour incentivises businesses to take ownership of new investment plans due to the reduced labour cost faced by firms. Also, a lower tax wedge incentivises qualified personnel to return from abroad – reversing the brain drain phenomenon, which is a harmful legacy of the Greek crisis, with positive effects on productivity and investment. Finally, the impact of reduced labour costs not only leads to job creation, the de-escalation of unemployment and an increase in the participation rate of women and young people, but may also confine undeclared work and accordingly, the shadow economy, which is another major pathogeny of the Greek economy.

Graph 2. Greek real GDP per capita evolution and comparison with the EU-27 (in PPPs)



Source: Eurostat

This study aims to enrich the public dialogue among policymakers and academics by providing some metrics on the combined effect of the above reform efforts on investment expenditure dynamics. This superstructure is built additively on a basis determined by the availability of the resources and the smooth implementation of the National Recovery and Resilience Plan (NRRP). Both the policy initiative of the three reforms under consideration and the NRRP contribution shape the total potential perimeter of the expected investments of the next five years in the country under a basic scenario. In this context we conducted an indicative sensitivity analysis and calculated the impact on investment under specific assumptions.

The rest of the *Insights* is structured as follows. [Section 2](#) presents a glossary of the three reforms under consideration, i.e., the improvement in judicial efficiency and governance quality and reduction tax wedge. It provides definitions and how our paper is related to the received literature. In [Section 3](#), we provide some stylized facts for the performance of Greece in these areas and compare the evolution of several indices of judicial efficiency and governance quality as well as the tax wedge with other EU and/or OECD countries. [Section 4](#) documents the investment-enhancing properties of these reforms using a cross-country analysis. In [Section 5](#), we investigate whether judicial efficiency, quality of governance and a reduced tax wedge can boost a specific type of investment, foreign direct investment (FDI). We also conduct a sensitivity analysis in [Section 6](#) – under some specific assumptions – in which we approximate a range of the rise in gross fixed capital formation coming from an additional inflow of FDI due to a reduction in tax wedge and an improvement in judicial efficiency and quality of governance. Eventually, we estimate the investment gap coverage, as a result of this exercise. Finally, [Section 7](#) provides some policy implications.

2. A glossary of the proposed investment-enhancing reforms

2.1 Conceptualising judicial efficiency

Judicial efficiency plays an important role in promoting economic growth and prosperity. The justice system is at the core of the formal institutional framework⁶. Thus, an efficient judicial system, marked by a rapid judicial decision-making process and an increasing rate of resolution of pending cases, can be growth-enhancing, facilitating and incentivising the domestic and external investment decisions and supporting the economies to achieve and sustain robust growth rates.

The growth-enhancing property of an efficient judicial system is documented on the back of the safeguarding of property rights and legal investor protection, the well-functioning of financial markets, the support to entrepreneurship and the upholding of the firm growth (Kapopoulos and Rizos, 2023). Efficient judicial systems foster economic growth in several ways. Firstly, a well-functioning judiciary is essential in enforcing contracts and protecting property rights. Investors are more willing to invest in an economy where their property rights are protected, and where they can resort to the law if these rights are violated. In such an environment, firms are more willing to invest, as they are confident that their investments will be safe. Secondly, efficient judiciary promotes competition by enforcing antitrust laws, thus limiting the power of monopolies. This enhances productivity and efficiency, which are crucial factors in driving economic growth. Thirdly, a functional judicial system contributes to the development of financial markets. By providing an effective mechanism for enforcing financial contracts, investors are more willing to participate in the financial markets. This encourages the development of new financial products and services, increasing the depth and liquidity of financial markets, which contributes substantially to economic growth.

Empirical studies have established a positive relationship between judicial efficiency and various aspects of economic development. For instance, several studies have identified a positive relationship between judicial efficiency and firms' size (e.g., Kumar et al., 2001; Beck et al., 2006; Laeven and Woodruff, 2007; Giacomelli and Menon, 2013), benefiting investment through the strengthening of scale economies. Moreover, judicial efficiency fosters FDI inflows (e.g., Benassy-Quere et al., 2007; Lorenzani and Lucidi, 2014; Comi et al., 2019; Tag, 2021). Furthermore, legal systems that protect creditors' rights are characterized by more developed banking systems and increased credit supply (e.g., Levine, 1998; La Porta et al., 1997; Chemin, 2009; Bae and Goyal, 2009). Kapopoulos and Rizos (2023) test whether operational inefficiencies of judicial

systems undermine directly economic growth using a new European-wide dataset over the period 2010–2018. They suggest that an inefficient judicial system leads to lower growth as it fails to safeguard the enforcement of private contracts and the security of property rights; consequently, operational inefficiencies pose obstacles to the domestic and external investment decisions, increase uncertainty and create productivity losses and, thus, hinder economic growth.

Measurement of judicial efficiency is not an easy task. Several methods have been proposed, relying either on time needed to settle a case or the number of cases completed or clearance rates (e.g., Dakolias, 1999, and Buscaglia and Ulen, 1997). There are several measures of judicial efficiency that are commonly used to evaluate the performance of a court system (see Box 1).

Box 1: Measures of judicial efficiency

The most commonly used measures of judicial efficiency are depicted in the table below. These measures can be used individually or in combination to assess the efficiency of a court system. However, it is important to note that no single measure can capture the full complexity of the judicial process or the factors that shape judicial efficiency.

Disposition time:	The amount of time it takes for a case to be resolved; from the time it is filed to the time a final decision is reached. A shorter time to disposition is generally seen as a sign of greater efficiency. It is one of the most used indicators of evaluating judicial efficiency. According to the EU Justice Scoreboard (2023), it measures the length of judicial proceedings (at first instance). It is equal to the total number of pending cases at the end of the reference period over the number of resolved cases during the same period, transforming the ratio to days by multiplying with 365.
Clearance rate:	The number of cases that are disposed of in a given period of time, usually a year. It is derived as the ratio of the number of resolved cases over the number of incoming cases within a year. A clearance rate higher than 100%, indicates that the courts resolve more disputes than they received. On the other hand, a clearance rate lower than 100% implies that the courts resolve fewer cases than they receive, increasing the accumulated unresolved cases for the next year. A high clearance rate indicates that the court is processing cases quickly and efficiently. Actually, it is a measure of courts' productivity, and it is an indirect measure of the time needed for a case to be resolved (at first instance).
Case backlog:	The number of cases that are pending before the court, waiting to be resolved. A high backlog can indicate that the court is not processing cases quickly enough.
Congestion rate:	This measure is defined as the caseload (which is the sum of the cases filed, those resolved and those still pending) divided by the number of resolved cases. A relatively high congestion rate means that it would be beneficial for the courts to postpone any reforms that aim to reduce the staff of courts.
Appeal rate:	This measures the percentage of cases that are appealed to a higher court. A high appeal rate can suggest that the lower court is making too many errors or that litigants are dissatisfied with the decisions.
Cost per case:	The amount of money spent on each case, including court personnel, facilities, and other expenses. A lower cost per case indicates that the court is using its resources efficiently.
Number of judges:	This measure has a direct impact on the question of how accessible the courts are to the society. Examining the ratio of judges per 100,000 people is one indirect way to evaluate the access to courts.

2.2 Governance quality as a catalyst for attracting investment

Moreover, apart from the efficiency of institutions per se, the quality of governance plays a crucial role in determining investment and economic growth. In general, governance refers to the effectiveness, transparency, and accountability of government choices and policies adopted, and procedures involved in

governing a country and reflects the quality of institutions characterising the economy (Rapanos, 2018). Usually, the role of government in affecting domestic economic activity depends on two pillars: the size of government and the quality of governance. Regarding the former, empirical research has shown that a large public sector is usually negatively associated with economic growth (see, e.g., Barro, 1991; Sala-i-Martin et al., 2004; Bergh and Karlsson, 2010) through the inefficient allocation of resources and the rent-seeking behavior against productive activities. On the other hand, the quality of governance refers to the degree of efficiency that characterizes the actions and policies pursued by the government related to the provision of public goods, the efficient tax revenue collection mechanism without an uneven distribution of the tax burden and the establishment of a business-friendly environment without strict regulations that raise impediments to the entry of new firms. The main advantage of a good governance is that it mitigates market failures, strengthening investors' confidence through the role of the government to safeguard the operation of markets, the protection of property rights and the enforcement of contracts, the effectiveness of government policies and the control of corruption.

The empirical literature on the effects of governance on economic growth is well-documented, suggesting a positive relationship between quality of governance and economic development (see, e.g., Barro, 1996; Kaufmann and Kraay, 2008; Vieira et al., 2012; Knutson, 2015). However, several studies provide ambiguous results regarding the effect of governance on growth, with the results varying across countries and time. This result mainly stems from the fact that the relationship is nonlinear (Kim et al., 2018), depending on various factors, such as the size of the government sector (Barro, 1990; Asimakopoulos and Karavias, 2016), the level of democracy (Barro, 1996), the level of infrastructure, globalization and financial development (Mamun et al., 2017).

The quality of governance is among the main drivers that determine the investment climate of a country. Investors seek stable, transparent, and efficient environments with solid legal frameworks and institutions that protect their property rights and safeguard businesses activity. Governance refers to the set of institutions, policies, and practices that influence the way a country is governed. It encompasses factors such as the rule of law, government effectiveness, regulatory quality, control of corruption, and political stability. Countries that are characterized by increased quality of governance are more likely to attract investment and, thus, stimulate economic growth, and enjoy the benefits of increased employment, productivity, and innovation.

Graph 3. Governance quality aspects



Sources: World Bank, World Governance Indicators

A set of indicators that is widely used to evaluate the quality of governance is that created by Kaufmann, D., Kraay, A., and Mastruzzi, M, (2011), and is known as worldwide governance indicators (WGI), published on an annual basis by the World Bank. According to Kaufmann et al., (2011), governance includes the traditions and institutions by which authority in a country is exercised, including, among others, “*the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them*”. Worldwide Governance Indicators capture six dimensions of governance, i.e., political stability, control of corruption, government effectiveness, voice and accountability, rule of law and regulatory quality (depicted in Graph 3).

All the aforementioned pillars contribute to the stimulation of investment. For example, a strong performance on rule of law ensures the protection of property rights and the efficient enforcement of private contracts, incentivising investors to undertake and implement their investment plans without the fear of expropriation. A high level of government effectiveness indicates a low level of bureaucracy and reduced regulations. Specifically, a well-functioning and effective government can reduce the operating costs of businesses, promote investment, support business activities and infrastructure development, boost human capital investment and lead to responsible fiscal management.

2.3 Rationalising tax wedge on labour

As previously mentioned, the quality of governance is reflected, among others, to a fair tax system and the establishment of a business-friendly environment that encourages the entry of new firms. Cross country data for selected European economies point to that direction, as depicted on Graph 4. In this case the effectiveness of tax policies is proxied by an indicator constructed by the Tax Foundation, the Tax Competitiveness Index (ITCI⁷), whereas the annual change in the number of private enterprises, indicates the growth of the business economy. A seven-year period average, from 2014 to 2020, is used for both variables.

The tax wedge, in particular for the average worker, is often used in the relevant literature (e.g., Elmeskov et al. (1998), Lehman et al. (2016)) as an indicative measure of labour income taxation. According to the OECD, it is defined as the difference between the total labour cost per employee and the net amount reimbursed to the employee. It consists of: (i) the personal income tax, (ii) the employee’s social security contributions (SSC), (iii) the employer’s SSC, and it is expressed as a percentage of total labour cost per employee⁸. Benefits paid by general government in cash, usually in respect of dependent children, reduce the tax wedge.

In theory, a deadweight loss occurs, expressed in terms of reduced social efficiency, with a tax wedge because a higher price of labour for producers, and a lower price received by suppliers of labour, reduces the quantity of the labour. The wedge prevents trades for which benefits exceed costs, especially when the economy is not at its natural rate of unemployment. So, the relationship between labour taxation and employment growth appears to be negative, according to the relevant empirical literature. Dolenc and Laporsek (2010) conducted such an empirical study for twenty-seven European Union (EU) Member States over 1999–2008 and calculated that one percentage point increase in the tax wedge, decreases employment growth in the EU27 by around 0.04 percentage points, *ceteris paribus*. The positive impact of the decreasing trend of the tax wedge on employment, was more prominent in Member States with high tax wedges. In addition, the results of a study conducted by the World Bank (2005), suggest that in selected eastern European countries, each percentage point difference in the tax wedge, leads to a decrease in employment growth by 0.5-0.8 percentage points. In addition, Nickell (2003) considers labour taxation as one of the parameters that influence unemployment, with the relationship being negative but its effect temporary.

