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Enhancing Judicial System Efficiency in Greece: Drivers and Economic Impact

Katherine Dai, Mariusz Jarmuzek, Ritong Qu, and Amira Rasekh

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ABSTRACT: Greece's judicial system efficiency has been one of the lowest in the EU, affecting adversely the country's economic performance. The massive increase in demand for judiciary services during the crisis period resulted from significant business and personal insolvencies, along with limited availability of alternative dispute resolutions and relatively low court fees. The response of judiciary services supply did not match the demand owing to inadequate deployment of human and financial resources and a low level of digitalization. Policy simulations suggest sizeable gains from judicial reforms for investment and productivity. Reducing the imbalances in the judicial system is important not only to address the legacy issues, but also to create conditions for higher growth going forward.

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SELECTED ISSUES PAPERS

Enhancing Judicial System Efficiency in Greece: Drivers and Economic Impact

Greece

Prepared by Katherine Dai, Mariusz Jarmuzek, Ritong Qu, and Amira Rasekh¹

¹ The authors would like to thank, without implicating, Theoni Alampasi, Leonor Coutinho, Jose Garrido, Ioannis Germanos, Christina Katopodi, Pelops Laskos, as well as participants of the workshop held at the Bank of Greece for useful discussions, comments, and suggestions.

ENHANCING JUDICIAL SYSTEM EFFICIENCY IN GREECE: DRIVERS AND ECONOMIC IMPACT¹

Greece's judicial system efficiency has been one of the lowest in the EU, affecting adversely the country's economic performance. The massive increase in demand for judiciary services during the crisis period resulted from significant business and personal insolvencies, along with limited availability of alternative dispute resolutions and relatively low court fees. The response of judiciary services supply did not match the demand owing to inadequate deployment of human and financial resources and a low level of digitalization. Reducing the imbalances in the judicial system is important not only to address the legacy issues, but even more importantly, to create conditions for higher growth and greater economic resilience going forward. Building on international experience, policy simulations suggest sizeable gains from judicial reforms for investment and productivity. The ongoing reform of the judicial system has correctly identified the key imbalances, appropriately prioritizing policy actions to address them, but requires a swift execution.

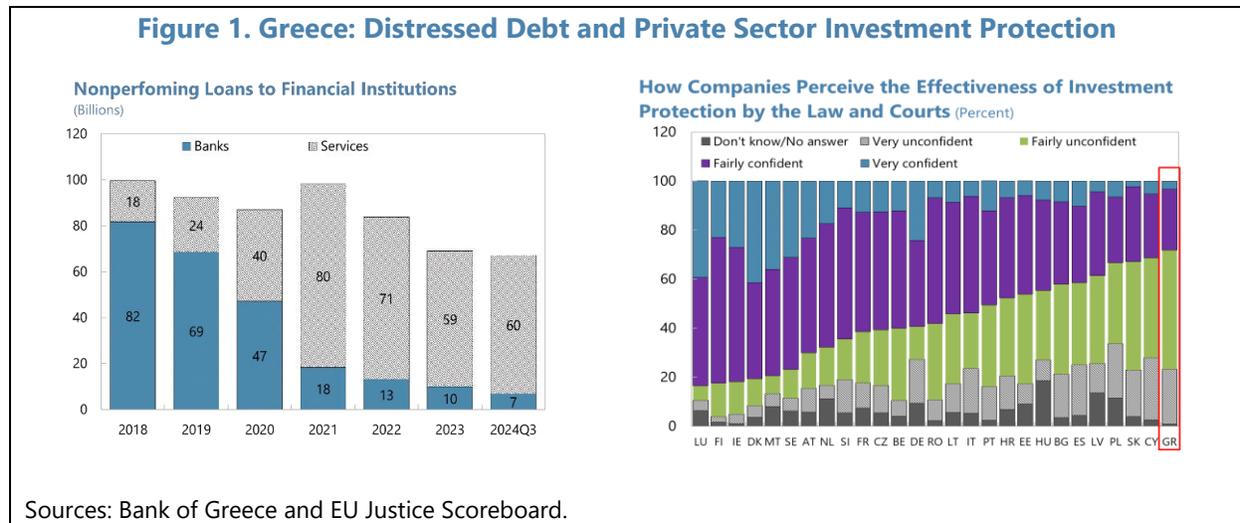
A. Introduction

1. The new insolvency framework has helped reducing distressed debt, but its implementation is hindered by an inefficient judicial system, hampering economic performance. Leveraging on the Hercules program, the NPL ratio was reduced from 40 percent in 2019 to 3 percent in 2024 (EBA, 2024). But the reduction implied a transfer of NPLs from the banking system balance sheet to the credit servicers in charge of recovering former NPLs (IMF, 2022). The resulting distressed debt in the hands of credit servicers amounted to around 70bn at end-2024, accounting for 30 around percent of GDP (BoG, 2024). The new insolvency framework, operationalized since late 2021, rearranged all existing proceedings under a single text and includes, in addition to an improved out-of-court workout, a pre-insolvency procedure for rehabilitation of business, liquidation, and a bankruptcy procedure for traders and non-traders (IMF, 2023). However, progress in the implementation of the framework has been hindered by lengthy court proceedings (EC, 2024a). This has in turn impacted adversely not only the reduction of the distressed debt (EC, 2024a), but likely also private investment and productivity (Lorenzani and Lucidi, 2014).

2. The recently launched reform of the judicial system aims at addressing its deficiencies. Drawing on World Bank (2023), the reform of the judicial system leveraging the EU funding initiated in 2024 prioritizes court reorganization, digitalization, training, and shifting away some tasks from judges, creating a very good opportunity to modernize the judiciary. Specifically, the implementation of new judicial map in civil and criminal justice is underway and constitutes a major reform, which aims at a balanced distribution of cases among first instance judges and a speedier

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administration of justice (EC, 2024c). In addition, several types of non-contentious cases, including mortgage pre-notations, the provision of sworn statements and acts relating to inheritance, can now be performed by lawyers, which is expected to contribute to decongesting civil courts from a significant number of time-consuming cases and improve efficiency (EC, 2024c). Finally, further upgrades in the information systems and video conferencing services are progressing, as is recruitment of additional judges and judicial clerks (EC, 2024c). The main target variable of the reform is to bring the length of court proceedings defined in terms of disposition time to the average EU level by 2027.



3. This paper presents key drivers for and economic impact of judicial system reforms in Greece. Key questions include (1) How does the Greek judicial system perform in the international perspective? (2) What are the main drivers for the judicial system performance? and (3) What could be an impact of judicial reforms on economic performance? To address these questions, the study first describes the court system in Greece and then documents judicial system efficiency, identifying its key drivers. The study subsequently sheds some light on the impact of judicial reforms on debt enforcement and insolvency proceedings, as well as economic performance, drawing on international experiences. Finally, the study presents some policy options.

B. Court System in Greece²

4. Insolvency and enforcement matters in Greece are handled by the civil courts. Civil courts in Greece deal with a wide range of civil, commercial and criminal issues ranging from family matters to commercial disputes. Starting from 2024, these civil courts comprise of three tiers: (i) 57 courts of first instance; (ii) 19 courts of appeal; and (iii) the Court of Cassation (Supreme Court of Areios Pagos).

² The analysis of the institutional framework for insolvency and creditor rights in Greece is conducted based on the World Bank's Principles for Effective Insolvency and Creditor and Debtor Regimes ("WB Principles").

5. There is a limited level of specialization in civil courts in Greece. The major courts have split the handling of civil and criminal cases between different groups of judges. With respect to civil law, three first instance courts (Athens, Piraeus and Thessaloniki) have established specialized benches in areas like debt enforcement, insolvency law, tort, family law, succession law and intellectual property. Similarly, there is a low level of specialization at the major courts of appeal (split between civil and criminal law, specialized benches in some civil areas).

6. The Greek court system does not allow a judge to specialize in insolvency—or commercial matters more broadly—on a permanent basis. Even in major districts with specialized benches in civil matters, judges still need to rotate every four years. This does not allow judges to build specialization and subject matter expertise over time; after four years, an outgoing insolvency judge could end up working in very different areas such as family law. The same applies for an incoming judge who might have been previously working in a completely different subject. Insolvency trainings for judges are held once or twice a year. Currently, 29 judges have a specialized role related to insolvency.

7. There is no central management of the court system. At the individual court level, there is often no centralized or adequate management. Courts are operated as individual entities rather than as part of a broader network. This has led to fragmentation and little flexibility in assigning and reallocating resources as needed. Data systems, if in place, tend to be court specific and do not cover the entire court system. This makes it difficult to oversee the system as a whole and have effective case management.³ Recent efforts to improve management at the level of first instance courts are welcome.

8. As of 2025, a new regime for the regulation of insolvency professionals was introduced. Prior to that, there was no professionally organized cohort of insolvency professionals, which negatively impacted the application of the insolvency framework.⁴ As of January 2025, there are 192 registered insolvency professionals. Insolvency professionals are licensed after undertaking exams organized by the Insolvency Management Committee, which was established in 2021 and operated under the supervision of the Ministry of Economy and Finance. Disciplinary sanctions against insolvency professionals range from a written reprimand, financial fine, temporary ban on assuming duties to a temporary withdrawal of license and removal from the registry.

