What is next?
Public debt and economic growth in Greece

George Economides

Athens University of Economics and Business, HOU, and CESifo

July 7, 2022

Motivation

- The covid-19 pandemic struck Greece in early 2020 when it was just starting to embark on a moderate growth path after years of depression;

Motivation

- The covid-19 pandemic struck Greece in early 2020 when it was just starting to embark on a moderate growth path after years of depression;
    - Greece had already lost more than 25% of its GDP during its sovereign debt crisis in 2009-2016.

Motivation

- The covid-19 pandemic struck Greece in early 2020 when it was just starting to embark on a moderate growth path after years of depression;
  - Greece had already lost more than 25% of its GDP during its sovereign debt crisis in 2009-2016.
  - Moreover, the pandemic crisis (and now the energy crisis) found the country with limited fiscal space;

Motivation

- The covid-19 pandemic struck Greece in early 2020 when it was just starting to embark on a moderate growth path after years of depression;
  - Greece had already lost more than 25% of its GDP during its sovereign debt crisis in 2009-2016.
  - Moreover, the pandemic crisis (and now the energy crisis) found the country with limited fiscal space;
    - its public debt was already 180% of GDP at the end of 2019 and

Motivation

- The covid-19 pandemic struck Greece in early 2020 when it was just starting to embark on a moderate growth path after years of depression;
  - Greece had already lost more than 25% of its GDP during its sovereign debt crisis in 2009-2016.
  - Moreover, the pandemic crisis (and now the energy crisis) found the country with limited fiscal space;
    - its public debt was already 180% of GDP at the end of 2019 and
    - most of it (around 70%) was in the hands of non-market European Union institutions as a result of the fiscal bailouts in the 2010s.

Motivation

- In an effort to stem the pandemic, the Greek government has been forced to take extended lockdown measures which have reversed the growth dynamics of the Greek economy and, at the same time

Motivation

- In an effort to stem the pandemic, the Greek government has been forced to take extended lockdown measures which have reversed the growth dynamics of the Greek economy and, at the same time
- to take severe fiscal stimulus measures in an attempt to counter the economic implications of the pandemic.

Motivation

- In an effort to stem the pandemic, the Greek government has been forced to take extended lockdown measures which have reversed the growth dynamics of the Greek economy and, at the same time
- to take severe fiscal stimulus measures in an attempt to counter the economic implications of the pandemic.
- Between 2019 and 2020, the GDP fell by 9% and the public debt to GDP ratio jumped from 180% to around 206% of GDP (European Commission, 2021, and CESifo's EEAG Report on the European Economy, 2021).

Motivation

- In an effort to stem the pandemic, the Greek government has been forced to take extended lockdown measures which have reversed the growth dynamics of the Greek economy and, at the same time
- to take severe fiscal stimulus measures in an attempt to counter the economic implications of the pandemic.
- Between 2019 and 2020, the GDP fell by 9% and the public debt to GDP ratio jumped from 180% to around 206% of GDP (European Commission, 2021, and CESifo's EEAG Report on the European Economy, 2021).
- Greece benefited by the new asset purchase programme, the Pandemic Emergency Purchase Programme (PEPP) (ECB).

Motivation

- In an effort to stem the pandemic, the Greek government has been forced to take extended lockdown measures which have reversed the growth dynamics of the Greek economy and, at the same time
- to take severe fiscal stimulus measures in an attempt to counter the economic implications of the pandemic.
- Between 2019 and 2020, the GDP fell by 9% and the public debt to GDP ratio jumped from 180% to around 206% of GDP (European Commission, 2021, and CESifo's EEAG Report on the European Economy, 2021).
- Greece benefited by the new asset purchase programme, the Pandemic Emergency Purchase Programme (PEPP) (ECB).
- Recovery Fund (EC).

Motivation

- What is next?

Motivation

- What is next?
- Can Greece manage to grow out its public debt?

Motivation

- What is next?
- Can Greece manage to grow out its public debt?
- Or will history repeat itself and the country will experience a new sovereign debt crisis and a new depression similar to the one ten years ago?

Motivation

- What is next?
- Can Greece manage to grow out its public debt?
- Or will history repeat itself and the country will experience a new sovereign debt crisis and a new depression similar to the one ten years ago?
- The million-dollar question here is which are the engines of, or the barriers to, growth in Greece.

Motivation

- What is next?
- Can Greece manage to grow out its public debt?
- Or will history repeat itself and the country will experience a new sovereign debt crisis and a new depression similar to the one ten years ago?
- The million-dollar question here is which are the engines of, or the barriers to, growth in Greece.
- This is because, given the inherited level of public debt, growth exerts the so-called denominator effect on the public debt to GDP ratio.