A high tax wedge hampers employment demand, especially for low-skilled and low-wage workers. According to Lehman et al. (2016) employment of low paid workers is more elastic to wages; in addition, a more progressive tax system has more positive impact on employment. As far as labour supply is concerned, following a study conducted by Bocconi University (2011) “*it is more effective to impact total hours worked through tax policies*”. The same study suggests that targeted policies i.e., initiatives to specific groups such as married women, mothers, low-educated individuals etc. may actually have a more significant impact effect

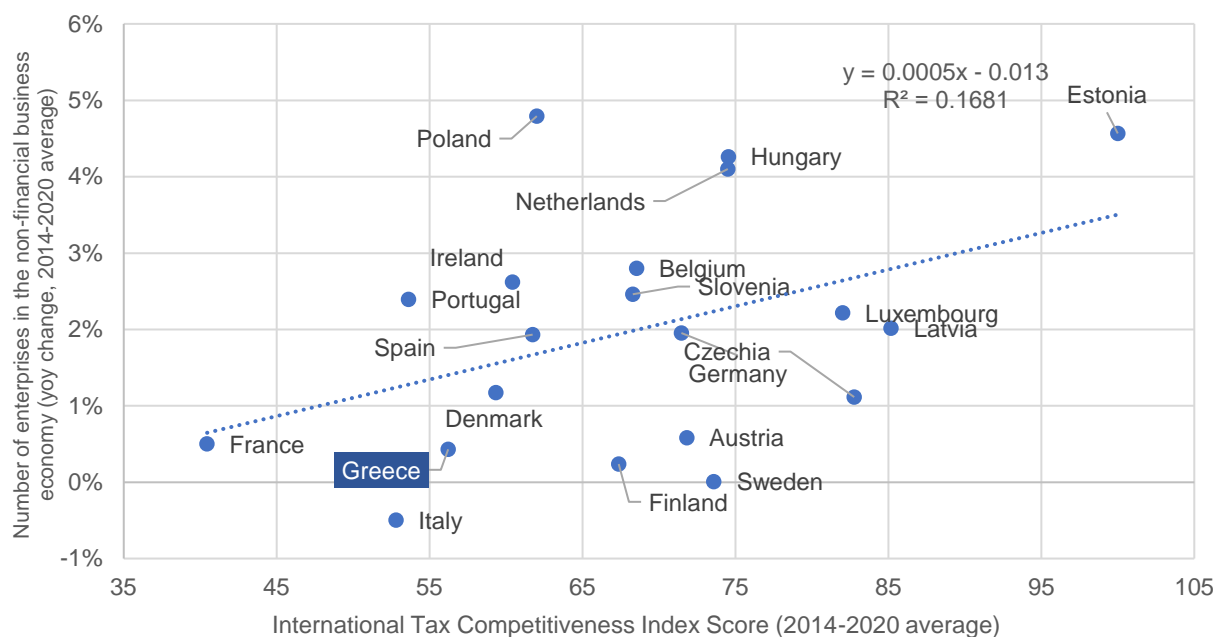
on the labour market performance, rather than horizontal measures. In general, the more elastic is the labour supply curve (and/or demand curve), the higher is the negative effect of tax wedge on employment (see World Bank, 2005).

In addition, the extent to which an increase in tax wedge results in lower employment appears to be affected by institutional features (e.g. degree of unionization) of each labour market (see for example Alesina and Perotti (1997), Elmeskov et al. (1998), Nickell and Layard (1999), Daveri and Tabellini (2000), Nickell (2003), Belot and van Ours (2004), Bassanini and Duval (2006), Góra et al. (2006)). According to Scarpetta (1996), in imperfect markets, the degree to which changes in the tax wage affect employment, is determined, among other parameters, by the negotiation power of workers, therefore how unionized the labour market is.

Daveri and Tabellini (2000) also suggest a correlation between the rise in the unemployment rate and the deceleration of GDP growth rate, both being driven by the same factor, which is the high labour cost. In particular -in a non-competitive labour market- they conclude that an exogenous and permanent increase in labour costs reduces labour demand, and thus creates unemployment. In addition, high tax wedges decrease return on investment, which may result in the postponement or even cancelation of investment projects, with a negative impact on growth. On the last point they conclude that an exogenous and permanent increase in labour costs reduces the marginal product of capital, as firms substitute capital for labour, which, if continued for a long period of time, is demotivating for expansion and growth. Attinasi et al. (2016) made a further analysis of the impact that each component of the tax wedge has on employment and consequently growth and found out that a reduction in the personal income tax rate directly increases workers' net income and has more positive effects on consumption, compared to reducing the firms' tax burden, which in turn leads to a steeper increase in employment.

A high tax wedge also leads to an increase in undeclared work, which in turn reduces general government revenues. In contrast, according to the European Commission (Factsheet on Undeclared Work -Greece, 2017) an employment friendly tax system may prove beneficiary for employment, as well as for undeclared work. According to Williams (2019), 65% of 23 EU member states, implement -among other policy measures

Graph 4. How do tax policies affect the entry of new businesses?



Sources: Eurostat, Tax Foundation

e.g., deterrence measures - direct tax incentives for corporations (e.g., exemptions, deductions), in order to combat undeclared work, with the relevant percentage standing at 71% for Western European countries and at 50% in Southern Europe. Demand side incentives are not equally common; for example, only 35% of EU countries apply targeted tax incentives to individuals, with the percentages varying considerably between regions; from 0% in the south, up to 67% in the Nordic countries.

Finally, according to the OECD, the tax wedge is also *“an economic term, that refers to the economic inefficiency resulting from taxes”*. The latter is justified by the fact that tax wedge is likely to have a greater impact on economic activity compared to other types of taxes, as it directly affects the decision to create jobs, whereas, for example, consumption taxes and property taxes are less likely to have a direct impact on labour market outcomes.

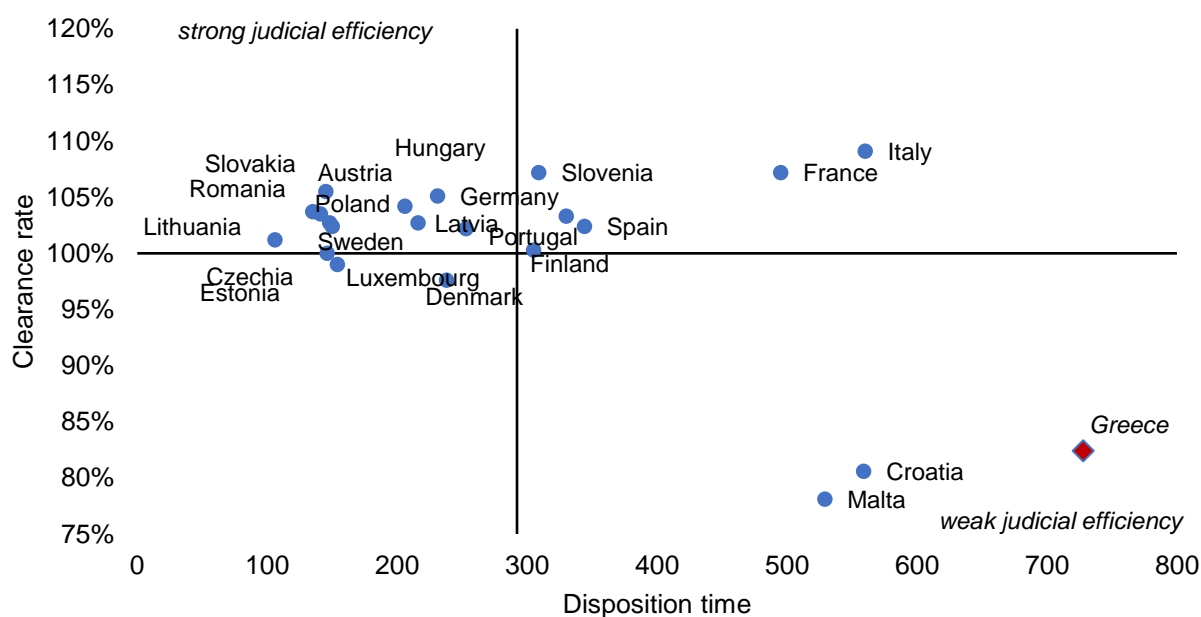
A pro-growth tax reform would shift part of the income taxes to less distortive taxes. In general, income taxes - either on labour or on capital - hinder economic growth since both distort the incentives of workers to participate in labour markets and of firms to invest in capital equipment and enhance productivity. On the other hand, consumption taxes usually exhibit smaller negative implications on growth, since they are a less distorting policy instrument compared to income taxes. However, they could also exhibit negative growth effects, as they could erode the real purchasing power of households, compressing private consumption (OECD, 2010). Furthermore, consumption taxes are less progressive than income taxes, leading to rising income inequality (OECD, 2010; Economides and Rizos, 2018).

3. Quantifying the content of reforms: Some stylized facts on the Greek experience

3.1 Assessing judicial efficiency in Greece

Greece's judicial system faces challenges related to the speed and effectiveness of court proceedings as well as obsolete procedures and structural weaknesses. The Greek government has already recognized the need to modernize and improve the efficiency of the judicial system, as it has incorporated a series of relevant reforms and investments into the NRRP and has already announced interventions in the context of its program statements this summer aiming at resolving the long-standing deficiencies of the judicial system⁹;

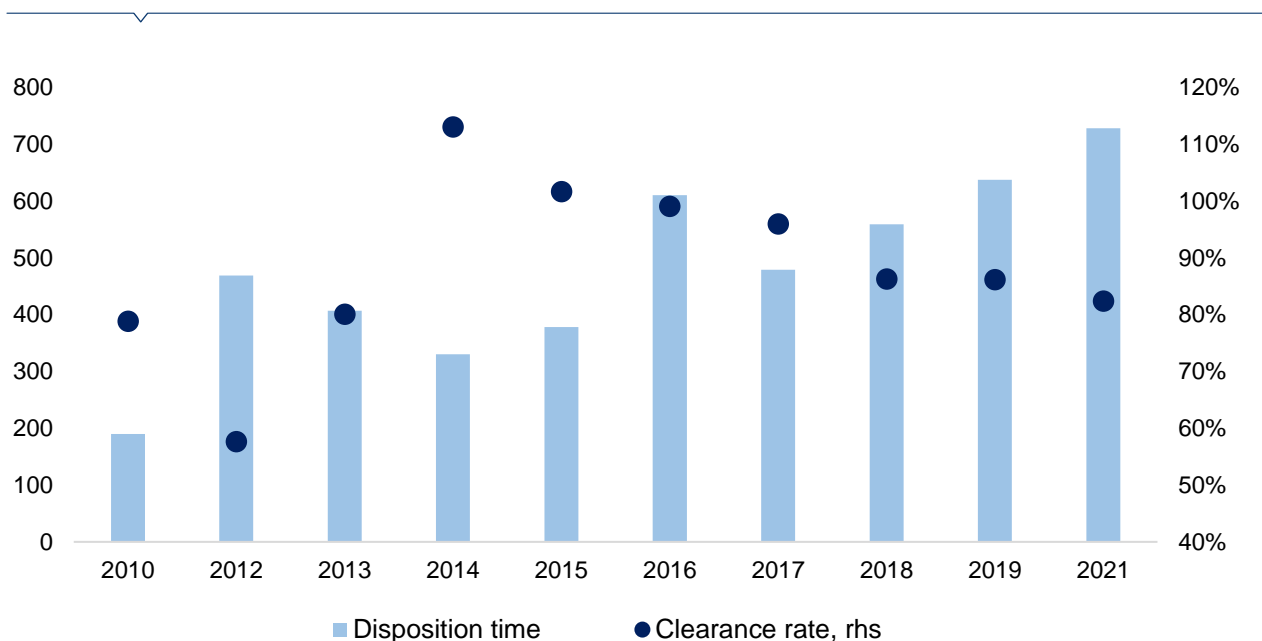
Graph 5. Assessing judicial efficiency in European Union: a cross country comparison (2021 data)



Sources: European Commission, EU Justice Scoreboard 2023

however, these reforms usually need extra time to materialize and support investment and economic growth. Judicial reforms are necessary to continue in the coming years for Greece in order to enhance the efficiency of its justice system, with significant positive repercussions on the attraction of FDIs from abroad, the acceleration of investment and the establishment of a business-friendly environment, that promotes competition, investment and economic growth. These reforms may include the digitization of justice, the creation of specialized courts, the upgrade of infrastructure, the vocational training of the courts' staff and the modification of the judicial rules and procedures, supported also by the funds from the NRRP.

Graph 6. Evolution of disposition time and clearance rate in Greece from 2010 onwards (*2020 data not available)



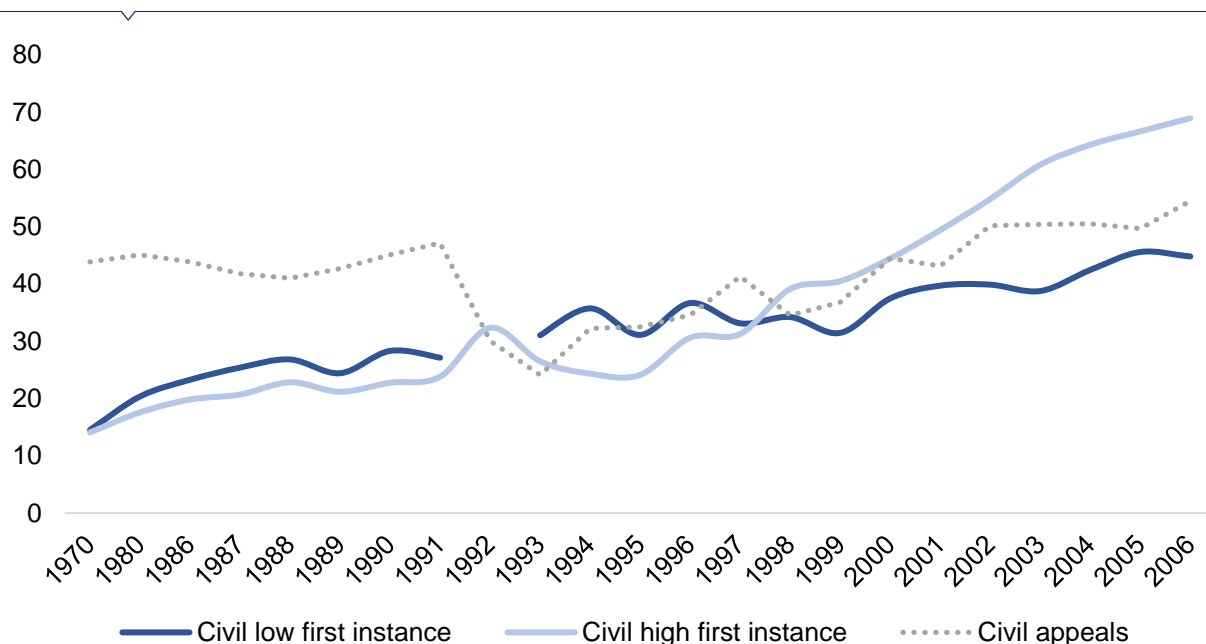
Sources: European Commission, EU Justice Scoreboard, 2022

Graph 5 visualizes the latest assessment of judicial performance for the European Union countries in 2021, based on two indices from EU Justice Scoreboard, i.e., clearance rate and disposition time. The axes of the graph represent the long-term average of these two indices. The EU Justice Scoreboard is an annual publication by the European Commission that provides a comparative overview of the efficiency, quality, and independence of judicial systems across EU member states. It aims to promote dialogue and support reforms in the field of justice.