C. Judicial System Efficiency

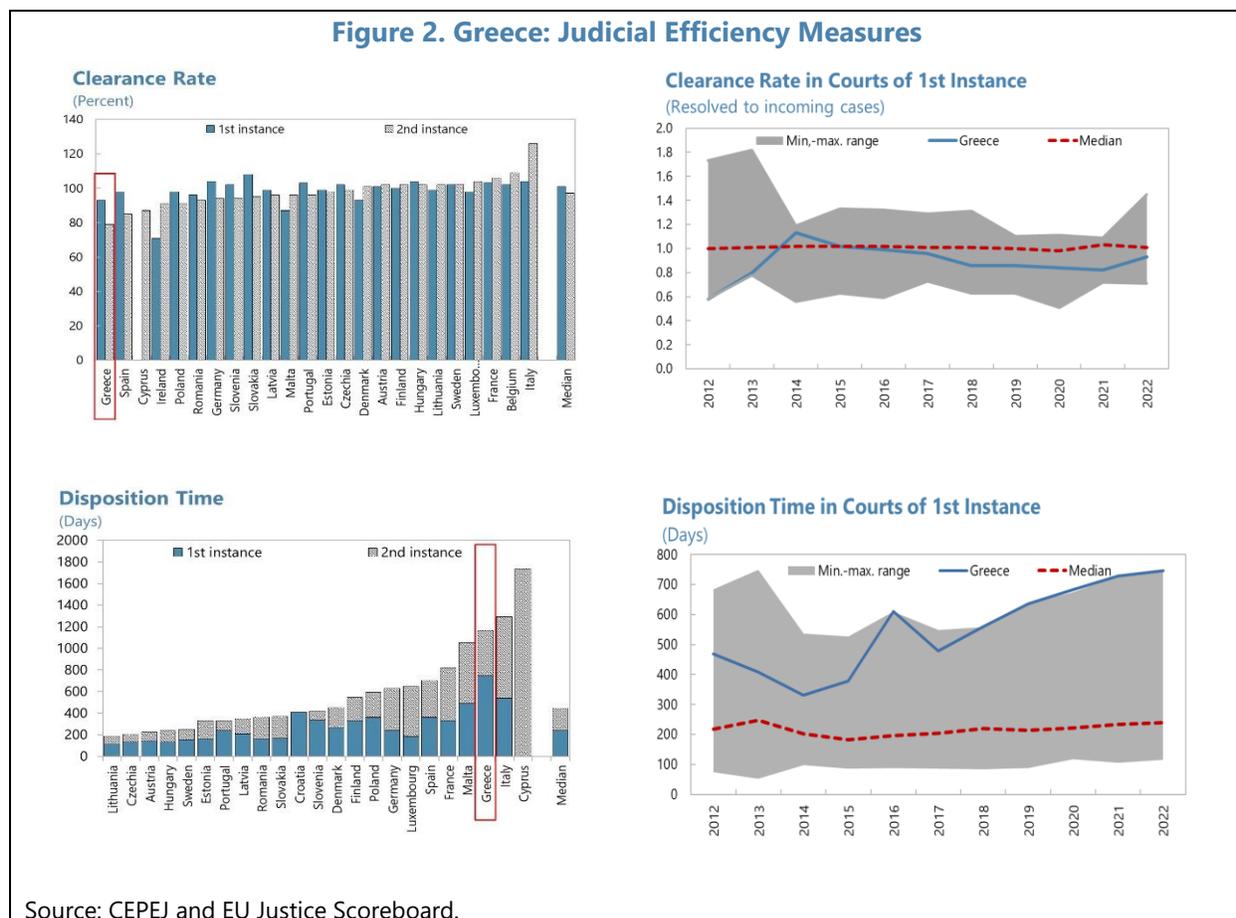
9. The length of dispute resolutions is pivotal for the correct functioning of the economy and good performance in other dimensions. A timely resolution of disputes is critical to reduce the risk of opportunistic lawsuits and prevent firms from suffering undue costs that may hurt their competitiveness and, for small firms, may even determine exit from business (Palumbo and others, 2013). In addition, trial length is key to guarantee the certainty of rules, which in turn assures that firms can make better investment choices because they know what rules will apply ex post. By

³ Bergthaler and Garrido (2017).

⁴ Bergthaler and Garrido (2017) provide a summary of earlier judicial reforms.

forcing litigants to endure long delays before a judgment is rendered, lengthy trials may compromise legal certainty and confidence in the justice system (Palumbo and others, 2013). The most commonly used measures of judicial efficiency are clearance rate and the estimated length of court proceedings (disposition time) (EC, 2024b).

10. Greece is one of the countries with the lowest judicial system efficiency in the EU, with only modest recent improvement. The clearance rate measures whether a court is keeping up with its incoming caseload. The indicator for civil and commercial cases in Greece has been well below 100 percent for both 1st and 2nd instance courts for almost the whole reporting period, implying that the courts were resolving fewer cases than the number of incoming cases, which was much lower than the EU average. The performance was particularly poor at the time of the Global Financial Crisis (GFC) and the European Debt Crisis (EDC) when the clearance rate dropped below 60 percent, creating a massive backlog in the system and leading to a jump in the disposition time indicator.⁵ The disposition time indicator estimates minimum time that a court would need to resolve a case while maintaining the current working conditions. Combining the data for 1st and 2nd instance courts, it takes almost 1,200 days in Greece to reach a decision for civil and commercial cases, which is considerably higher than the EU average of 446 days, with Greece recording the longest proceedings for 1st instance courts in the EU.



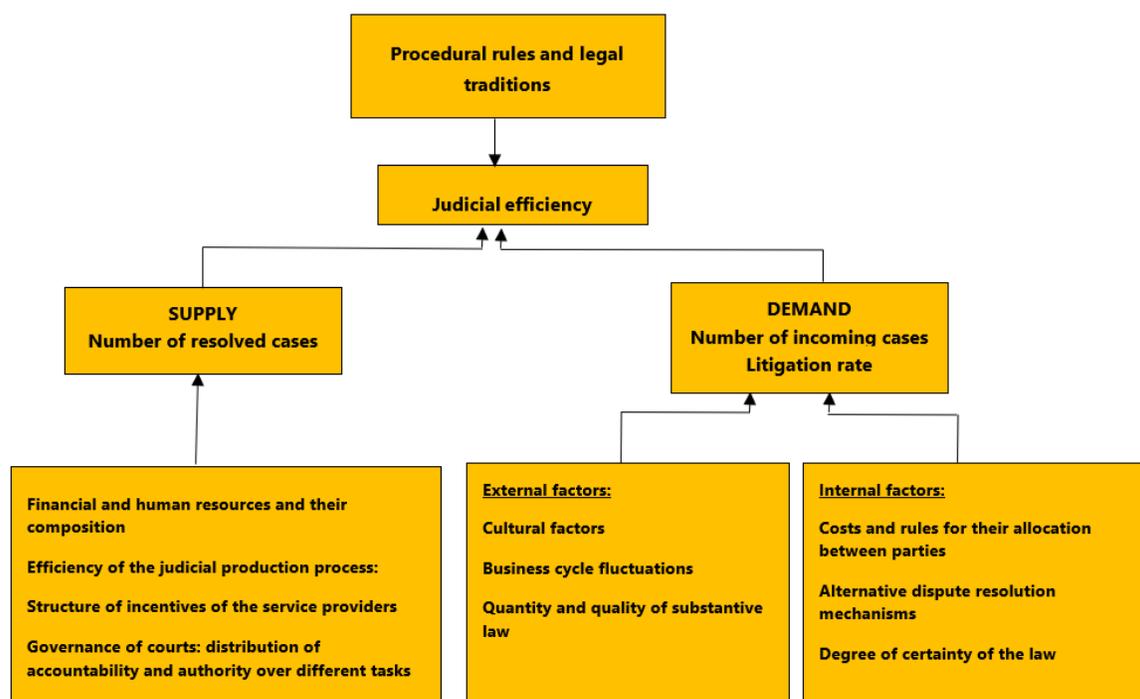
⁵ Mitsopoulou and Pelagidis (2007) report on low judicial system efficiency prior to the GFC.

D. Drivers of Judicial Efficiency

Conceptual Framework

11. The conceptual framework for analyzing judicial system efficiency hinges on the demand-supply approach. Building on earlier studies zooming separately in on demand and supply factors shaping civil justice efficiency, Palumbo and others (2013) and Lorenzani and Lucidi (2014) integrate these factors into one framework viewing the judicial system as a market where demand for and supply of justice meet. The demand for justice is measured by the number of incoming cases, driven by business cycle fluctuations, quantity and quality of law, costs and rules governing court proceedings, alternative dispute resolution mechanisms, with some influence from national social norms. The supply of justice is measured by the number of cases resolved, driven by financial and human resources, efficiency of judicial production process, structure of incentives of the service providers, and the governance of courts. According to this approach, the market for justice clears through adjustments in the length of court proceedings, with the inability of the system to satisfy the demand for justice generating congestion and delays.