Motivation

- To answer these questions, it is necessary to understand how Greece has reached the current situation and what the lessons from the recent past are.

Motivation

- Four distinct periods in Greece from the 1980s onwards. These four periods correspond to:

Motivation

- Four distinct periods in Greece from the 1980s onwards. These four periods correspond to:
    - the 1980s and the first part of the 1990s;

Motivation

- Four distinct periods in Greece from the 1980s onwards. These four periods correspond to:
    - the 1980s and the first part of the 1990s;
    - the years of euphoria during the second part of the 1990s and the 2000s until the eruption of the global financial crisis in 2008;

Motivation

- Four distinct periods in Greece from the 1980s onwards. These four periods correspond to:
  - the 1980s and the first part of the 1990s;
  - the years of euphoria during the second part of the 1990s and the 2000s until the eruption of the global financial crisis in 2008;
  - the Greek sovereign debt crisis 2009-2016; and finally,

Motivation

- Four distinct periods in Greece from the 1980s onwards. These four periods correspond to:
  - the 1980s and the first part of the 1990s;
  - the years of euphoria during the second part of the 1990s and the 2000s until the eruption of the global financial crisis in 2008;
  - the Greek sovereign debt crisis 2009-2016; and finally,
  - the ongoing pandemic crisis since 2020 (plus the current energy crisis).

The origins of the current situation: 1980s and the mid-1990s

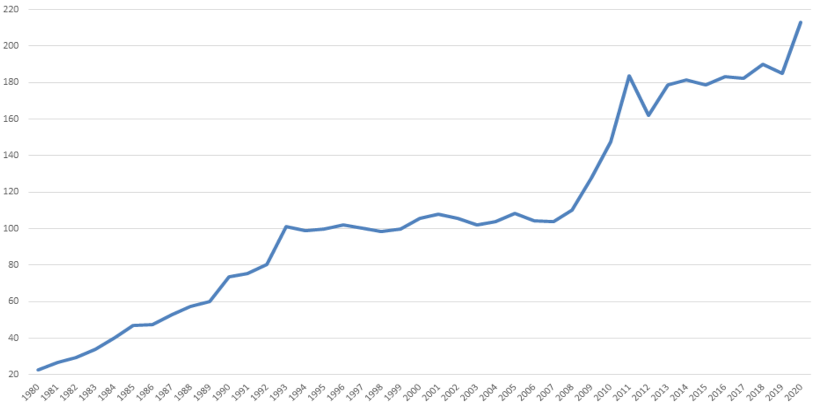
- A big expansion of the public sector (both in terms of size and role) and the beginning of an explosive rise in public debt.

The origins of the current situation: 1980s and the mid-1990s

- A big expansion of the public sector (both in terms of size and role) and the beginning of an explosive rise in public debt.
- Figures 1 and 2 illustrate respectively the paths of public debt as share of GDP and the growth rate of real GDP.

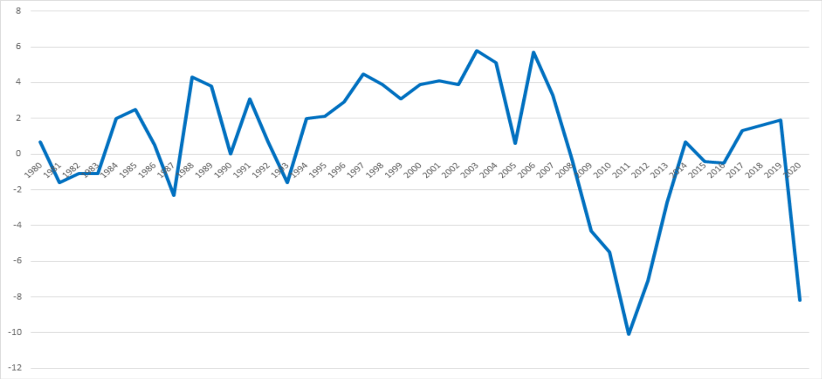
The origins of the current situation: 1980s and the mid-1990s

Figure 1: Public debt as % of GDP (1980-2020)



The origins of the current situation: 1980s and the mid-1990s

Figure 2: Growth rate of real GDP



The years of euphoria: the second part of the 1990s and the 2000s

- From the late 1990s to 2008, Greece, like most periphery countries in the EZ, enjoyed an exceptional economic boom.

The years of euphoria: the second part of the 1990s and the 2000s

- From the late 1990s to 2008, Greece, like most periphery countries in the EZ, enjoyed an exceptional economic boom.
- This was driven by a big rise in private demand and pro-cyclical fiscal policies.