Specifically, the Greek judicial system lags behind its EU peers. As depicted in Graph 5, Greece is among the group of countries that exhibit a weak judicial performance (last available data: 2021), with a relatively low clearance rate (82.4%), below the respective EU average (100%), and a skyrocketing disposition time (728 days), which is the highest among the EU countries and well above the respective EU average (292 days). Looking at the evolution of these indices for Greece (Graph 6), one can observe that the disposition time in Greece (i.e., the time needed to resolve civil and commercial disputes at first instance) gradually deteriorated from 2014 onwards, increasing to 728 days in 2021 from 637 days in 2019 and 559 days in 2018. Moreover, the clearance rate for litigious civil and commercial cases has slightly deteriorated in 2021, standing at 82.4% (resolved cases: 177,813, incoming cases: 206,387) compared to 86.2% in 2019 and 86.3% in 2018, significantly above the 2010 levels (78.9%) but below the record level of 113.1% in 2014.

The deterioration of these indices increases the risk of additional backlogs and delays, with adverse effects on investment and the attraction of FDIs. The interruption of trials or postponements due to the containment measures adopted in the context of the Covid-19 pandemic, with some trials scheduled for 2025 onwards, contributed to the deterioration of these indices.

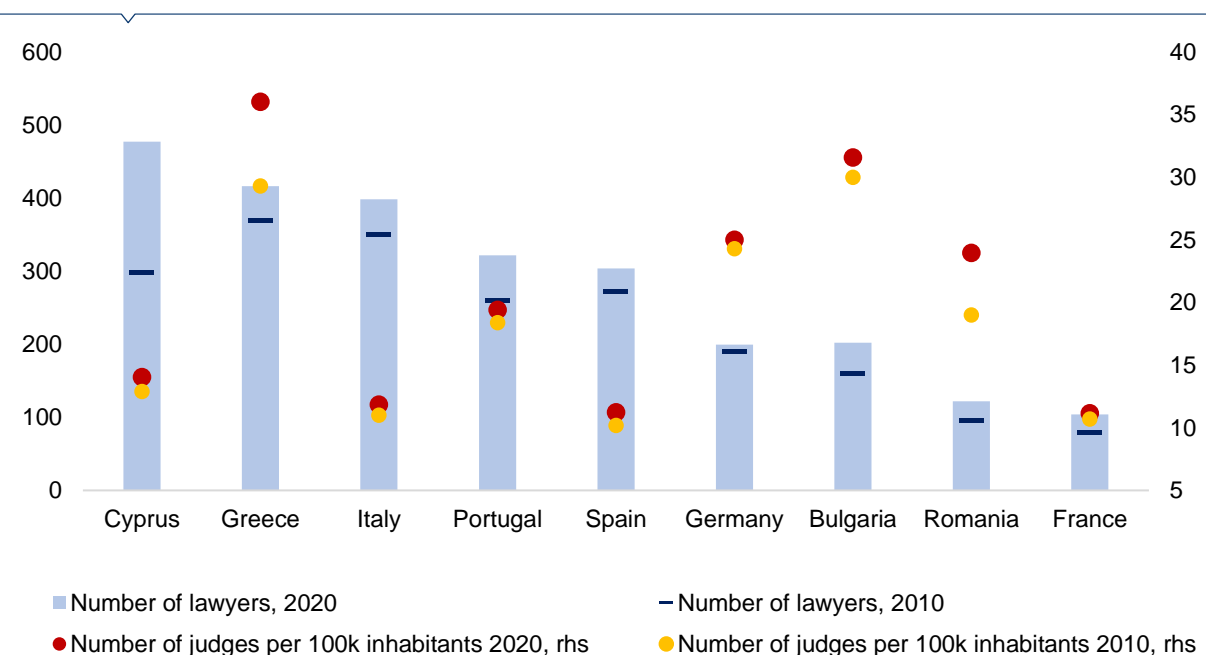
Graph 7. Historical evolution of the ratio of remaining cases (unresolved and postponed) to incoming cases



Sources: Mitsopoulos and Pelagidis (2011)

Historically, although there are several limitations to the availability of the judicial-related data, Greece exhibits a gradual deterioration in several judicial efficiency indicators. For instance, using data from the study of Mitsopoulos and Pelagidis (2011), who analyze data from “Statistics of Justice” publication of the Greek Statistical Service (ESYE), one can observe the upward trend of the ratio of the remaining (unresolved and postponed) cases to total incoming cases for the civil first instance courts (both lower and higher) as well as for the civil appeal courts. As depicted in Graph 7, this upward trajectory is evident especially from the mid-90s, accelerating sharply from 2000 onwards, mainly for the civil first instance higher courts.

Graph 8. Number of lawyers and judges, cross-country comparison, 2010 vs 2020



Sources: European Commission, EU Justice Scoreboard 2022

Furthermore, as depicted in Graph 6, from 2010 onwards, there is a sharp deterioration on the time needed for a case to be resolved at first instance, from 190 days in 2010 to 637 days in 2019, while the clearance rate recorded an increase, from 78.9% to 86.2%. Despite the deterioration in judicial efficiency, the number of judges and lawyers has increased from 2010 from 369.5 thousand lawyers in 2010 to 416.1 thousand in 2020, while judges have also increased markedly, rising from 29.3 judges per 100,000 inhabitants in 2010, to 36 judges per 100,000 inhabitants in 2020 (Graph 8). Thus, Greece exhibits a higher number of judges compared to other EU economies, while the number of lawyers is also one of the highest.

Although Greece records a deterioration of its judicial efficiency indicators, i.e., disposition time and clearance rate, drawn by EU Justice Scoreboard, and lags behind the EU average, we observe a similar pattern for the peripheral EU countries. As depicted in Graph 9, the periphery countries of the EU exhibit higher disposition times for 2020 compared to other groups of countries, implying that there are significant structural inefficiencies in the operation of their courts. The same picture holds for earlier periods. It is worth noting that these countries were largely affected by the financial crisis in the beginning of the second decade of the 21st century, falling into deep recession and implementing economic adjustment programmes. The main reasons behind this development were, apart from weaknesses in their public finances, accumulated structural inefficiencies and low institutional quality which weighed on economic activity.

Box 2: RRF Initiatives to enhance judicial efficiency

Among the various investments and reforms included in the Recovery and Resilience Facility (RRF), there are also 1 proposed investment and 3 reform projects aiming to enhance judicial efficiency in Greece, with significant repercussions for economic growth and social cohesion. More specifically, these projects are the following:

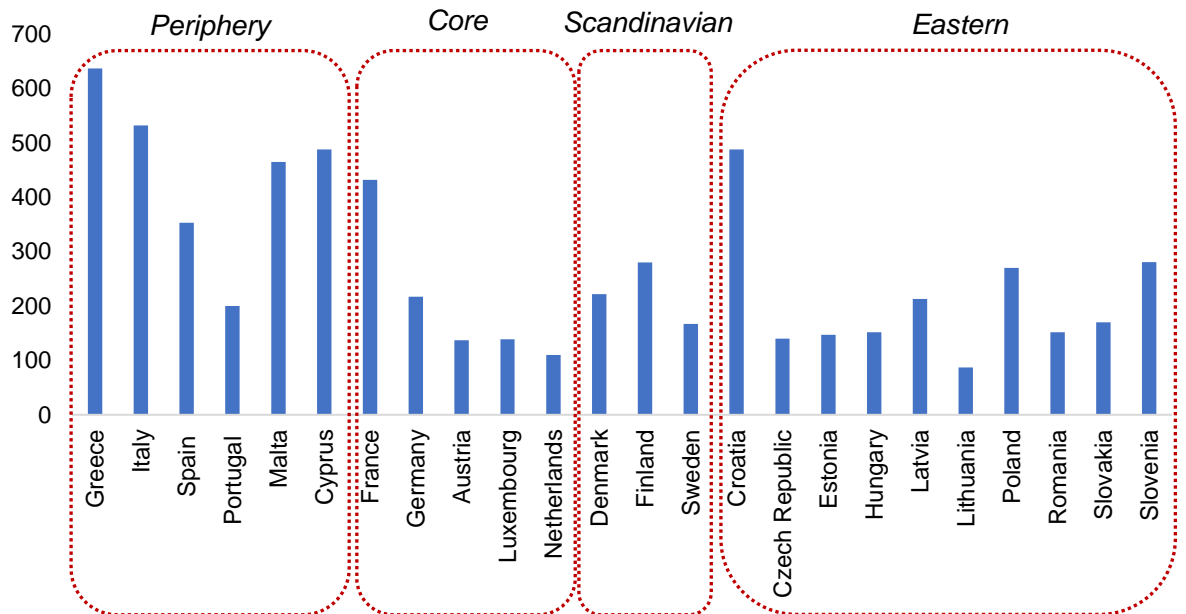
a) **Digitalization of justice (e-justice).** This reform is in line with the goals and initiatives of the public sector's and the country's digital transformation, with positive effects on business confidence. It includes actions that contribute to the modernization of justice in Greece, such as the creation of Justice–Cloud, the homogenization of processes and the launch of “Artificial Intelligence for Justice”. The proposed reform is expected to decrease the time needed to resolve a case, increase judicial independence and transparency, contribute to the digital integration of courts and Ministry of Justice, develop mechanisms of control for the detection of money laundering and the protection of intellectual and industrial property and simplify the judicial procedures for all the stakeholders (citizens, judges, lawyers and judicial officers).

b) **Speeding up of justice.** Delays in the administration of justice pose significant obstacles to the economic development of a country and undermine public's trust in judicial system. This proposed reform includes the rationalization of the spatial planning of courts, the distribution of competencies in the existing structures, the organization and administration of each individual court, the establishment of alternative dispute resolution mechanisms and the setup of an independent office for collecting, processing, and monitoring of judicial-related data (the so called *Just Stat*).

c) **Upgrading judicial infrastructure.** Upgrading the existing and building new courts and improving the facilities of the Greek judicial infrastructure through the establishment of an electronic register for the needs of all court infrastructure.

d) **Upskilling of the judges and the judicial staff,** via the modernization of the National School of Judges curriculum and the training of the justice staff for upgrading their digital and other skills.

Graph 9. Disposition time per group of countries (2020)

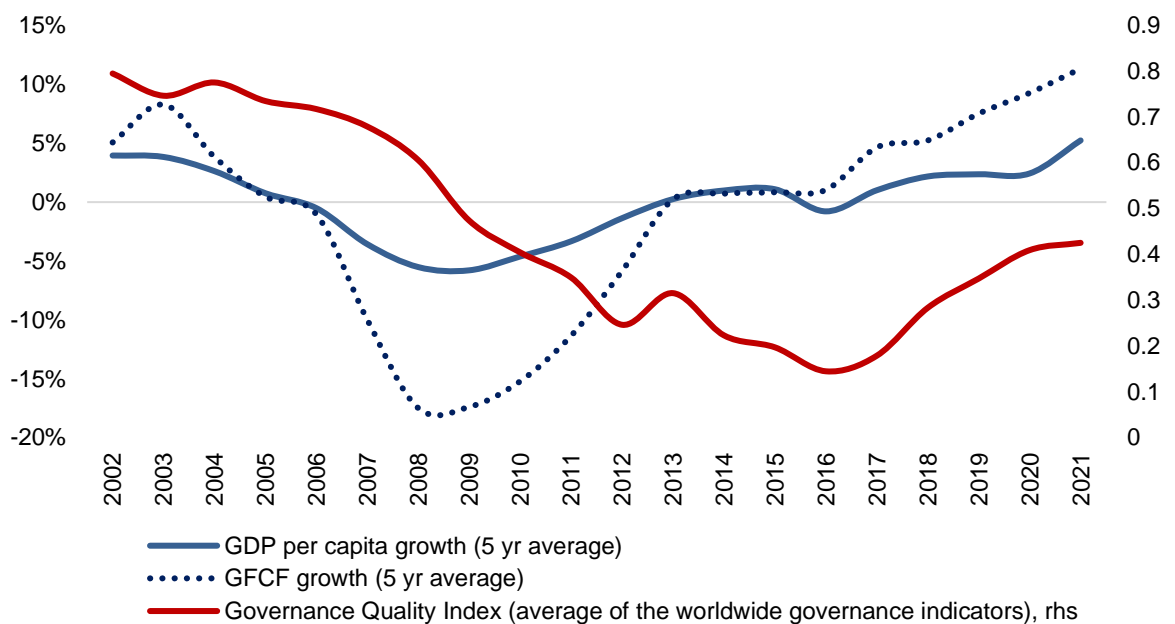


Sources: European Commission, EU Justice Scoreboard, 2020

3.2 Quality of governance in Greece: weaknesses and challenges ahead

In section 2.2, we highlighted the investment-enhancing property of the quality of governance. Here, we present some stylized facts about the evolution of the quality of governance in Greece and its comparison with the rest EU economies.