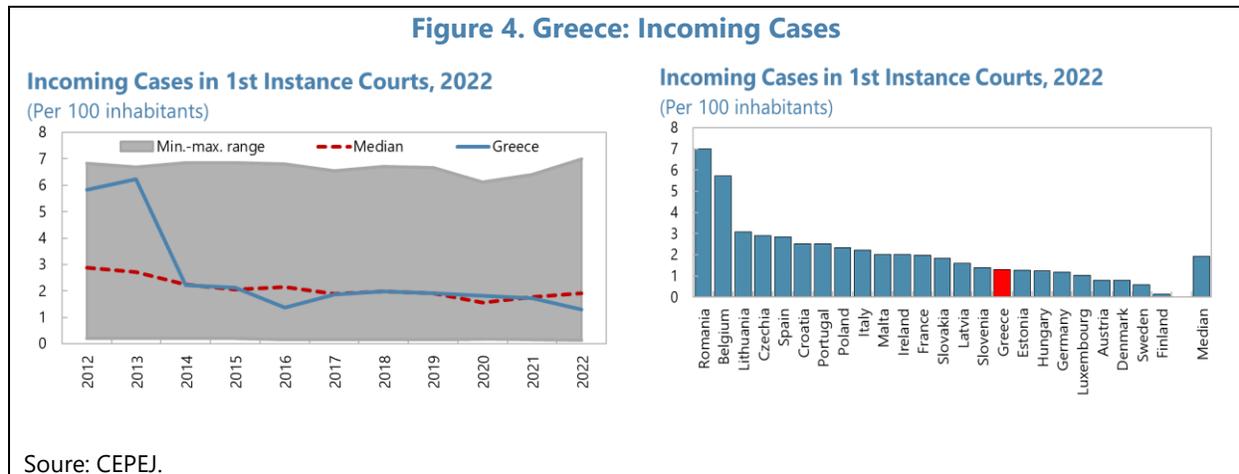
Figure 3. Greece: Conceptual Framework for Judicial Efficiency Drivers



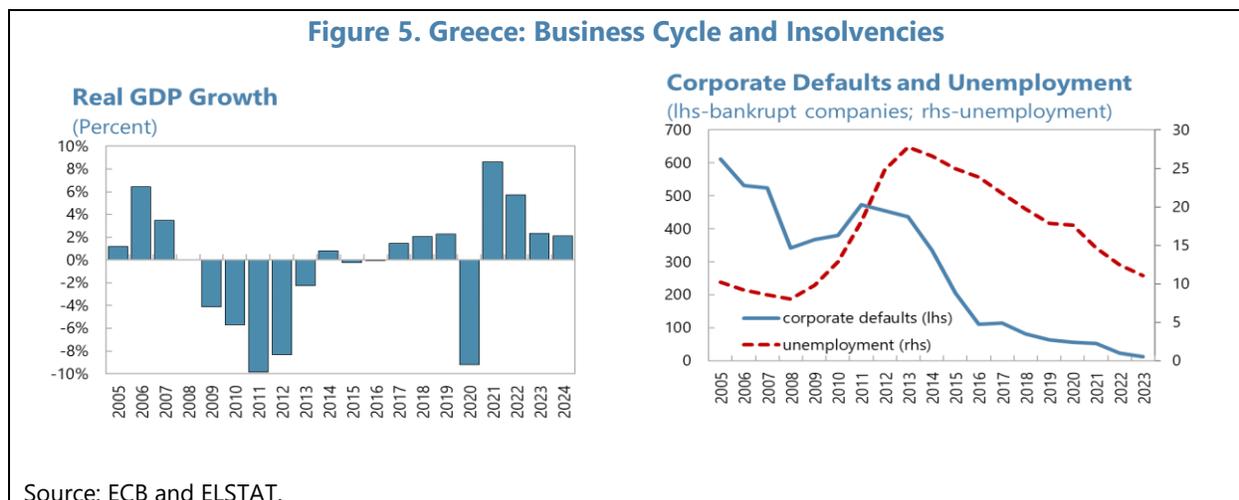
Sources: Palumbo and others (2013), and IMF staff.

Demand-side Factors

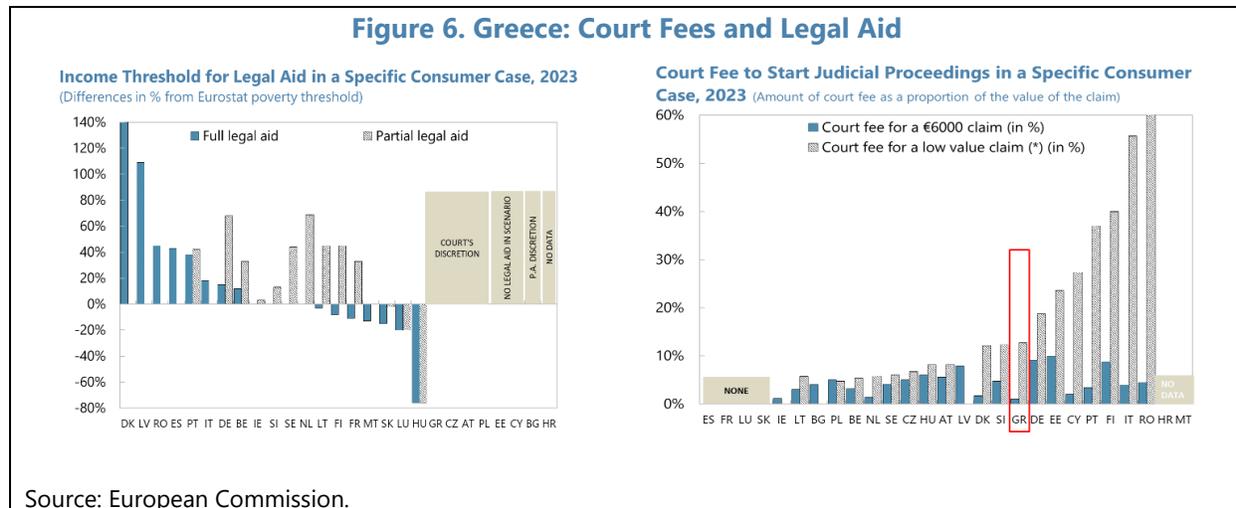
12. There was a massive increase in demand for judiciary services during the GFC and the EDC, generating congestion in the system. While the incoming cases have recently slowed down and are below the EU average, the shocks associated with the GFC and the EDC were of exceptional magnitude in Greece compared to the other countries. The increase in litigation implied that courts were faced with a larger number of cases to be solved. The resulting workload generated congestion and hence lengthened the duration of trials, given that the supply of justice did not adjust accordingly.



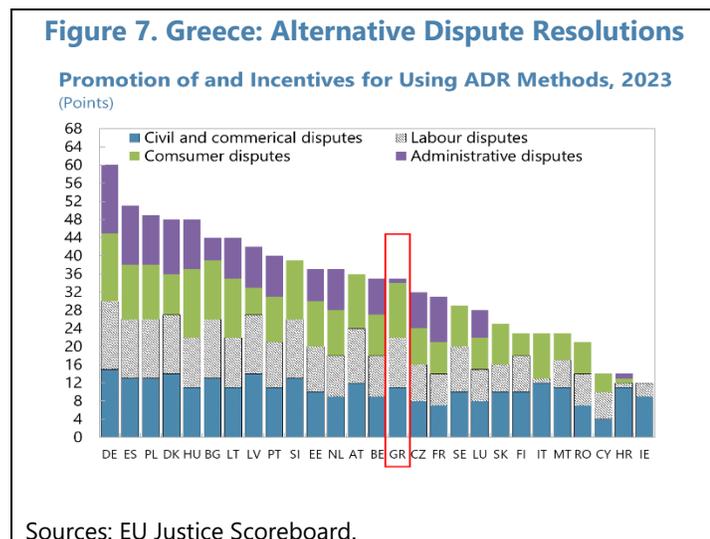
13. The distress period has resulted in significant business and personal insolvencies. The crisis period shocks resulted in a substantial recession in Greece suffering from a cumulative loss of around 30 percent of GDP over the 5-year period. This in turn triggered business and personal insolvencies on a massive scale, with corporates defaults spiking in 2011 and starting to decline only in 2014, while unemployment rate remaining elevated until 2020. Greece's experience associating economic downturns with higher litigation rates is consistent with the findings of Palumbo and others (2013) for OECD countries and of Ginsburg and Hoetker (2006) for Japan.