The years of euphoria: the second part of the 1990s and the 2000s

- From the late 1990s to 2008, Greece, like most periphery countries in the EZ, enjoyed an exceptional economic boom.
- This was driven by a big rise in private demand and pro-cyclical fiscal policies.
- This demand-driven boom led to accumulation of large private, public and external debts.

The years of euphoria: the second part of the 1990s and the 2000s

- From the late 1990s to 2008, Greece, like most periphery countries in the EZ, enjoyed an exceptional economic boom.
- This was driven by a big rise in private demand and pro-cyclical fiscal policies.
- This demand-driven boom led to accumulation of large private, public and external debts.
- Rises in wages (at a rate incompatible with developments in productivity), prices and unit labor costs caused a loss in competitiveness.

The years of euphoria: the second part of the 1990s and the 2000s

- These developments, combined with resource misallocation (towards non-traded activities protected from competition by natural and political barriers) resulted in a vulnerable economic model.

The years of euphoria: the second part of the 1990s and the 2000s

- These developments, combined with resource misallocation (towards non-traded activities protected from competition by natural and political barriers) resulted in a vulnerable economic model.
- In addition, Greece displayed a big asymmetry in the quality of core institutional fundamentals relative to its EU partners.

The years of euphoria: the second part of the 1990s and the 2000s

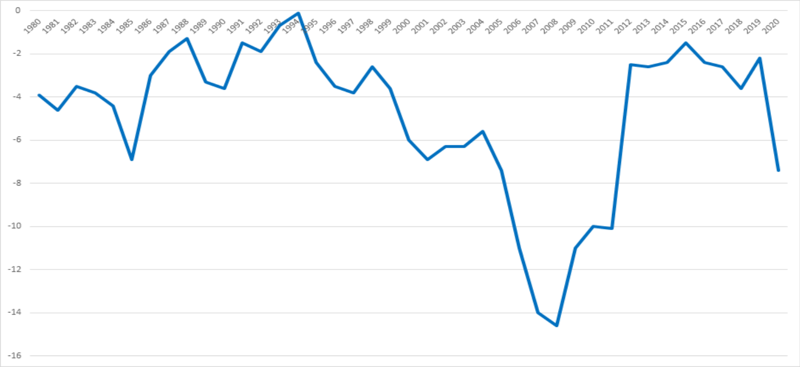
- These developments, combined with resource misallocation (towards non-traded activities protected from competition by natural and political barriers) resulted in a vulnerable economic model.
- In addition, Greece displayed a big asymmetry in the quality of core institutional fundamentals relative to its EU partners.
- Figures 3 and 4 plot Greece's current account and foreign debt as shares of GDP, while Figure 5 shows an index of property rights.

The years of euphoria: the second part of the 1990s and the 2000s

- These developments, combined with resource misallocation (towards non-traded activities protected from competition by natural and political barriers) resulted in a vulnerable economic model.
- In addition, Greece displayed a big asymmetry in the quality of core institutional fundamentals relative to its EU partners.
- Figures 3 and 4 plot Greece's current account and foreign debt as shares of GDP, while Figure 5 shows an index of property rights.
- The latter is widely believed to be a key measure of institutional quality and hence an important driver of sustainable economic growth.

The years of euphoria: the second part of the 1990s and the 2000s

Figure 3: Current account balance as % of GDP (1980-2020)

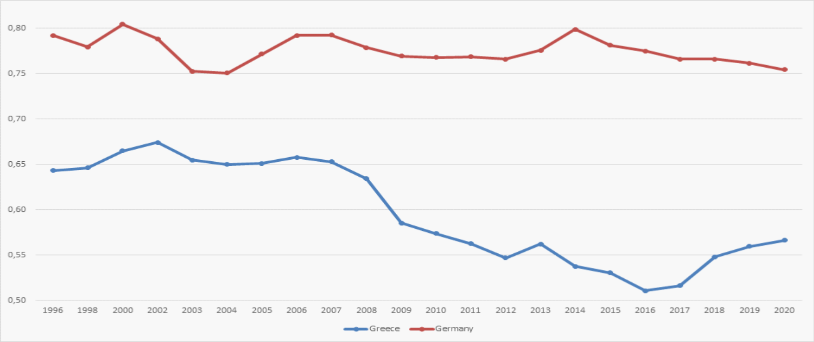


The years of euphoria: the second part of the 1990s and the 2000s

Figure 4: Foreign debt as % of GDP (2003-2020)

The years of euphoria: the second part of the 1990s and the 2000s

Figure 5: Institutional quality: Index of property rights (1996-2020)



The years of euphoria: the second part of the 1990s and the 2000s

- These imbalances were already present when the global crisis erupted in 2007-8.