Graph 10. Evolution of the governance quality in Greece and its relationship with GDP per capita and investment growth

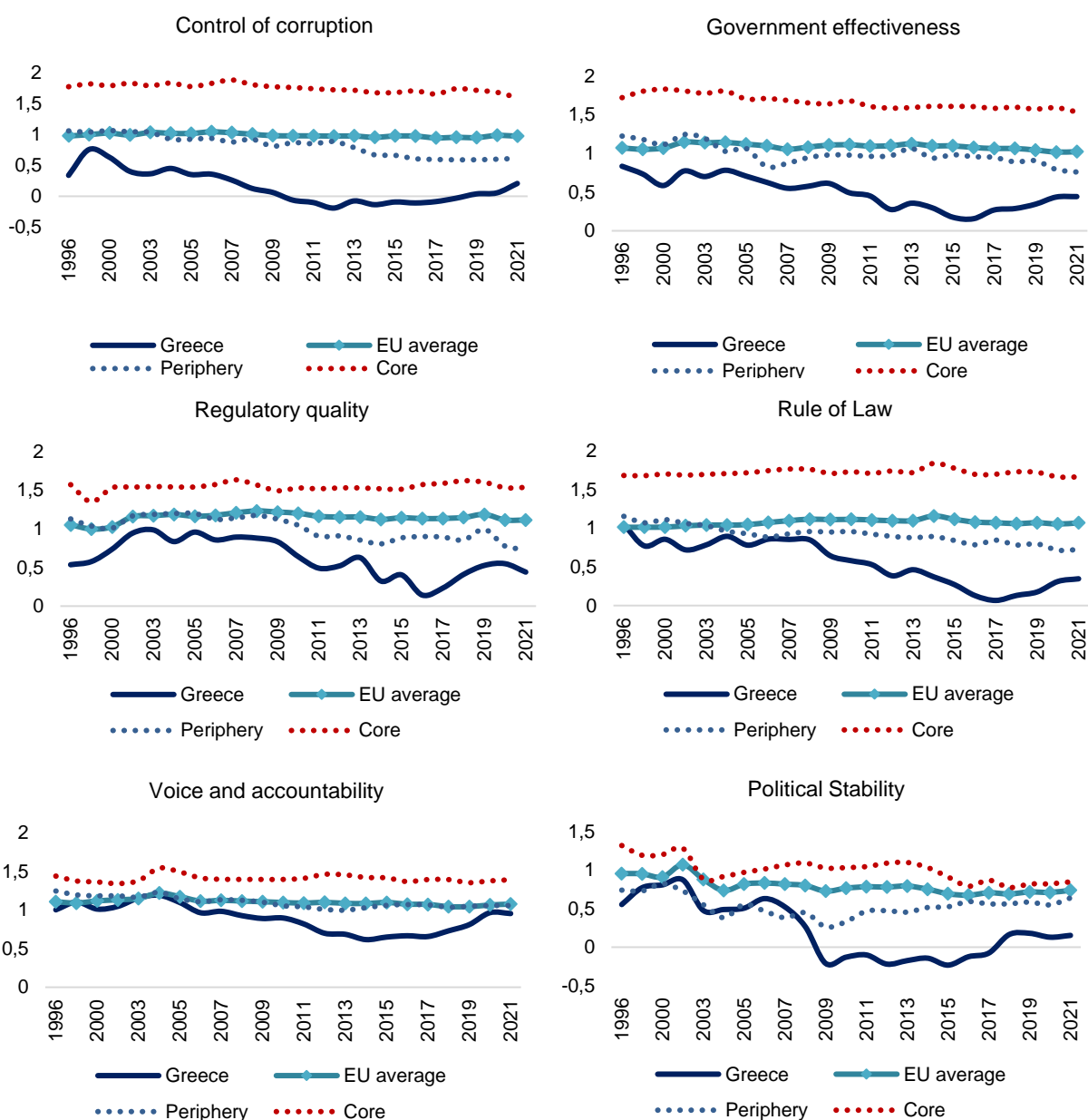


Sources: World Bank (World Governance Indicators), European Commission, Alpha Bank research calculations

As depicted in Graph 11, Greece's governance indicators lag behind the EU average as well as the periphery (Cyprus, Italy, Portugal, Spain) and core countries (Austria, France, Germany, Luxembourg, Netherlands) in all areas of quality of governance. For instance, in the area of government effectiveness¹⁰, the gap between Greece's indicator with the one of the periphery countries has been widened since 2007 and until 2016. However, from 2017 onwards, the gap in government effectiveness between Greece and the peripheral economies, as well as the EU average is gradually narrowing. This picture is also evident in the evolution of the rest of the governance indicators. Thus, although Greece's governance quality deteriorated from the mid-2000s onwards, a gradual reversal of the negative trend is recorded from 2017 onwards, with positive effects on economic growth and investment.

The positive relationship between economic growth, investment and the improvement in the quality of governance is shown in Graph 10, which depicts the evolution of the quality of governance in Greece and its

Graph 11. Worldwide Governance Indicators, Greece vs European Union countries



Sources: World Bank (World Governance Indicators)

relationship with investment (gross fixed capital formation) and per capita GDP growth rates. More specifically, we derive the general governance quality index as the simple average of the six separate worldwide governance indicators (see section 2.2). A higher index denotes a better quality of governance. Output and investment gains usually take time to materialize after an improvement in institutional or governance quality.

Thus, we plot this index against the 5-year average growth rates of the per capita GDP and gross fixed capital formation. As it is depicted in Graph 10, Greece exhibited a deterioration in governance quality from 2004 onwards, accompanied by negative growth rates in per capita GDP and investment. On the other hand, from 2017 onwards, the general governance quality index has embarked on an upward trajectory, signifying a gradual improvement in the quality of governance. This improvement was accompanied by positive and increasing growth rates of investment and per capita GDP.

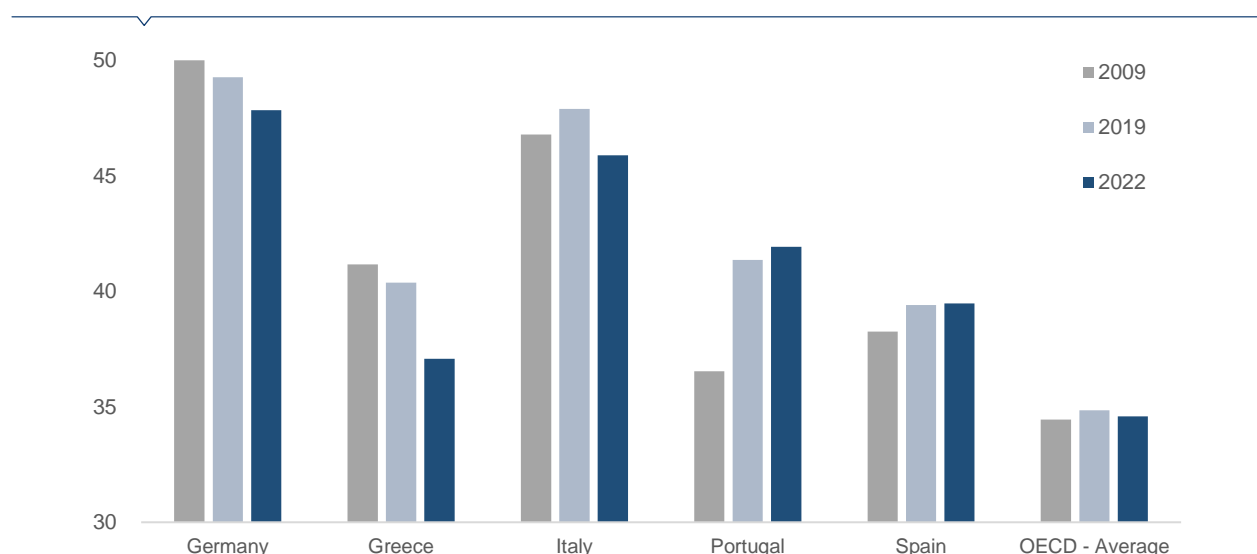
3.2. Tax wedge in Greece: Evolution of the tax wedge since the 2000s

The tax wedge for a single person without children, with an income at 100% of average earnings, in Greece, is currently standing at 37.1% (2022 data). Despite the fact that this is the lowest percentage recorded since 2000, the tax wedge in Greece remains above the OECD average throughout this period. In addition, from the beginning of the new millennium, the average tax wedge in the OECD countries is on a downward trend, whereas in Greece it fluctuated considerably.

Although tax wedge in Greece remains elevated, the reduction recorded in the past few years, for the average worker without children, was the third highest among the OECD countries. In particular, the percentage for a single earner was equal to 37.1% in 2022, down from 40.4% in 2019. The decrease was the result of: (i) the reduction of income tax by 0.4 percentage point (pp); (ii) a 1.3 pp drop in the employee's social security contributions; (iii) the reduction of the employer's social security contributions by 1.6 pp. Since 2009, the tax wedge has decreased cumulatively by 4.1 pp, due to the reduction of social security contributions (1.1 pp of the employee and 3.6 pp of the employer). As a result, the non-wage cost of labour was lower in 2022, in Greece, compared to other European countries, such as Spain and Portugal (Graph 12).

It should also be noted that in 2020 the Greek Government set a new law in place (4758/2020) with which a 50% exemption from personal income tax and the special solidarity levy, for a period of up to 7 years, is

Graph 12. Tax wedge (% labour cost) in Greece and selected OECD countries



Source: OECD

applied for non-residents that relocate to Greece, or Greeks that currently work abroad but wish to be repatriated, on the condition that they take on a new job position or starting a new activity in the country.

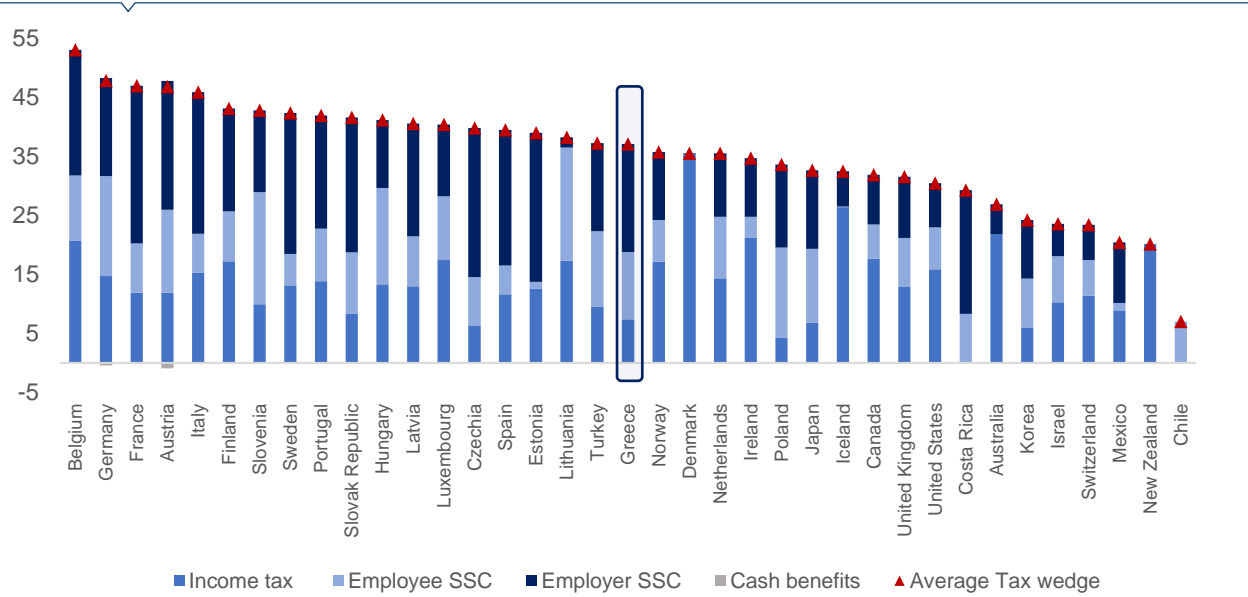
The de-escalation of the tax wedge led to its convergence with the OECD average which was equal to 34.6% in 2022, with the difference between the two percentages being at its lowest point (2.5 pp) since 2000. In addition, Greece ranked 19th among the OECD countries in terms of the tax wedge of a single earner without children (descending order), compared to the 14th place in 2019.

In terms of the composition of the tax wedge, the employer's social security contributions for the average worker without children made up 49% of the tax wedge in 2021, compared to 37% on average in the OECD countries. The corresponding percentages are lower in Germany (35%) and other European countries that, like Greece, have completed economic adjustment programs within the previous decade. Specifically, employer SSCs amounted to 29% of the tax wedge in Ireland, and 46% in Portugal, respectively. On the contrary, in France (57%), Italy (52%) and Spain (58%), the non-wage cost of labour paid by the employer, as a percentage of total labour cost per employee, was higher compared to Greece (Graph 13). As regards the tax wedge for other categories of employees:

- *One-earner, married couple, at 100% of average earnings, with two children:* it was equal to 33.7% in 2022, the eighth highest relevant percentage recorded among the OECD countries. The latter is due, *on one hand*, to the high amounts paid to social security for both the employee and the employer, and *on the other hand* to the fact that the social transfers paid to this category of workers, which actually reduce the tax wedge, are low in comparison to the OECD average (3.8% versus 4.6% as a percentage of total labour cost). The tax wedge for this category of workers, however, was also reduced by 3.5 percentage points in 2022 compared to 2019 and by 7.7 p.p. compared to 2009.
- *Two-earner married couple, both at 100% of average earnings, with two children:* the tax wedge in 2022 was equal to 37.5% down by 3.3 pp from 2019, compared to 31.6% on average in the OECD countries.