14. While court fees tend to be on the low side, legal aid is left for courts' discretion. Court fees to start judicial proceedings in Greece are generally on the low side compared to other EU countries. Beneficiary of legal aid in Greece can be a person whose capital annual income does not exceed the two-thirds of the lowest annual salaries, with discretion left to courts to determine the amount of legal aid (EC, 2024b). While access to legal aid is a fundamental right of the EU citizens, lower private costs of trial can be a contributing factor to higher litigation, with Palumbo and others (2013) showing some evidence for a negative correlation between litigation rate and cost of trial for OECD countries.



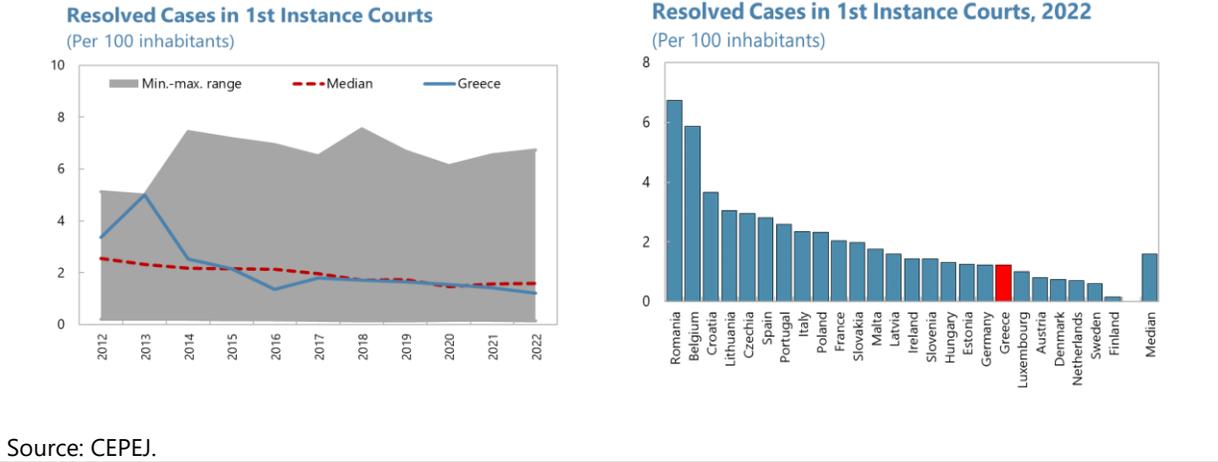
15. Alternative dispute resolutions have only recently become an important supporting factor. With the relatively low availability of alternative dispute resolutions in Greece during the crisis period, this mechanism could not help much in channeling disputes through out-of-court arbitration and mediation. But Greece has adopted a modern system since 2019, contributing to some extent to a declining trend in the litigation rate. This would be consistent with the evidence presented from the French civil courts by Belarouci (2021) and from the US courts by Heise (2010).



Supply-Side Factors

16. Supply of judiciary services has been on the downward trend since the crisis period. While there was some pick-up in judiciary supply measured by the resolved cases in Greece during the crisis period, there has generally been a declining trend, with Greece below the EU average and not responding adequately to elevated demand.

Figure 8. Greece: Resolved Cases



Source: CEPEJ.

17. Inadequate deployment of human and financial resources has led to low court resolution rate in Greece. Greece is a country characterized by a very high number of judges per capita compared to the EU average, along with one of the highest increases in the EU between 2012 and 2022, exceeding 60 percent. While a higher number of judges is generally expected to enhance the number of resolved cases, cross-country evidence from the EU countries presented by Lorenzani and Lucidi (2014) suggests no statistically significant relationship. This is in line with the findings of Beenstock (2001) who attributes it to the decreasing productivity of existing judges in a response to the appointment of additional judges. But support from non-judge staff has been very limited in Greece, leading to overburdening judges with administrative and other non-core tasks and resulting in lower efficiency compared to its EU peers, in line with the findings of Buscaglia and Dakolias (1999) for advanced and emerging economies that underwent judicial reforms. The relevance of judges' salaries for efficiency may be limited because higher pay could provide an incentive for judges to perform better but poorly designed reward schemes could demotivate top performers (Gouveia and others, 2017). In general, Voigt and El Bialy (2013) show that there is no strong evidence that more resources result in higher court resolution rate.

Figure 9. Greece: Human and Financial Resources

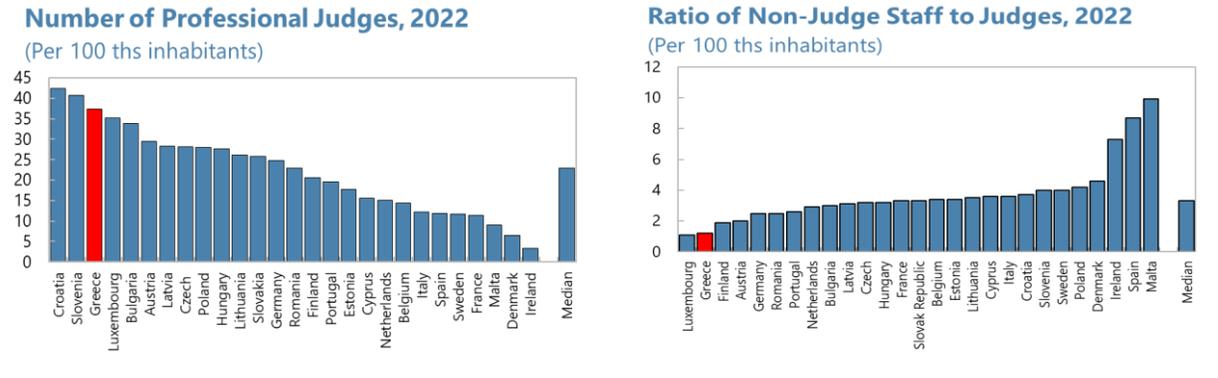
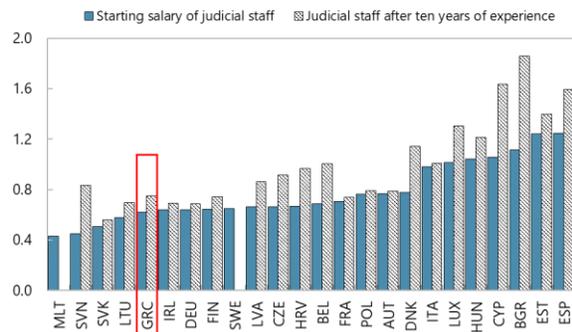
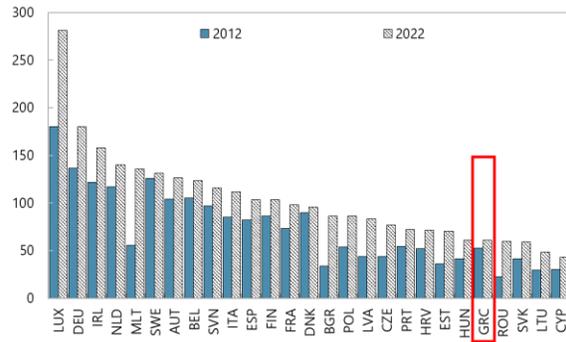


Figure 9. Greece: Human and Financial Resources (concluded)

Expert Judicial Staff Salary (2022)
(expert judicial staff salary / average salary)



Government Expenditure on Law Courts Per Inhabitant (EUR)

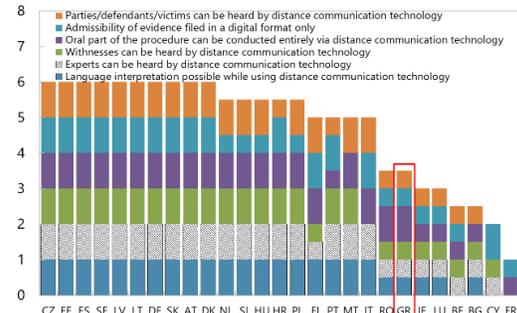


Source: CEPEJ.

18. A low level of digitalization has also contributed to a less efficient judiciary system. In order to benefit from digitalization, appropriate regulation allowing the use of distance communication technology for court and court-related procedures needs to be incorporated in national procedural rules, with Greece lagging behind its EU peers in this respect. Beyond digital-ready procedural rules, courts need to have appropriate tools and infrastructure in place for distance communication and secure remote access to the workplace, which are also needed for secure electronic communication between courts/prosecution services and legal professionals and institutions, with Greece lagging behind its EU peers also in this respect. The availability of various digital tools at the disposal of judges and judicial staff can streamline work processes, ensure fair workload allocation and lead to a significant time reduction. The possibility for courts to communicate electronically between themselves, as well as with legal professionals and other institutions, can streamline processes and reduce the need for paper-based communication and physical presence, which would lead to a reduction in the length of pre-trial activities and court proceedings. Greece deviates significantly from the EU average in this respect too. There is strong evidence from Lorenzani and Lucidi (2014) for the EU countries and from Palumbo and others (2013) for the OECD countries confirming the importance of digitalization for efficiency.

Figure 10. Greece: Digitalization

Procedural Rules Allowing Digital Technology in Courts in Civil/Commercial Cases, 2023 (Points)



Use of Digital Technology by Courts, 2023 (Points)

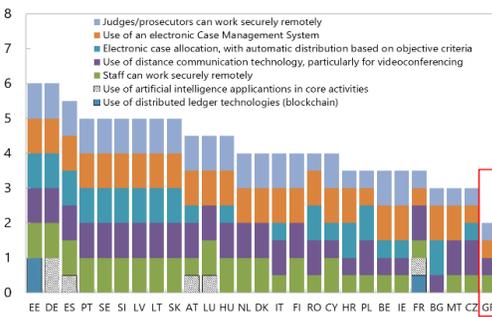
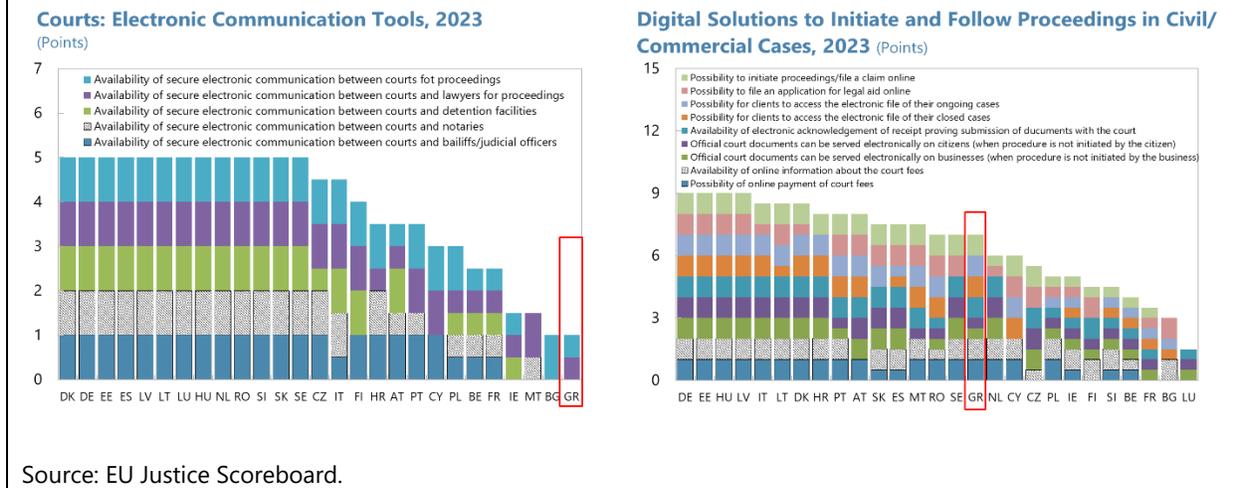
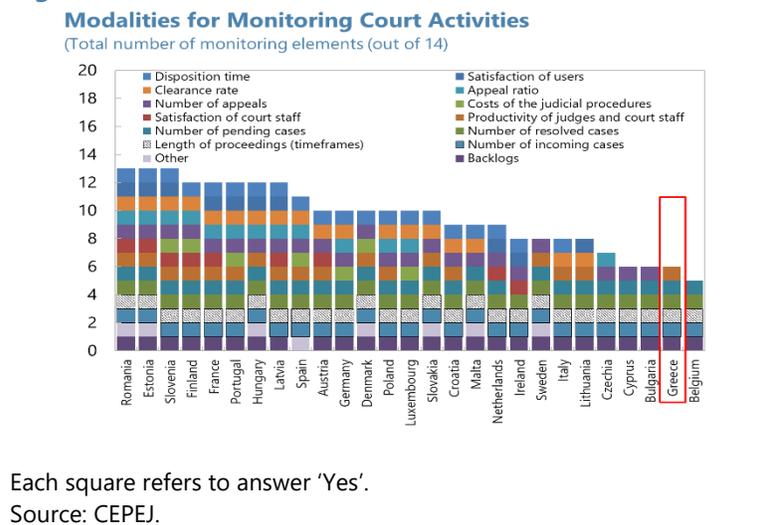


Figure 10. Greece: Digitalization (concluded)



19. Further room for improvements in the incentive structure of service providers. While the monitoring system of court activities in Greece embeds key elements such as backlogs, number of incoming, resolved, and pending cases, other relevant elements are not subject to an active monitoring. These other elements include disposition time, clearance rate, and appeal rate, which are essential components of the monitoring framework of court activities in the vast majority of the EU countries. De Figueiredo and others (2020) present evidence from the US federal civil cases documenting that judges close markedly more cases and decide more motions in the week immediately before they report their outputs as part of semi-annual evaluation cycles. Botero (2003) and Bosio (2023) point to the importance of adequate incentives that would create conducive environment for higher efficiency through increased accountability and competition.

Figure 11. Greece: Incentive Structure of Service Providers



E. Impact of Judicial Efficiency on Debt Enforcement and Insolvency Proceedings

20. Debt enforcement is significantly impacted by the shortcomings in the court system coupled with the rigidities in the Code of Civil Procedure. It could take several years for a creditor to obtain a court order with the debtor having multiple avenues to challenge and delay it. Delays frequently occur in respect of hearings of legal challenges against enforcement proceedings/auctions, and hearings are generally set for dates in the distant future. Measures are

underway to address these issues and help accelerate the proceedings, including by restricting the possibilities for adjourning trials under the newly revised Code of Civil Procedure. The newly revised code (to be adopted in June 2025) aims to create a simpler and more effective set of rules that is easier for judges to apply and limits the room for constant postponement of hearings. Further, the staffing of additional judges (30 previously magistrate judges) on debt enforcement proceedings to clear the backlog of cases is currently underway.

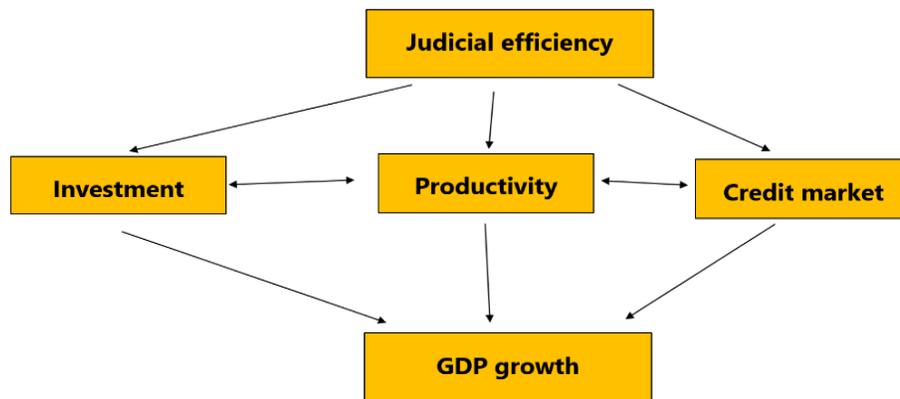
21. Progress in the implementation of a new insolvency framework remains insufficient, partly due to shortcomings in the court system. For corporate insolvency proceedings, the lack of procedural efficiency and strong judicial infrastructure are a huge challenge. One primary complication is the distant dates given to the hearing of the insolvency petition. Delays between the submission of an insolvency petition and the actual opening of a case are particularly detrimental for a corporate insolvency where timing is of the essence for saving a business. These delays clearly dissuade businesses from tapping the insolvency framework as the very slow pace coupled with the heavy bureaucracy would often mean a death sentence for a corporation. An added factor in corporate insolvencies is also the level of expertise required for the effective and successful handling of these cases. Unlike personal bankruptcy, where the issues at hand tend to be simpler, corporate insolvencies often involve more complex issues that require financial as well as legal expertise across an array of commercial law matters. The bankruptcy procedure has been impacted to a lesser extent, although delays may nevertheless occur at the hearing of legal challenges against the auction for the sale of the bankruptcy estate or against the creditor classification list with many petitions being filed by the debtor.

F. Impact of Judicial Efficiency on Economic Performance

Conceptual Framework

22. There are various transmission channels through which judicial system efficiency affects economic performance. Palumbo and others (2013) and Bosio (2023) identify investment, productivity, and credit markets as key channels. Given that contract enforcement is a critical element of judicial system performance, investment is linked to contract enforcement through a reduction in business and policy uncertainty, as well as an increase in expected returns (Dixit and Pindyck, 1994; Aboel and others, 2014). Productivity can benefit from judicial system efficiency through its impact on the business dynamism, firm size, and innovation (Cooley and others, 2004; Chemin, 2020). Credit markets are linked to judicial system efficiency through its impact on access to finance by corporates and households (Jappelli and others, 2005). Ponticelli and Alencar (2016) combine these channels into one theoretical framework allowing interactions between them, pointing to the importance of judicial efficiency for access to bank loans, investment, and productivity. These channels are pertinent to Greek economy which features smaller firm sizes, low private sector investments, low firm exit rates, and deteriorating allocation efficiencies since the EDC (Qu, 2025).