A further decrease of social security contributions by 3pp, along with the suspension of the special solidarity levy for the private sector employees, were taken in effect in 2022, as part of the fiscal measures adopted to deal with the negative impact of the pandemic. Those measures, as well as the abolishment of the special solidarity levy for employees of the public sector and for pensioners, were permanently adopted as of January 2023 according to the State Budget, in order to support real income.

Graph 13. Tax wedge composition in the OECD countries, 2022



Source: OECD

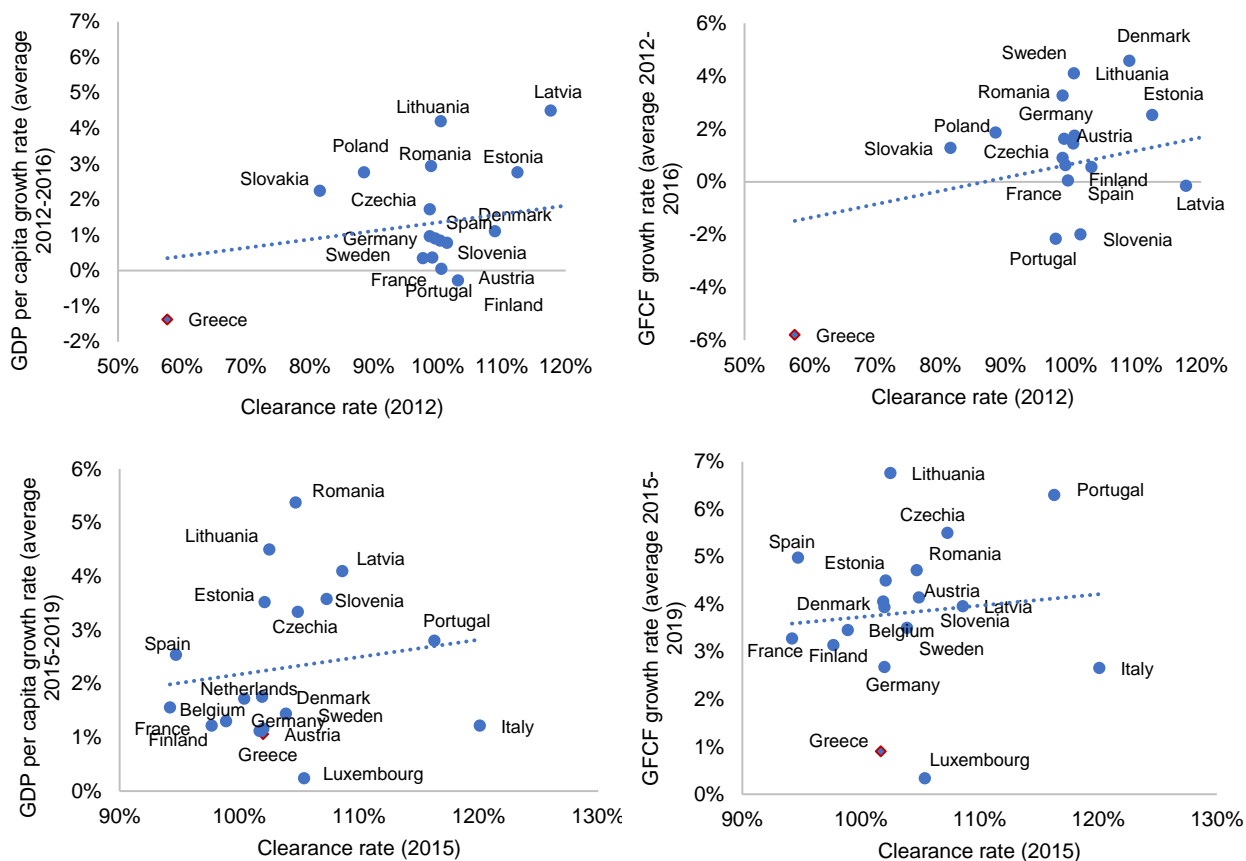
4. Documenting the investment-enhancing properties of reforms

4.1 Judicial efficiency: an analysis based on cross-country data

Graph 14 depicts the positive relationship between the clearance rate and per capita GDP growth as well as investment growth for the European Union member states. The Graph illustrates the so-called “catching-up effects” of an improvement in judicial efficiency, through the resolution from the courts of more disputes than they received (i.e., a reduction of the backlog of past cases), for two different time periods. It is worth noting that usually changes in institutional efficiency take time to materialize and their effects on macroeconomic variables are not evident contemporaneously but only after some periods. Thus, we depict the clearance rate for 2012 and 2015 versus the average GDP per capita and average investment for 5 years ahead (2012-2016 and 2015-2019).

As it is depicted in Graph 14, there is a positive relationship between higher levels of clearance rate and per capita GDP and investment growth. Consequently, a high clearance rate indicates that the courts are processing cases quickly and efficiently. In turn, the reduction of the past unresolved cases strengthens investment, incentivising investors to take the ownership of investment plans and signalling a willingness of policymakers to challenge past institutional inefficiencies, facilitating the inflow of new investments.

Graph 14. Catching-up effects, clearance rate vs per capita GDP and investment growth rates

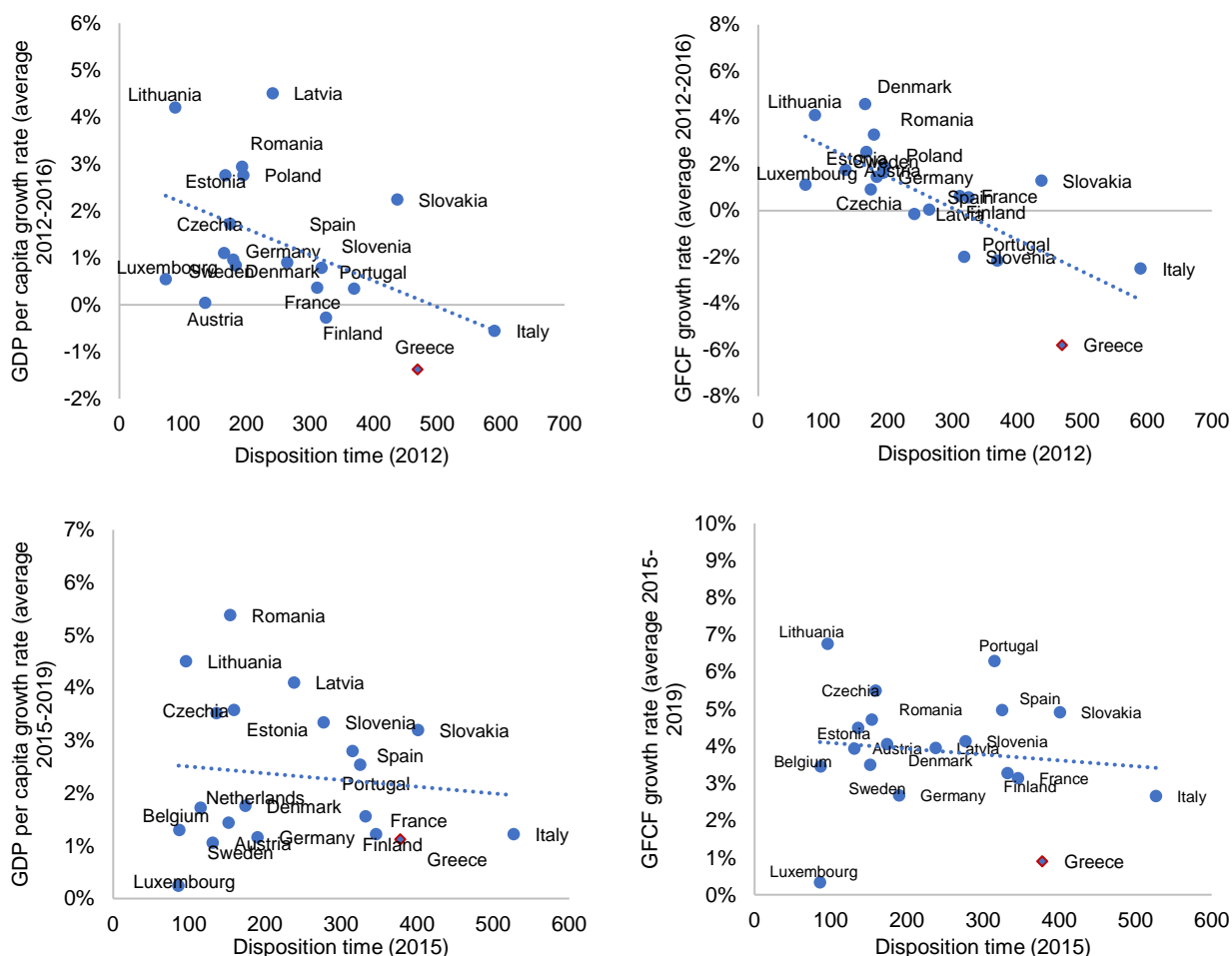


Source: European Commission, Eurostat

The same picture is evident when we examine two relationships: disposition time and per capita GDP, as well as disposition time and investment growth (Graph 15). A higher disposition time is related to lower levels of investment and per capita GDP growth. Delays in the resolution of commercial disputes may have adverse effects to the attraction of fresh investment since it creates disincentives for the investors to invest in the respective country.

The channels supporting the relationship between judicial efficiency and investment are numerous. One of the primary channels is the protection of property rights. When property rights are protected, individuals and businesses are more willing to invest, leading to increased capital accumulation and economic growth. Secondly, an efficient judiciary contributes to the development of financial markets, which is crucial in driving investment and economic growth. Financial markets play an essential role in allocating capital to productive uses, and when these markets are functioning effectively, they facilitate capital accumulation and investment. Thirdly, efficient judicial systems promote competition by enforcing antitrust laws, which limits the power of monopolies. This enhances productivity and efficiency, driving economic growth. Finally, efficient judiciary reduces transaction costs by providing an effective mechanism for enforcing contracts. When transaction costs are lower, economic activity is more efficient, leading to increased productivity and economic growth.

Graph 15. Catching-up effects, disposition time vs per capita GDP and investment growth rates

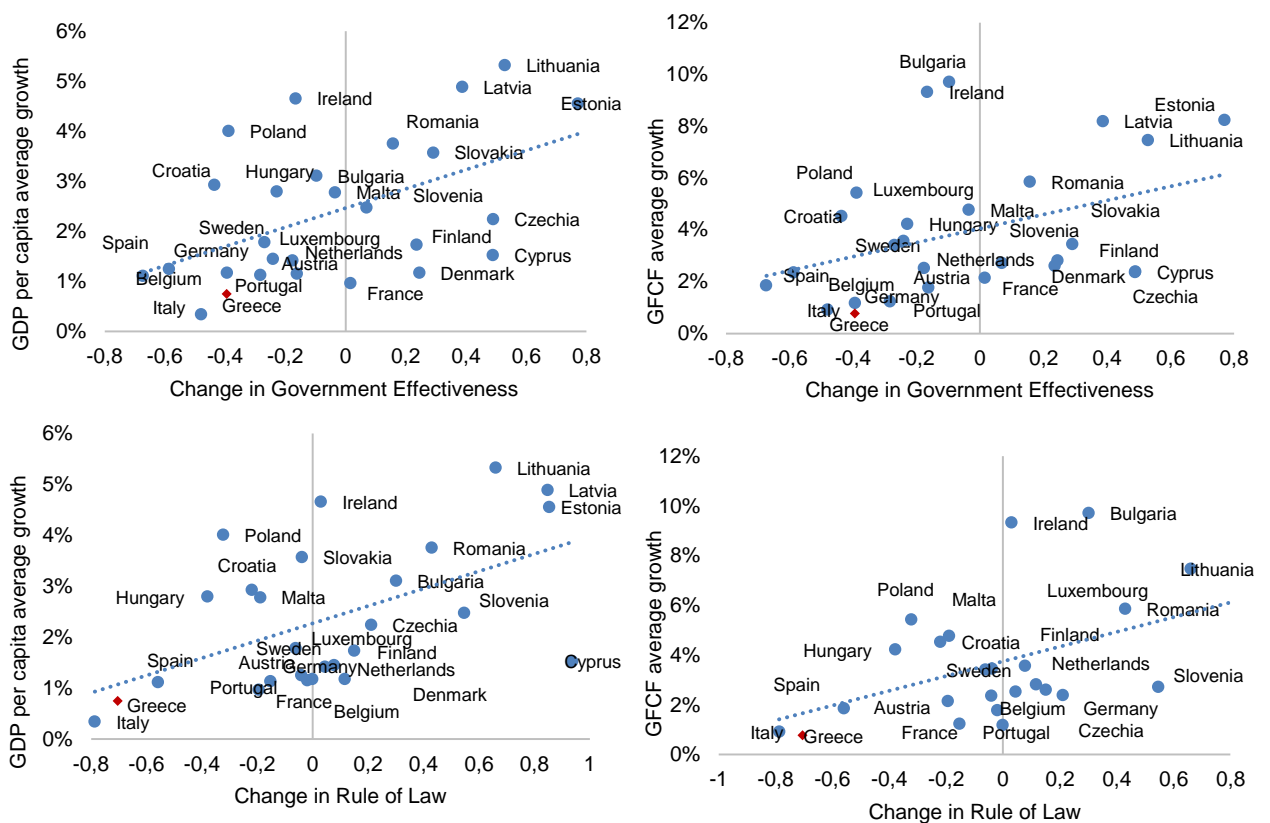


Source: European Commission, Eurostat

4.2 The nexus between governance quality, investment and economic growth

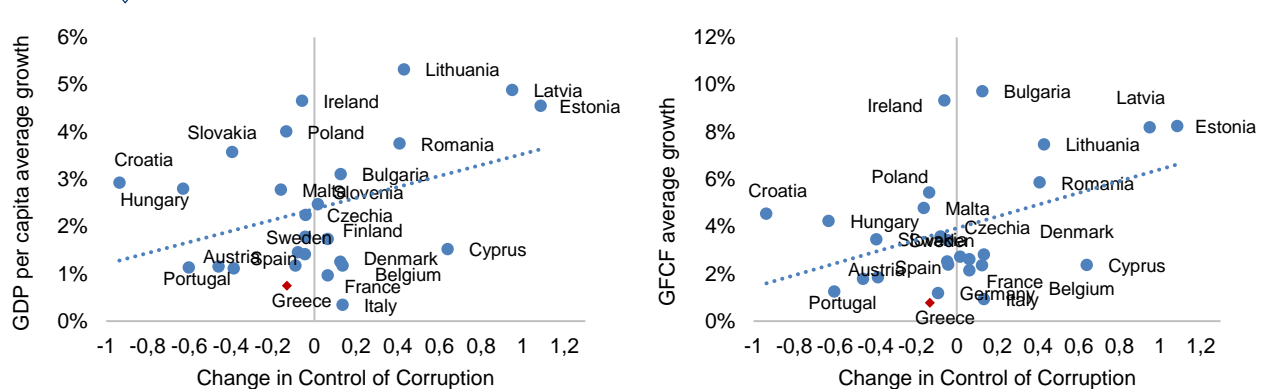
Graphs 16-18 illustrate the positive relationship between changes in alternative governance quality indices and per capita GDP as well as investment growth for the European Union countries. Thus, an improvement in governance quality, measured as an increase in the respective indicators, leads to higher levels of per capita GDP growth and investment growth.