Figure 12. Greece: Conceptual Framework for Impact of Judicial Efficiency on Economic Performance



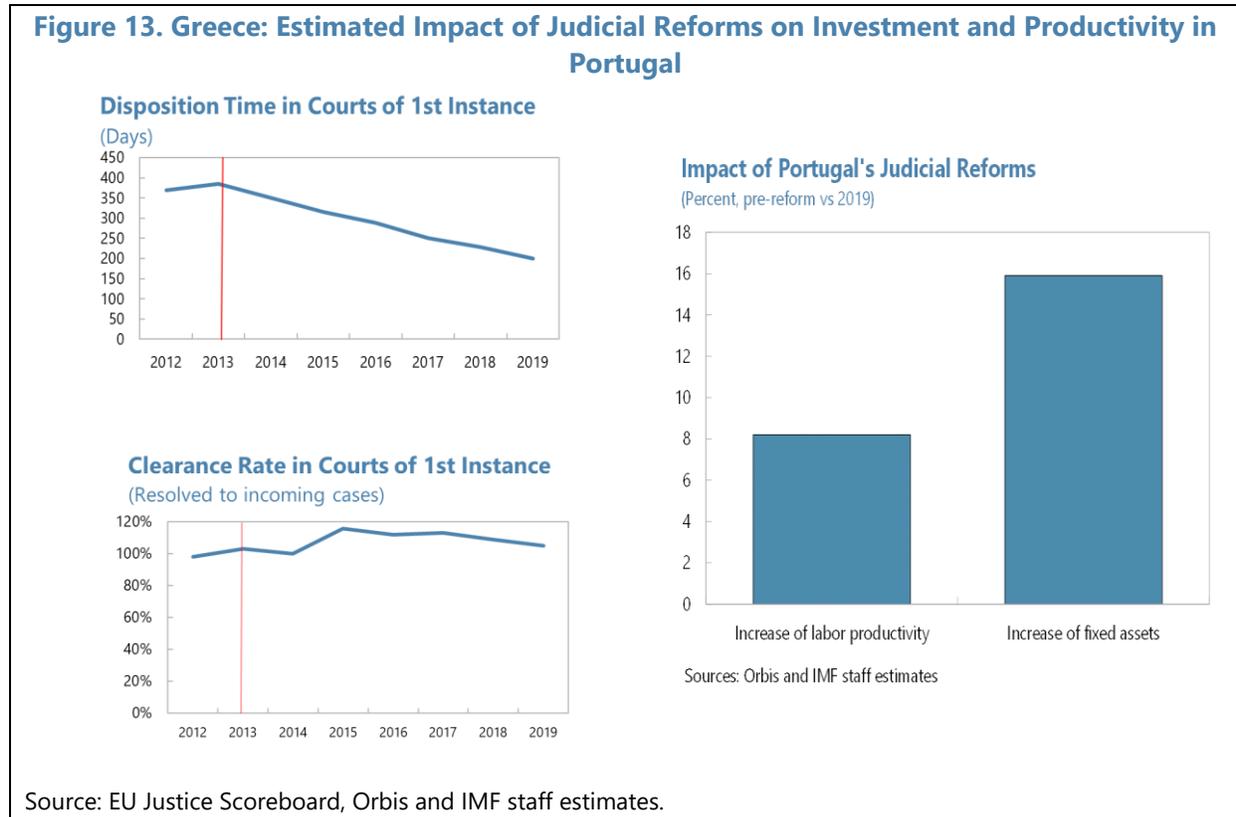
Sources: Ponticelli and Alencar (2016), Bosio (2023), Palumbo and others (2013), and IMF staff.

International Evidence

23. Cross-country empirical studies provide support for the relevance of these channels for economic performance. The relevance of investment is confirmed by Pang and Wu (2009) who present evidence that countries with better contract enforcement tend to have more efficient capital allocation in industries that are more contract-intensive, as well as by Lorenzani and Lucidi (2014) who show that higher judicial efficiency leads to higher foreign direct investment. The relevance of productivity is confirmed by Chemin (2020) who finds that judicial efficiency significantly improves firm productivity in sectors requiring more relationship-specific investments, with Lorenzani and Lucidi (2014) presenting evidence for the role of business dynamism in the form of firm entry and exit and Beck and others (2006) for the relevance of firm size. The relevance of credit market is documented by Qjan and Strahan (2007) and Bae and Goyal (2009) who find that better contract enforcement induces credit suppliers to increase loan size, lengthen loan maturity, and reduce loan spreads. Kapapolous and Rizos (2024) provide support for the relevance judicial efficiency for real growth per capita.

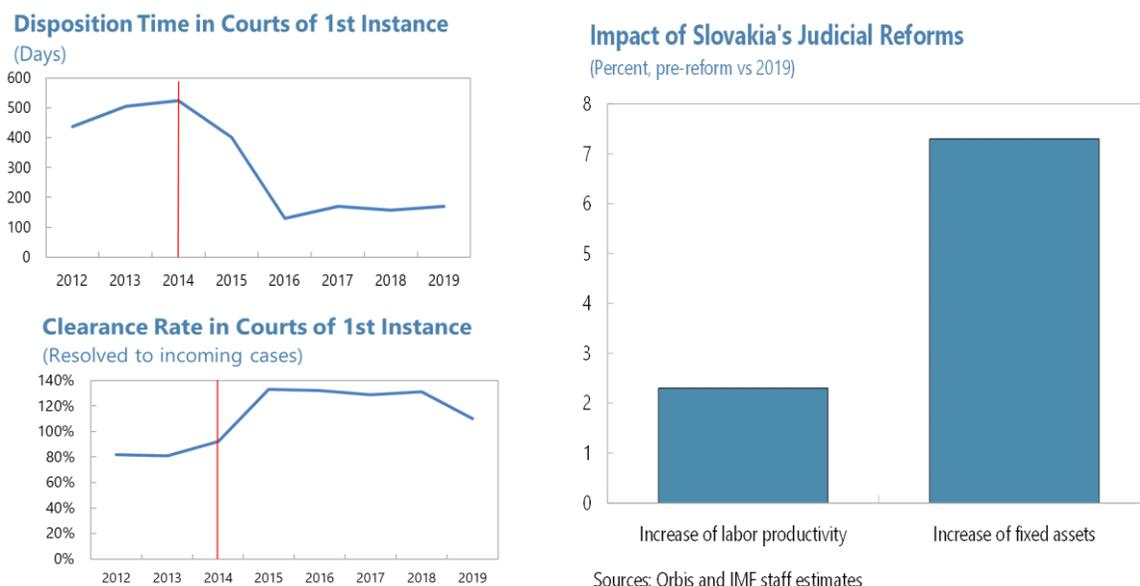
24. Portugal can potentially serve as an example of successful judicial system reforms. Building on the change in the territorial jurisdiction of courts in 2006, Portugal implemented ambitious judicial reforms aiming at improving efficiency between 2011 and 2013 (Pereira and Wemans, 2018 and 2022). The reforms included a new code of civil procedure facilitating the swift conduct of proceeds by judges and parties, and the implementation of the jurisdictional organization act creating court clusters allowing for greater economies of scale and professional specialization. The reforms also included the creation of the special task forces to reduce pending cases and the introduction of tighter supervision instruments, in addition to extending the toolkit for the alternative dispute resolution through mediation and tax arbitration regimes (Lorenzani and Lucidi, 2014). Benefitting from the reforms, the disposition time in the first instance courts declined from around 400 days in 2013 to around 200 days in 2019, with significant improvements for the

clearance rate. Evidence based on firm-level data for Portugal using the analytical framework by Chemin (2020) suggests a positive impact of the judicial reforms on investment and productivity in Portugal (Appendix I).



25. Slovakia’s judicial reforms can help shed some light on their economic impact too. Slovakia implemented a range of judicial reforms aiming at ensuring quality and effectiveness in adjudication as well as increasing transparency between 2012–16 (Spac and others, 2018). The reforms included establishing of the new court dealing with enforcement, with the main aim to reduce the caseload at the district and regional courts, as well as adoption of two new codes for the civil law and procedure (ENCJ, 2016). Benefitting from the reforms, the disposition time in the first instance courts declined from around 500 days in 2014 to around 200 days in 2019, while the clearance rate increased from around 80 percent in 2013 to around 120 percent in 2019. Similarly to the analysis employing the methodology by Chemin (2020) to Portugal, evidence based on firm-level data for Slovakia also suggests a positive impact of the judicial reforms on investment and productivity in Slovakia (Appendix I).

Figure 14. Greece: Estimated Impact of Judicial Reforms on Investment and Productivity in Slovakia



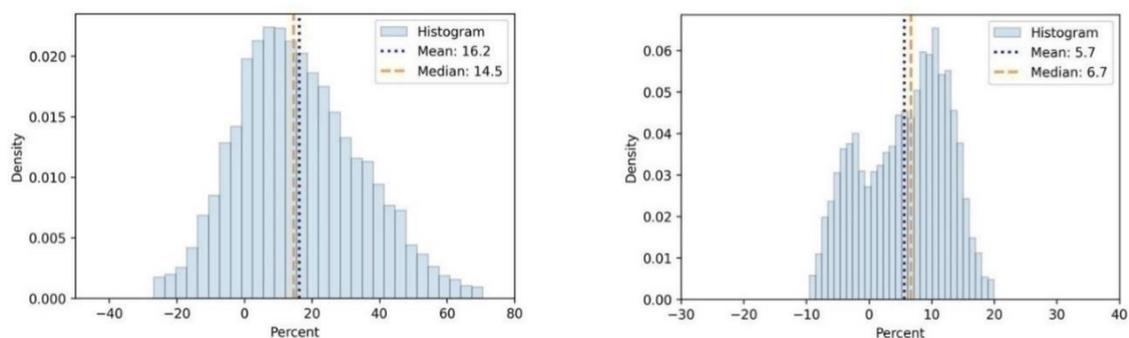
Source: EU Justice Scoreboard, Orbis and IMF staff estimates.

Policy Simulations

26. Simulations for Greece suggest good potential for boosting its economic performance.

Policy simulations leverage on pooling the firm-level data for Portugal and Slovakia building on the framework developed by Chemin (2020) who employs a standard ex post evaluation method in the form of the difference-in-difference model (Appendix I). The simulations assuming the average impact of reforms based on the analysis for Portugal and Slovakia suggest that Greece could benefit from judicial reforms in terms of gains in investment and productivity. In line with the results for Portugal and Slovakia, the simulated impact is higher for investment than for productivity. While the results are surrounded by a wide margin of error and presented solely for illustrative purposes, they suggest a meaningful growth dividend payout associated with judicial system efficiency reforms.

Figure 15. Greece: Simulated Impact of Judicial Reforms on Investment and Productivity for Greece



Sources: Orbis and IMF staff estimates.

G. Conclusions and Policy Implications

27. Greece's judicial system efficiency is one of the lowest in the EU. The length of dispute resolutions is pivotal for the correct functioning of the economy and good performance in other dimensions, but Greece is one of the countries with the lowest judicial system efficiency in the EU. While the new insolvency framework has helped reducing distressed debt in Greece, its implementation is hindered by an inefficient judicial system, with adverse impact on economic performance.

28. Earlier weaknesses in judicial efficiency have been amplified by the crisis period, with both demand and supply factors contributing. There was a massive increase in demand for judiciary services during the crisis period, leading to the congestion of the system. The crisis period has resulted in significant business and personal insolvencies. While court fees tend to be on the low side, legal aid is left for courts' discretion. Alternative dispute resolutions have only recently become an important supporting factor. Supply of judiciary services has been on the downward trend since the crisis period, with important factors being inadequate deployment of human and financial resources and a low level of digitalization. Further room for improvements in the incentive structure of judges and their specialization are desirable.

29. Enhancing judicial efficiency could potentially boost economic performance. Key transmission channels through which judicial system efficiency affects economic performance include investment, productivity, and credit market. Cross-country empirical studies provide support for the relevance of these channels for economic performance. Portugal and Slovakia can serve as relevant examples of judicial system reforms benefitting economic performance in terms of investment and productivity. Illustrative policy simulations for Greece suggest good potential for boosting its economic performance.

30. Addressing the efficiency challenges requires a multi-pronged approach that focuses both on its quantitative as well as qualitative aspects. Case processing times, court backlogs and staffing levels are key quantitative indicators of judicial efficiency affecting debt enforcement and insolvency proceedings. The currently ongoing reform of the judicial system, leveraging the EU funding, appropriately prioritizes actions to address the efficiency challenges through court reorganization, digitalization, training, and shifting away some tasks from judges. Quantitative indicators should be established to monitor progress for these policy priorities, being sufficiently specific and providing for the possibility of aggregation and disaggregation at different levels. Qualitative factors in terms of the specialization of judges and the professionalization of insolvency representatives, while more challenging to measure, are equally important in enhancing judicial efficiency.

31. Consideration could be given to setting up commercial courts to enable judges to specialize in commercial matters on a permanent basis. The complexity and urgency of insolvency cases, the high economic stakes involved, and the inevitable discretion that courts have in these cases, call for specialized judges with the necessary qualifications and expertise. These requirements are essential to ensure that court proceedings work efficiently and provide legal

certainty.⁶ Having judges that specialize in commercial matters—as opposed to judges that rotate between all types of civil cases—creates synergies by providing judges with expertise in areas (e.g. company law, commercial contracts, intellectual property) that are relevant for decision-making in complex cases of reorganizations and liquidations. Indeed, a resolution of a corporate insolvency case will usually involve multiple aspects of these different legal areas. Enhancing support staffing and ensuring an adequate budget are also important.⁷

32. Judicial statistics have an important role to play in the effective management of the court system. Better qualitative and quantitative statistics would support proper budgetary and staffing decisions. Data systems should cover the entire system and not just singular courts. Resources could be assigned and reallocated as needed across the system for cases to be effectively managed. Adequate and centralized management at individual court level and system wide, based on reliable and comprehensive statistics, would ensure there is such flexibility in moving resources across courts and rebalancing workload as needed in a timely manner.⁸

33. Procedural efficiency will be just as key to a well-functioning court system. The ongoing work on revising and simplifying the Code of Civil Procedure is a step in the right direction. It is important that the functioning of the court system be supported by an efficient and flexible set of civil procedure rules that limit the room for postponement and adjourning of trials and delaying tactics by parties.

34. Further development, adequate regulation and continued supervision of insolvency professionals will remain crucial for strengthening institutional capacity.⁹ Insolvency professionals play a vital role in the insolvency process. In an efficient and well-functioning system, an insolvency professional is well-qualified and equipped to take decisions with legal effect on many matters in the insolvency case, leaving the court and judge to act as a recourse should these decisions be challenged. Hence, the qualification and skillset of insolvency professionals have a direct bearing on alleviating the workload of the court, allowing judges to focus their already scarce resources strategically on more complex issues.

35. Bold and swift policy actions are indispensable. These actions are required not only to address the legacy issues, but even more importantly, to create conditions for higher growth and greater economic resilience going forward. The ongoing reform of the judicial system has correctly identified key challenges, appropriately prioritizing ensuing actions to address them, but requires a swift execution to meet the ambitious disposition time target and generate a meaningful growth dividend payout in foreseeable future.

⁶ See WB Principles D1.2 and D1.5. See also Article 25 of Directive 2019/1023 on restructuring and insolvency (“the Directive”) and Garrido et al (2021), p.31.

⁷ The upcoming appointment of 300 new judicial clerks is a positive step and continued efforts—be it continuously managing staffing levels or trainings—are needed to ensure that judges are equipped with adequate support staff.

⁸ See WB Principles D3.

⁹ See WB Principles D8. See also Articles 26-27 of the Directive and Garrido et al (2012), p. 31-32.

Appendix I. Technical Aspects

Data

1. The data to analyze the impact of judicial reform on productivity and fixed asset growth (Section D) are sourced from the Orbis data set. We follow Díez et al. (2021) to clean the data. The analysis is confined to the market economy sectors and it therefore excludes sectors including education, human health and social work activities, and public administration and defense, as defined by NACE Rev. 2. The dataset is annual and covers period from 2010 to 2020. To filter out the disruptive the impact of Covid19, we truncate the data up to year 2019. For the estimates of the impact of judicial reforms, we focus on firms that are available both in the year before the reform (2012 for Portugal, and 2013 for Slovakia) and in year 2019, the end of our sample. For the simulation analysis of counterfactual impact on Greek firms, we use year 2019 as the starting point. The data cleaning leaves us with about 62 thousand, 10 thousand and 5 thousand firms for Portugal, Slovakia and Greece respectively.

Methodology

2. The impact of judicial reform is estimated employing the standard ex-post evaluation methodology in the form of the difference-in-difference technique. The methodology allows to examine the difference in responses of the court-sensitive sectors relative to sectors that are less reliant on courts. The latter serves as a control group for the impact of the business cycle and other concurrent reforms which affect all firms. Our empirical strategy follows the one proposed by Chemin (2020). Building on the seminal contributions by Levchenko (2007) and Nunn (2007), we identify the court-sensitive sectors as those that are more capital intense, namely, manufacturing, financial and insurance activities, real estate activities and construction. They will benefit more from a more efficient judicial system which will relieve fixed assets trapped in less productive firms. The regressions to estimate impacts of judicial reforms is set up as the following and estimated separately for fixed asset growth and labor productivity growth:

$$\ln \text{Fixed assets}_{i,t} = c_i + \gamma_t + a \cdot \text{firm features}_{i,t-lags} + \beta D_t I_{i \in \text{court sensitive}} + \varepsilon_{i,t},$$

and

$$\ln \text{MRPL}_{i,t} = c_i + \gamma_t + a \cdot \text{firm features}_{i,t-lags} + \beta D_t I_{i \in \text{court sensitive}} + \varepsilon_{i,t},$$

where D_t denotes a dummy variable for judicial reforms, and the firm features include lagged values of the firm's log fixed assets, log marginal revenue productivity of capital and labor in the year before the judicial reform. The coefficient β stands for the impact of judicial reforms.