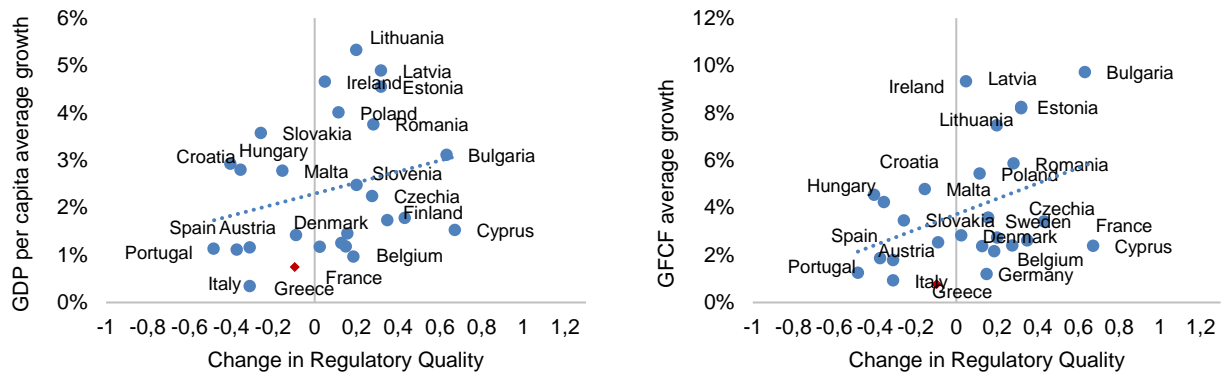
Graph 16. The relationship between changes in rule of law and government effectiveness with per capita GDP and investment growth



Source: Worldwide Governance Indicators (WGI), World Bank, Eurostat

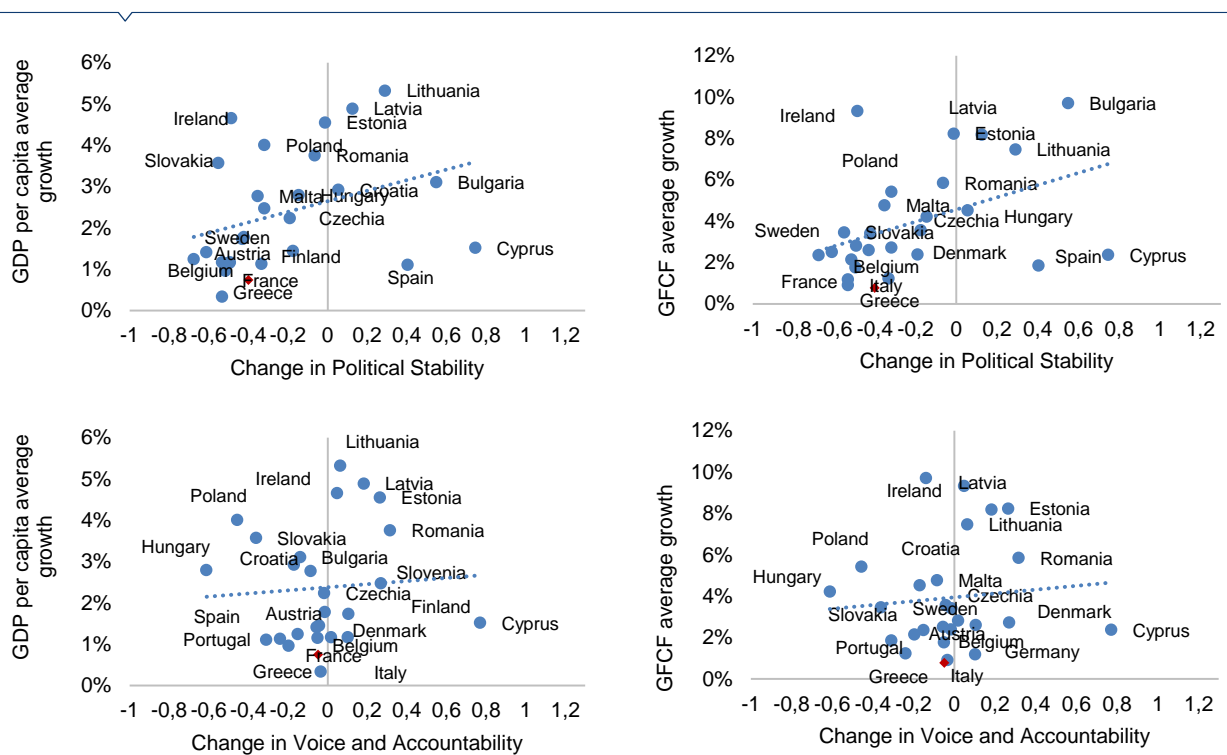
Graph 17. The relationship between changes in regulatory quality and control of corruption with per capita GDP and investment growth





Source: Worldwide Governance Indicators (WGI), World Bank, Eurostat

Graph 18. The relationship between changes in political stability and voice and accountability with per capita GDP and investment growth



Source: Worldwide Governance Indicators (WGI), World Bank, Eurostat

4.3 The growth enhancing properties of a tax wedge reduction

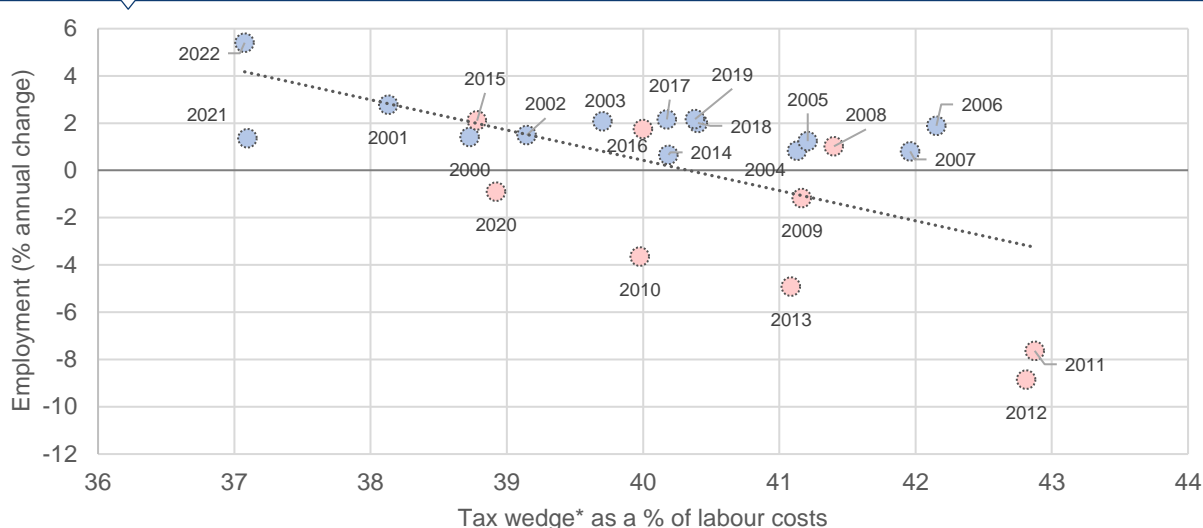
As depicted in Graph 20, the relationship of the tax wedge with several economic variables such as GDP growth, investment, Foreign Direct Investment (FDI) and employment, using cross country data for the OECD countries since 2000 (or 2005 on the case of FDIs) is negative. The latter is an indication of the growth enhancing nature of the tax wedge, meaning that a potential tax wedge reduction enhances job creation, boosts investment, thus economic activity.

Taking a closer look to the correlation of the tax wedge to employment in Greece, using historical data from 2000 to 2022, it is generally concluded that in periods when the tax wedge was relatively high, employment decreased and vice versa (Graph 19). For example, at the beginning of the Greek debt crisis, i.e., between 2010-2013, when the tax wedge exceeded 40% of the labour cost, employment recorded a steep drop (-

6.3%, on an annual basis, on average). On the contrary, in 2021 and 2022, when the tax wedge, as a percentage of labour cost per employee reached its lowest point, employment rose by 1.4% and 5.4%, respectively. However, as depicted in Graph 19, there were periods when the tax wedge was quite high, e.g., 2004-2007 (41.6% on average) and 2017-2019 (40.3% on average) and employment kept rising. The latter implies that the tax wedge is not the only factor determining the course of employment, but rather complements other parameters into affecting employment. A common feature of the previously mentioned periods for example, is that economic activity was also rising, as indicated by the light blue colour of the spheres.

Overall, the impact of the tax wedge on employment and economic activity is complex and multifaceted. While a high tax wedge can reduce the incentive for employers to hire workers and for workers to seek employment, the exact impact depends on a range of factors, including the level and structure of taxes, the labour market conditions, and the economic environment, in general. Thus, the sensitivity of the labour market to tax wedge changes may differ according to the phase of the economic cycle. During a recession, a high tax wedge may exacerbate the negative effects of the downturn by reducing the demand for labour and leading to higher unemployment. On the other hand, during an economic expansion, a high tax wedge may have a smaller impact on economic activity because the demand for labour is already strong, and employers may be willing to absorb some of the additional costs associated with hiring workers.

Graph 19. A negative relationship between tax wedge and employment in Greece



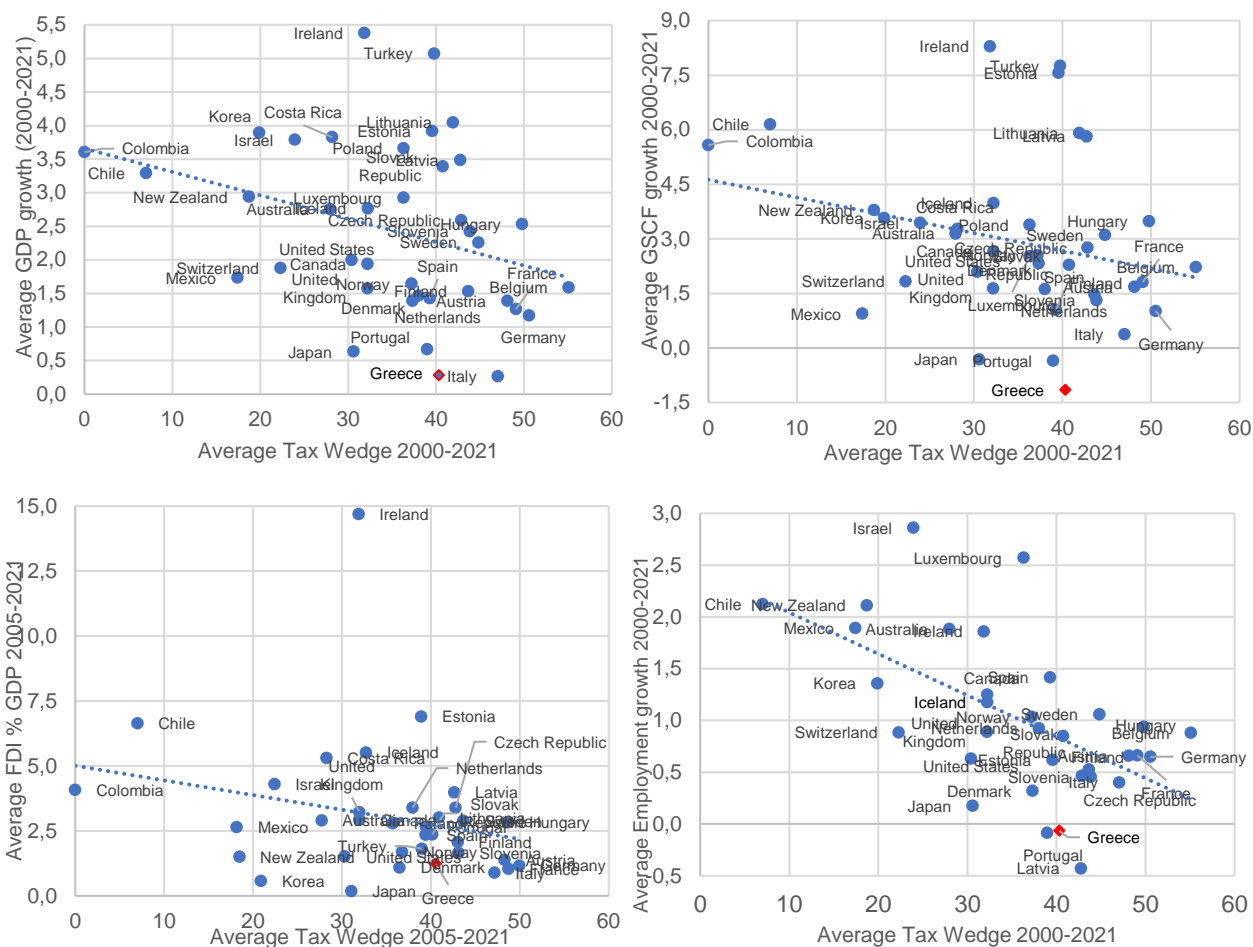
(*) Single person at 100% of average earnings, without child.
Light blue filling represents positive GDP growth rate and pink filling stands for negative GDP growth rate.

Source: OECD

Policymakers should carefully consider the potential trade-offs associated with different tax policies and seek to strike a balance between promoting economic growth and ensuring a fair and equitable tax system. On one hand, tax reforms aiming to rationalize tax wedge, accelerate economic growth. On the other hand, lowering the labour tax wedge could raise potential fiscal risks (e.g. loss in revenues, need for issuance of new government debt).

Nevertheless, the reduction of the labour tax wedge (for example, through a reduction in the labour income tax rate), could raise tax revenues in the medium run through the materialization of significant employment gains which are expected to contribute to the expansion of the tax base. Moreover, lower taxes could decrease tax evasion, as the size of the tax rate is negatively associated with the degree of tax evasion (see, e.g., Economides et al., 2020). The reduction of tax evasion could be seen as an expansion of the tax base, benefiting tax revenues. In both cases, the expansion of the tax base could counterbalance the losses in tax revenues after a reduction in labour income tax rate without the need for the government to resort to other distortionary taxes or without the widening of income inequality.

Graph 20. How the tax wedge level affects Investment, Employment and Growth



Source: OECD

5. Tracing the impact of reforms' envelope on FDI inflows: an empirical investigation

In this section, we investigate whether judicial efficiency, quality of governance and a reduced tax wedge can boost a specific type of investment, foreign direct investment. Foreign direct investments (FDIs) are a key financing source to capital investment. FDIs refer to investments made by individuals, companies, or governments from one country into another country aiming to establish a lasting interest and significant influence in the foreign economy. As a result, their importance is high as they contribute both directly and indirectly on total investment in the host economy. Thus, FDIs can accelerate aggregate investment mainly through increased capital inflows, technological spillovers on the domestic firms helping them to overcome deficiencies in technology and expertise, easier access to global markets for the domestic firms, employment gains and increase in human capital as well as gains for the domestic suppliers of raw materials.

Among the main factors that determine FDIs, institutional quality seems to play a vital role. As a result, host countries, that aim to attract investment from abroad, usually adopt significant structural reforms orientated to improve institutional efficiency and the quality of governance and, thus, establish a business-friendly environment. In this section, we focus our analysis on the effect of judicial efficiency, tax wedge and quality of governance on FDI inflows. Well-functioning judicial systems, efficient tax systems that do not weigh substantially on the labour cost and improved governance indicators can increase FDIs; all these factors generate a positive signal for foreign investors to take the ownership of significant investment plans in the host country without jeopardising their equity. Also, the theoretical and empirical literature has recognized the positive effect of FDI flows on potential growth.

To examine the effects of judicial efficiency and several aspects of quality of governance as well as the tax wedge on the FDI inflows, we use a sample of 22 European Union countries (those EU countries that are also members of the OECD) over the period 2005-2021. EU countries are significant investors as well as recipients of FDIs. For our empirical investigation, we are based on the received literature on the determinants of FDI (see, e.g., Delis et al., 2017). Our dependent variable is the FDI flows drawn by OECD database. As our baseline specification, we use a parsimonious model, including the main determinants of FDIs (see, e.g., Delis et al., 2017). More specifically, we incorporate as control variables the (logarithm of) real GDP, the country-specific unit labour cost index, the trade openness (defined as the ratio of the sum of exports and imports to GDP) and the tax wedge (as a combined measure of tax revenues and the non-wage labour cost faced by firms). Then, we introduce various indicators of judicial efficiency and quality of governance.

Based on the above, our baseline specification is given by:

$$y_{i,t} = \beta_0 + \beta_1 gdp_{i,t} + \beta_2 ulc_{i,t} + \beta_3 trade_{i,t} + \beta_4 taxwedge_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, $y_{i,t}$ is the FDI flows, $gdp_{i,t}$ is the (natural logarithm) of the country-specific real GDP, ulc is the unit labour cost, $trade$ is the trade openness, $taxwedge$ is the tax wedge for a single person at 100% of average earnings, without child.

Then, we enrich our baseline specification incorporating various judicial efficiency indicators, namely the enforcement of contracts, derived by the Fraser Economic Institute and the clearance rate and disposition time, derived from European Commission (EU Justice Scoreboard).

$$y_{i,t} = \beta_0 + \beta_1 gdp_{i,t} + \beta_2 ulc_{i,t} + \beta_3 trade_{i,t} + \beta_4 taxwedge_{i,t} + \beta_5 jud_{i,t} + \varepsilon_{i,t} \quad (2)$$

where, jud is the country-specific judicial efficiency indicator.

Finally, we expand our baseline specification adding as additional explanatory variables the quality of governance indicators. To do so, we use the Worldwide Governance Indicators (by the World Bank), namely political stability, control of corruption, government effectiveness, voice and accountability, rule of law and regulatory quality.

$$y_{i,t} = \beta_0 + \beta_1 gdp_{i,t} + \beta_2 ulc_{i,t} + \beta_3 trade_{i,t} + \beta_4 taxwedge_{i,t} + \beta_5 gov_{i,t} + \varepsilon_{i,t} \quad (3)$$

where, gov is the country-specific governance indicator.

Our model is estimated using a panel data setting. A panel data approach has the advantage that it uses all the information available which is not detectable in pure cross-sections or in pure time series. We use standard panel estimation methodologies, pooled (OLS) panel models.

Our baseline results for equation (1), depicted in Table 1, suggest that there is a negative relationship between tax wedge and FDI flows. In particular, a 1% decrease in tax wedge leads to a rise in FDI inflows by €1.6 bn. This result corroborates the widespread belief that the reduction of the tax wedge has a positive impact on the attraction of FDIs, since it reduces the tax burden faced by employers as well as employees. The establishment of a business-friendly environment marked by lower taxation and social security contributions incentivizes, on the one hand, firms to invest and hire personnel due to the lower non- wage labour cost they face and, on the other hand, workers to increase their participation rate in the host labour market.

Table 1	
<i>Dependent variable: FDI flows (in million)</i>	
	Benchmark
	OLS
Constant	147.52** (41.719)
log (real GDP)	5.048*** (1.393)
ULC	-1.542*** (0.221)
Openness	0.289 (0.216)
Tax wedge	-1.623** (0.591)
Prob (F-statistic)	0.0016
Number of obs	386

Note for Table 1: The table reports estimations of equation (1) for our baseline specification. Robust standard errors in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% level

Our results for the rest of the control variables are in line with the received economic literature. More specifically, the effect of real GDP on FDI flows is positive and statistically significant. This can be explained by the fact that real GDP is a measure of the market size and, thus, a higher market size attracts more FDIs. Moreover, an increased unit labour cost is negatively related to FDI inflows since it reduces the expected profits of the newly incumbent firms. In addition, we find that the trade openness of an economy, measured as the share of the sum of exports and imports to total GDP, is positively related to FDIs.

To examine the effects of various judicial efficiency indicators on FDI inflows, we regress equation (2). The results are depicted in Table 2. We estimate alternative regression equations incorporating one separate structural variable at a time. Following Bénassy-Quéré et al. (2007), we introduce the institutional variables separately, given their high degree of correlation, in order to avoid multicollinearity that may provide biased estimates.

Our findings suggest that improvements in various aspects of judicial efficiency are beneficial for the attraction of FDIs. More specifically, an improvement in the clearance rate by 1% leads to a rise in FDI flows by €2.3 bn. The coefficient of the disposition time is negative, meaning that it is related negatively to FDIs; however, we do not get a statistically significant coefficient. Moreover, we uncover a positive relationship between the enforcement of contracts and FDI inflows. More specifically, an increase in the contract enforcement score by one unit, results to a rise in FDI flows by €0.8 bn. In general, our results corroborate that, improvements in judicial efficiency incentivize foreign investors to invest in the host country. In other words, inefficiencies in the operation of courts that fail to safeguard the protection of property rights and create delays or increased backlogs in the resolution of disputes discourage FDIs.

Table 2			
<i>Dependent variable: FDI flows (in bn)</i>			
<i>Controlling for judicial efficiency indicators</i>			
	(1)	(2)	(3)
	OLS	OLS	OLS
Constant	-9.182 (114.9)	187.8 (227.2)	53.18 (66.88)
log(real GDP)	5.967** (2.308)	4.275 (2.579)	6.018*** (1.586)
ULC	-1.728*** (0.569)	-2.236 (1.864)	-1.249*** (0.326)
Openness	0.365 (0.234)	0.492*** (0.118)	0.438** (0.184)
Tax wedge	-3.489*** (1.224)	-1.812 (1.587)	-1.863** (0.821)
Clearance rate	2.310** (0.931)		
Disposition time		-0.091 (0.059)	
Contract enforcement			0.793** (0.317)
Prob (F-statistic)	0.001	0.001	0.000
Number of obs	204	191	344

Note for Table 2: The table reports estimations of equation (2). Robust standard errors in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% level

Turning to the results for the governance quality indicators, we find strong evidence of a positive and statistically significant relationship between the majority of these indicators and FDI inflows (Table 3). Specifically, a rise in government effectiveness score by one unit raises FDIs by €2 bn; a higher quality of public and civil services, combined with government policies characterized by credibility, establish a sound business framework that encourages foreign companies to allocate their resources into the host country. Strengthening policies that aim to control corruption and weaken the power of elites accelerate FDI flows, since investors seek stable business environments with low levels of corruption which do not exert rising transaction costs through bribes etc. In particular, rising by 1 unit the control of corruption indicator leads to a €1.8 increase in FDIs. The same picture is evident for the rest quality of governance indicators. For instance, a strong governance system ensures the rule of law and an effective regulatory framework. A transparent and efficient legal system that protects property rights, enforces contracts, and resolves disputes in a fair and timely manner reduces the risks associated with investing, making a country more appealing for FDI. Finally, an improvement in voice and accountability (i.e., “*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*”) implies significant gains in FDIs.

Table 3
Dependent variable: FDI flows (in bn)
Controlling for governance quality indicators

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	OLS	OLS	OLS	OLS
Constant	102.26* (58.32)	102.69 (58.37)	89.802 (58.10)	138.64 (85.70)	121.16 (59.43)	51.68 (62.63)
log(real GDP)	4.746*** (1.339)	4.151*** (1.314)	4.371*** (1.325)	2.547 (2.442)	5.308*** (1.515)	4.443*** (1.369)
ULC	-1.442*** (0.302)	-1.409*** (0.297)	-1.433*** (0.302)	-1.465*** (0.306)	-1.514*** (0.311)	-1.335*** (0.295)
Openness	0.356* (0.186)	0.345* (0.183)	0.338* (0.186)	0.175 (0.328)	0.381** (0.191)	0.346* (0.182)
Tax wedge	-1.472* (0.766)	-1.261* (0.754)	-1.219* (0.726)	-1.405 (1.281)	-1.410* (0.777)	-1.285* (0.762)
Government effectiveness	2.029*** (0.721)					
Control of corruption		1.846*** (0.542)				
Regulatory quality			2.596*** (0.975)			
Rule of law				3.157*** (1.099)		
Political stability					3.151 (6.858)	
Voice and accountability						5.241*** (1.584)
Prob (F-statistic)	0.001	0.000	0.000	0.002	0.000	0.000
Number of obs	366	366	366	366	366	366

Note for Table 3: The table reports estimations of equation (3). Robust standard errors in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% level

6. Calculation of the reforms' impact on FDIs and the pass-through to investment: An Exercise

Foreign Direct Investments play an important role in promoting aggregate domestic investment through various channels. First, they are a key source for financing investment of fixed assets from foreign funds. Usually, FDIs within a year could be transformed at some extent to gross fixed capital formation in the subsequent years. Second, FDIs refer to the investment made by a company or individual from one country into a business or venture located in another country. This investment may involve the acquisition of ownership in a domestic entity or the creation of new business operations and infrastructure. This type of FDI, which includes the construction of new production facilities and/or the building of new infrastructure (such as factories, offices, hubs and other facilities), is called “greenfield” investment. Thus, greenfield FDIs are usually included directly in gross fixed capital formation and are more indicative of fresh investment activity (*United Nations, 2021*), which is not the case with other types of FDIs (such as mergers and acquisitions or the purchase of foreign securities).

6.1 Basic assumptions and mechanics

To identify the rise in gross fixed capital formation -on top of the anticipated increase based on available forecasts (2023 Stability Programme, Ministry of Finance) - coming from an additional inflow of FDIs, we, indicatively, adopt a scenario consisting of a decline in the tax wedge ranging 0.7%-1.3% per year, during 2023-2026, an increase in the clearance rate between 0.7%-1.3% per year, again during 2023-2026 and a one-off improvement, by 1 unit, in the government effectiveness index. To do so, we rely on specific assumptions, which are necessary in order to calculate the potential impact of these reforms on investment. The value of the parameters used in this analysis are drawn from the estimation results presented in Tables 1-3 in section 5 or were calibrated based on actual data. Thus, the results of this exercise are dependent on the values of the parameters chosen at this stage and could change if we use different estimated coefficients.