Regression Results

3. Table 1 and Table 2 below shows the estimates of the regressions. The standard errors are in brackets.

Table 1. Greece: Impact of Judicial Reforms on log Labor Productivity Growth				
	Portugal		Slovakia	
In Fixed assets	-0.054		-0.047	
	(0.001)		(0.003)	
In MRPK	-0.074		-0.057	
	(0.001)		(0.004)	
$I_{i \in \text{court sensitive}}$	0.077	0.083	0.021	0.023
	(0.004)	(0.004)	(0.011)	(0.011)

Table 2. Greece: Impact of Judicial Reforms on log Fixed Assets Growth				
	Portugal		Slovakia	
In Fixed assets	-0.073		-0.127	
	(0.002)		(0.007)	
In MRPK	0.159		0.087	
	(0.002)		(0.008)	
$I_{i \in \text{court sensitive}}$	0.141	0.159	0.021	0.073
	(0.007)	(0.007)	(0.021)	(0.020)

Policy Simulation

4. We apply the estimates to Greek firms' data in a scenario of improved efficiency of courts. To quantify the heterogeneous impacts on firms with different features, we refined the regressions discussed in the previous paragraph as below:

$$\ln \text{Fixed assets}_{i,t} = c_i + \gamma_t + a \cdot \text{firm features}_{i,t-lags} + D_t I_{i \in \text{court sensitive}} \cdot \beta \text{firm features}_{i,s,t} + \varepsilon_{i,t}$$

and

$$\ln \text{MRPL}_{i,t} = c_i + \gamma_t + a \cdot \text{firm features}_{i,t-lags} + D_t I_{i \in \text{court sensitive}} \cdot \beta \text{firm features}_{i,s,t} + \varepsilon_{i,t}$$

where s stands for NACE Rev. 2 level 2 industries. The conditional variables, $\text{firm features}_{i,s,t}$, includes industry level fixed coefficients, firm's log fixed assets, log marginal revenue productivity of capital and labor relative to the industry average. The results of the simulation are shown in Figure 15 of the main text.

References

- Aboal, D., N. Noya, and A. Rius, "Contract Enforcement and Investment: A Systematic Review of the Evidence," *World Development* 64 (2014), 322–338.
- Bae, K.H. and V.K. Goyal (2009), "Creditor Rights, Enforcement, and Bank Loans", *Journal of Finance*, 64(2), 823-860.
- Bank of Greece (2024) Financial Stability Review, November.
- Beck, T., A. Demirguc-Kunt, and V. Maksimovic (2006), "The Influence of Financial and Legal Institutions on Firm Size", *Journal of Banking & Finance*: 2995–3015.
- Beenstock, M. 2001. "The Productivity of Judges in the Courts of Israel," *Israel Law Review* 35(2): 249-265.
- Belarouci, M (2021), "Efficiency of judicial conciliation activities in French courts: Evidence from a bad-output Data Envelopment Analysis (DEA) framework," Post-Print hal-03355040, HAL.
- Bergthaler, W and J. Garrido (2017) Insolvency and enforcement issues in Greece, Selected Issues Paper.
- Bosio, E. (2023). "A Survey of Judicial Effectiveness: The Last Quarter Century of Empirical Evidence," Policy Research Working Paper Series 10501, The World Bank.
- Botero, J., R. La Porta, F. Lopez-de-Silanes, A. Shleifer and A. Volokh. 2003. "Judicial reform," *The World Bank Research Observer*, 18(1): 61–88.
- Buscaglia, E. and M. Dakolias (1999). "Comparative International Study of Court Performance Indicators", *Legal and Judicial Reform Series*, World Bank Publications and Research on Law and Justice Institutions,
- Chemin, M. 2020. "Judicial efficiency and firm productivity: Evidence from a world database of judicial reforms." *Review of Economics and Statistics*, 102(1): 49–64.
- Cooley, T., Marimon, R., & Quadrini, V. (2004). Aggregate consequences of limited contract enforceability. *Journal of Political Economy*, 112(4), 817–847.
- Coutinho, L. & A. Kappeler & A. Turrini (2023). "Insolvency Frameworks across the EU: Challenges after COVID-19," *European Economy - Discussion Papers* 182, Directorate General Economic and Financial Affairs (DG ECFIN), European Commission.
- de Figueiredo, M, A. Lahav and P. Siegelman. 2020. "The Six-Month List and the Unintended Consequences of Judicial Accountability," *Cornell Law Journal*, 105(2): 363-456.

Díez, F., Fan, J., and Villegas-Sanchez, C. (2021). "Global Declining Competition." *Journal of International Economics* 132 (2021): 103492.

Dixit, A. K., & Pyndick, R. (1994). *Investment under uncertainty*. Princeton: Princeton University Press.

European Banking Authority (2024) Risk Dashboard, December.

European Commission (2024a) Post-Program Surveillance Report, Autumn, November.

European Commission (2024b) EU Justice Scoreboard, June.

European Commission (2024c) Rule of Law Report for Greece, July.

European Network for Councils of the Judiciary (2016) Annual Report.

Garrido et al (2021), "Restructuring and Insolvency in Europe: Policy Options in the Implementation of the EU Directive", IMF Working Paper.

Ginsburg and Hoetker (2006), "The Unreluctant Litigant? An Empirical Analysis of Japan's Turn to Litigation", *Journal of Legal Studies*, 35: 31-59

Gouveia A., S. Santos and C. Herber. 2017. "The impact of structural reforms of the judicial system: a survey," GEE Papers 0064, Gabinete de Estratégia e Estudos, Ministério da Economia (January): 1-40.

Heise, M. 2010. "Why ADR Programs Aren't More Appealing: An Empirical Perspective," *Cornell Law Faculty Publications*. March, p. 920-946.

International Monetary Fund (2023) Article IV Consultations Staff Report.

International Monetary Fund (2022) Article IV Consultations Staff Report.

Jappelli, T., M. Pagano and M. Bianco (2005), "Courts and Banks: Effects of Judicial Enforcement on Credit Markets", *Journal of Money Credit and Banking*, 37(2): 223-244.

Kapopoulos p. & A. Rizos, (2024). "Judicial efficiency and economic growth: Evidence based on European Union data," *Scottish Journal of Political Economy*, *Scottish Economic Society*, vol. 71(1), pages 101-131, February.

Levchenko, A. (2007). "Institutional quality and international trade", *The Review of Economic Studies*, 74(3): 791-819.

Mitsopoulos, M and T Pelagidis. 2007. "Does staffing affect the time to dispose cases in Greek courts?" *International Review of Law and Economics*, 27(2): 219-244.

Nunn, N. (2007), "Relationship-Specificity, Incomplete Contracts and the Pattern of Trade", *The Quarterly Journal of Economics* 122(2): 569-600.

- Lorenzani, D., and F. Lucidi. (2014). "The Economic Impact of Civil Justice Reforms." European Commission Economic Papers 530, European Commission, Brussels.
- Palumbo, G., G. Giupponi, . Nunziata, and J. S. Mora-Sanguinetti, (2013). "Judicial Performance and Its Determinants," OECD Economic Policy paper 5.
- Pang, J., & Wu, H. (2009). Contract enforcement and the allocation of capital (Unpublished manuscript). New Orleans: Tulane University, and Edmonton: Department of Economics, University of Alberta.
- Pereira, Manuel Coutinho and Lara Wemans (2022) Characteristics of parties and duration of insolvency cases in Portugal, Economic Bulletin and Financial Stability Report Articles and Banco de Portugal Economic Studies.
- Pereira, Manuel Coutinho and Lara Wemans (2018). "How long does it take for a debt to be enforced by the Portuguese judicial sector?" Banco de Portugal - Economic Studies, 4(2), 1–28.
- Ponticelli, J. and L. S. Alencar (2020). "Court Enforcement, Bank Loans, and Firm Investment: Evidence from a Bankruptcy Reform in Brazil." *The Quarterly Journal of Economics*, 131(3), 1365–1413.
- Qian, J. and P. Strahan (2007), "How Law and Institutions Shape Financial Contracts: The Case of Bank Loans", *Journal of Finance*, 62(6): 2803-2834.
- Qu, Ritong (2025). "Improve Resource Allocation to Boost Growth." Greece: Selected Issues Paper.
- Spac, S., M. Simalcik and G. Sipos (2018) Let's Judge the Judges. How Slovakia Opened its Judiciary to Unprecedented Public Control, Transparency International Slovakia.
- Voigt, S. and N. El Bialy (2012), Identifying the Determinants of Judicial Performance: Taxpayers' Money Well Spent?, Working Paper.
- Voigt, S; El-bialy, N. (2016) *European Journal of Law and Economics*; New York Vol. 41, Iss. 2, 283-319.
- World Bank (2023) Report on the update of Judicial Map baseline and Judicial Map benchmarking and analysis of the list of planned justice sector infrastructure projects set out in the Greek National Recovery and Resilience Plan (NRRP).
- World Bank Principles for Effective Insolvency and Creditor and Debtor Regimes.