More specifically, we rely on the following assumptions:

- (a) a pass-through parameter, which captures the share of FDIs that are included directly in gross fixed capital formation. This parameter is estimated using the share of greenfield FDIs to total FDIs. The average share of greenfield investment to total FDIs from 2005 to 2022 in Greece is around 70%.
- (b) a sensitivity parameter for the impact of tax wedge on FDIs, drawn from Table 1.
- (c) a sensitivity parameter for the impact of an increase in clearance rate on FDIs, drawn from Table 2. This could be the outcome of, for example, the digitisation of the judicial proceedings, which is expected to reduce the numerator i.e. the number of resolved cases, or the establishment of out-of-court resolution mechanisms reducing the denominator of the clearance rate i.e. the number of incoming cases.
- (d) a sensitivity parameter for the impact of a one-off improvement by 1 unit in government effectiveness index on FDIs, drawn by Table 3. This covers a wide range of improvements in various aspects of the operation of the government. For example, an improvement in government effectiveness may reflect a reduction in red tape, a more efficient process for starting and operating businesses, a prudent management of public finances characterized by an effective tax collection mechanism and efficient allocation of resources to support public services and infrastructure projects

For the institutional variables, we assume that these changes take place gradually within the four-year horizon, with heavier weights imposed backloaded. This assumption is made due to the fact that institutional changes need more time to materialize to real effects in economic growth or investment.

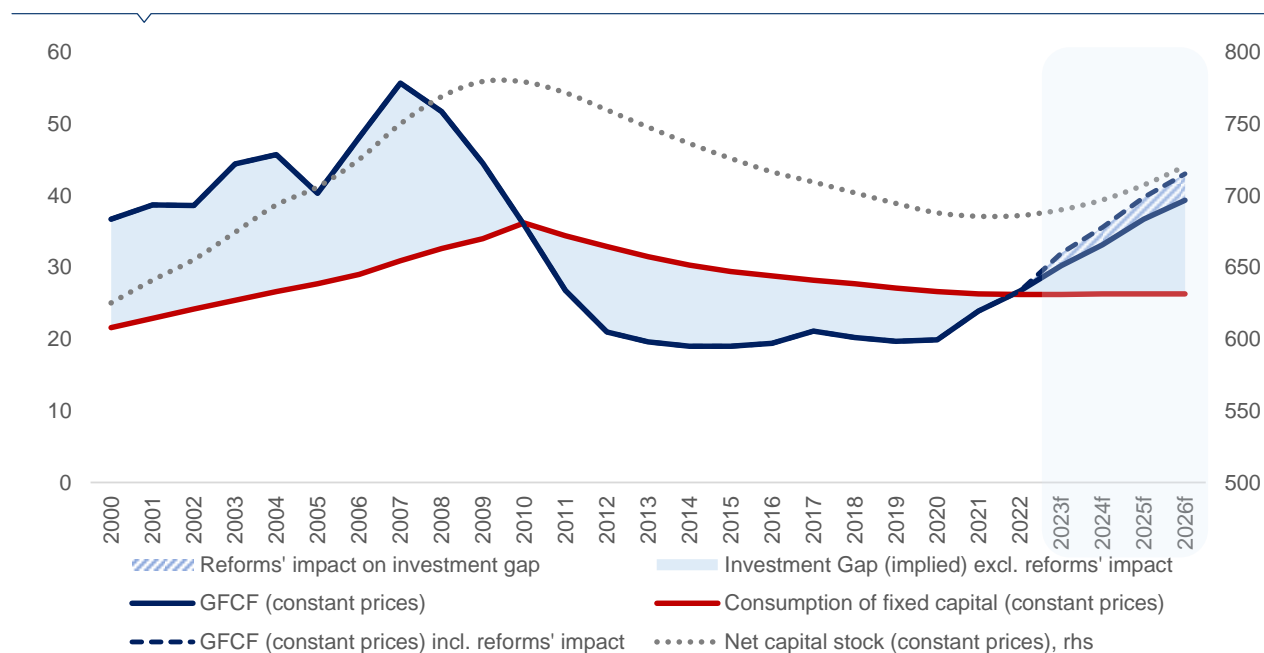
6.2 Investment Gap coverage

Investment in Greece embarked on a downward trajectory from 2008 onwards, with the fall accelerating in the first two years of the economic crisis of the previous decade. Therefore, gross fixed capital formation in constant prices de-escalated to €19 bn in 2014-2015, from almost €56 bn in 2007. As a result, for a period of 12 years, from 2010 until 2021 and despite that investment started to pick up from 2016, the consumption of fixed capital exceeded fresh investment, eroding the natural capital stock. The investment gap that was generated throughout this period reached €94 bn (2015 prices), as depicted in Graph 21. In 2022 investment grew by almost 12%, following a 20% increase in 2021 and reached €26.7 bn. The depreciation of the capital stock was equal to €26.2 bn with their difference turning to positive ground for the first time since 2009.

According to the 2023 Stability Programme (MoF) gross fixed capital formation is forecast to increase by 10.2% per annum (Compound Annual Growth Rate, CAGR) until 2026, on the back of the absorption of close to €70 bn of EU funds, which will lead to the coverage of the investment gap by €35 bn or 37%. Based on our exercise, the combined effect of the reforms' implementation on labour taxation and specifically the tax wedge, judicial efficiency and governance quality is estimated to range €9-16 bn in current prices. When deflating this amount based on the MoF's projections for GDP deflator, the total reforms impact throughout the forecast horizon (2023-2026) in constant prices, will be approximately €8-14 bn. Thus, the investment gap coverage would range €43-49 bn or 46%-52% and the CAGR of investment would be increased by approximately 2-3 pps, to 12%-13.3%. In Graph 21 we depict the results based on a 1% decrease of the tax

wedge and a 1% increase in the clearance rate per annum in 2023-2026 and a 1 pp improvement in the government effectiveness index throughout the forecast horizon.

Graph 21. Filling-in the investment gap in the medium-term and the reforms' potential impact



Source: European Commission, Ministry of Finance (2023 Stability Programme), Alpha Bank Economic Research calculations

7. An Epilogue – policy implications

Greece stands facing a historical opportunity; the transformation of its productive model from consumption based to an investment-driven growth pattern. Two elements point to that direction.

First, the funds from the EU’s Recovery and Resilience Facility (RRF), which are expected to contribute significantly to this transformation, triggering a sizeable investment injection into the Greek economy. Greece stands to be one of the largest beneficiaries of the RRF with over €30 bn of funds, which correspond to 17% of GDP (2021 data), the highest percentage among EU countries. Additional funds at the same tune are expected to be mobilised, both in the form of bank debt and sponsor equity, resulting in total mobilised program funds of around €60 bn. Greece is also expected to receive around €40 bn from EU’s long-term budget, which is further analysed as €13.4 bn from the Common Agricultural Policy and € 26.2 bn from National Strategic Reference Framework (NSRF). Along with the RRF funds, the total EU envelope amounts to around €70 bn. Therefore, the output expansion in the coming years, based on available projections (2023 Stability Programme, April 2023, MoF) is expected to be investment driven.

Secondly, the structural reforms that were implemented during the previous decade in the context of the economic adjustment programmes, as well as in the past few years, with the aim of creating a business-friendly environment in the country, have already resulted in a steep increase in FDI in 2021 and 2022 (+90% and +35%, y-o-y, respectively). The continued implementation of reforms designed to address legacies of the past and deficiencies in crucial sectors that hinder economic activity, along with the absorption of the EU funds and the established political stability in the country, are expected to further boost investment and achieve sustainable economic growth in the coming years.

On top of the above two elements, we add a third one which may accelerate investment and therefore contribute to sustainable growth rates. In this paper we addressed where Greece stands in terms of judicial efficiency, governance quality and labour tax wedge as a percentage of the total labour cost per employee;

we discussed the potential benefits from the implementation of further reforms on these three areas and shed light on their impact on FDI flows, their pass-through to actual investment and ultimately the extent to which these reforms will narrow the investment gap created in the previous decade, due to the economic crisis.

Our results show that the combined effect of: (i) a 0.7%-1.3% decrease per annum of the tax wedge, (ii) a 0.7%-1.3% increase every year, in the clearance rate -that is the cases resolved through the justice system, and (iii) a one-off increase in the government effectiveness index, by 1 unit, in the medium term horizon, i.e. up to 2026; are estimated to generate additional investment of €8-14 bn, in constant prices, achieving an further coverage of the investment gap, by 8.5-14.7 percentage points (pps).

The impact of the implementation of these reforms, however, is not limited to the above quantification, which mainly refers to “fresh investment” in physical capital. As mentioned at the beginning of this *Insights*, the combination of higher levels of physical and human capital and the adoption of technological advances that improve productivity, are also factors that enhance economic activity. Consequently, the above reforms may have multiplicative effects on the volume of investment. Moreover, the growth footprint of the aforementioned reforms usually takes time to materialise. Thus, long-lasting benefits are expected to take place beyond the medium-term horizon examined in this paper, i.e. from 2026 onwards, contributing to higher GDP levels and the convergence of GDP per capita to the EU average.

The third of the main pillars of the National Recovery and Resolution Plan foresees approximately € 3 bn of investment in reinforcing job creation, increasing participation in the labour market as well as in education, including vocational education, training, upskilling and reskilling of the workforce, with emphasis on digital skills. In parallel a rationalisation of the tax system is expected to have multiple effects. First, an increase in the participation rate and the decline of undeclared work. Second, it is anticipated to act as a strong motive for high-skilled human capital that migrated during the economic crisis abroad, to be repatriated. Therefore, it is expected to lead to some extent at least, to the reversal of the ‘brain drain’ phenomenon, i.e., to a ‘brain re-gain’ for the country. Third, it will reduce operational costs for businesses that in turn will be able not only to fulfil investment plans, but also finance the training of their human resources.

However, all these interactive features with virtuous circles could not be fully represented in our calculations. The increased participation in the labour market, the rise in employment, the upgrading of skills of the labour force, the return of experienced workforce from abroad, along with the incorporation of new technologies in the production processes, will create productivity gains and ultimately boost economic activity in the longer term. So, additional research will be needed to quantify the impact of the above factors on the implementation of new investment plans, attraction of FDIs and growth. Finally, the establishment of an even more business-friendly environment is expected to have multiplicative effects in the years to come: turning the country into an investment destination, further encouraging foreign investment, leading to the growth of the business sector, as well as of employment. Regaining investment grade status will further accelerate investment opportunities and will also contribute to achieving sustainable growth in the long-term.

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- www.oecd.org (OECD)
- <https://data.worldbank.org/> (World Bank)
- <https://ec.europa.eu/> (European Commission)
- <https://taxfoundation.org/> (Tax Foundation)

Endnotes

¹ Defining the investment gap as the distance of domestic fixed capital formation as percent of GDP from the corresponding EU average, excluding residential investments, between 2010-2021 it amounts to Euro 125 billion at current prices.

² For detailed and insightful analyses of the sources, the magnitude and the length of the boom experienced until 2007 and the bust afterwards pls see (Gourinchas et. al., 2016 and Chodorow-Reich et al., 2023). For a comparative assessment of the impact of EU rescue plans refer to Gourinchas et. al., 2023.

³ Memorandum of Understanding (MoU).

⁴ For a detailed discussion see “Structural Reforms in Greece”, Centre of Planning and Economic Research on behalf of the European Commission, March 2019.

⁵ Under several definitions.

⁶ North (1994) in his pioneering work provided a widely accepted definition of institutions. In his words, “institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. They structure incentives in human exchange, whether political, social or economic.” A broader definition provided also by the literature (e.g., Hatzis, 2018) supports the idea that institutions include rules, norms, social habits, beliefs and structures. A distinction is made by Acemoglu and Robinson (2012), categorising institutions as:

- inclusive, those entail (i) the protection of property rights and the safeguard of contract enforcement, (ii) the protection of investors and a solid and transparent insolvency law, (iii) the rule of law which ensures the division of powers and the equal access to political power, (iv) competitive markets that ensure the equal access to economic opportunities, (v) a developed public infrastructure and free access to health and education (Hatzis, 2018b).
- exclusive or extractive, which involve the concentration of power and wealth in the hands of a small elite, limited access to economic opportunities, a corrupted political system and the suppression of political and civil rights.

⁷ The International Tax Competitiveness Index (ITCI) seeks to measure the extent to which a country’s tax system adheres to two important aspects of tax policy: competitiveness and neutrality. The Tax Foundation’s International Tax Competitiveness Index (ITCI) measures the degree to which the 38 OECD countries’ tax systems promote competitiveness through low tax burdens on business investment and neutrality through a well-structured tax code. The ITCI considers more than 40 variables across five categories: Corporate Taxes, Individual Taxes, Consumption Taxes, Property Taxes, and International Tax Rules.

⁸ According to Eurostat: labour cost or total labour cost is the total expenditure borne by employers for employing staff. It cost consists of:

- employee compensation (including wages, salaries in cash and in kind, employers’ social security contributions);
- vocational training costs;
- other expenditure such as recruitment costs, spending on working clothes and employment taxes regarded as labour costs;
- minus any subsidies received.

⁹ Program Statements of the Minister of Justice, July 2023.

¹⁰ According to the World Bank definition government effectiveness captures “*the perceptions of the quality of public services, 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*”.

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