The years of euphoria: the second part of the 1990s and the 2000s

- These imbalances were already present when the global crisis erupted in 2007-8.
- Such imbalances set the stage for a crisis; what is needed is only a shock to trigger the crisis (see e.g. Lorenzoni (2014)).

The years of euphoria: the second part of the 1990s and the 2000s

- These imbalances were already present when the global crisis erupted in 2007-8.
- Such imbalances set the stage for a crisis; what is needed is only a shock to trigger the crisis (see e.g. Lorenzoni (2014)).
- The shock came in the form of the global financial crisis that arrived in Europe in the summer of 2008.

The global financial crisis and the Greek great depression: 2008 to 2016

- In 2009, amid new unfavorable developments (unpleasant news about the country's actual public finances, big riots in Athens in December 2008 combined with political polarization in the years after, the release of reports by the EC and rating agencies expressing fears of sovereign insolvency, etc)

The global financial crisis and the Greek great depression: 2008 to 2016

- In 2009, amid new unfavorable developments (unpleasant news about the country's actual public finances, big riots in Athens in December 2008 combined with political polarization in the years after, the release of reports by the EC and rating agencies expressing fears of sovereign insolvency, etc)
    - confidence was undermined;

The global financial crisis and the Greek great depression: 2008 to 2016

- In 2009, amid new unfavorable developments (unpleasant news about the country's actual public finances, big riots in Athens in December 2008 combined with political polarization in the years after, the release of reports by the EC and rating agencies expressing fears of sovereign insolvency, etc)
  - confidence was undermined;
  - GDP collapsed;

The global financial crisis and the Greek great depression: 2008 to 2016

- In 2009, amid new unfavorable developments (unpleasant news about the country's actual public finances, big riots in Athens in December 2008 combined with political polarization in the years after, the release of reports by the EC and rating agencies expressing fears of sovereign insolvency, etc)
    - confidence was undermined;
    - GDP collapsed;
    - debts-to-GDP ratios exploded;

The global financial crisis and the Greek great depression: 2008 to 2016

- In 2009, amid new unfavorable developments (unpleasant news about the country's actual public finances, big riots in Athens in December 2008 combined with political polarization in the years after, the release of reports by the EC and rating agencies expressing fears of sovereign insolvency, etc)
    - confidence was undermined;
    - GDP collapsed;
    - debts-to-GDP ratios exploded;
    - and all this became a vicious cycle.

The global financial crisis and the Greek great depression: 2008 to 2016

- What happened then is well known (see e.g. Sinn (2010, 2014), De Grauwe (2016) and the annual EEAG Reports on the European Economy by CESifo since 2010).

The global financial crisis and the Greek great depression: 2008 to 2016

- What happened then is well known (see e.g. Sinn (2010, 2014), De Grauwe (2016) and the annual EEAG Reports on the European Economy by CESifo since 2010).
- Greece, along with Ireland and Portugal, was shut out from private capital markets and the Greek government had to resort to its first fiscal bailout provided by EU institutions and the IMF in 2010.

The global financial crisis and the Greek great depression: 2008 to 2016

- What happened then is well known (see e.g. Sinn (2010, 2014), De Grauwe (2016) and the annual EEAG Reports on the European Economy by CESifo since 2010).
- Greece, along with Ireland and Portugal, was shut out from private capital markets and the Greek government had to resort to its first fiscal bailout provided by EU institutions and the IMF in 2010.
- Nevertheless, the fear of default rose again, and, in 2012, the Greek government defaulted on its bonds held by private creditors and received its second fiscal bailout. But again that was not enough.

The global financial crisis and the Greek great depression: 2008 to 2016

- What happened then is well known (see e.g. Sinn (2010, 2014), De Grauwe (2016) and the annual EEAG Reports on the European Economy by CESifo since 2010).
- Greece, along with Ireland and Portugal, was shut out from private capital markets and the Greek government had to resort to its first fiscal bailout provided by EU institutions and the IMF in 2010.
- Nevertheless, the fear of default rose again, and, in 2012, the Greek government defaulted on its bonds held by private creditors and received its second fiscal bailout. But again that was not enough.
- In the summer of 2015, the country lived again on a razor's edge; capital controls were eventually imposed to stop the capital flight and the bank run and the country restored to its third fiscal bailout.

The global financial crisis and the Greek great depression: 2008 to 2016

- The total amount of these three official fiscal bailouts was around 290 billion euros.

The global financial crisis and the Greek great depression: 2008 to 2016

- The total amount of these three official fiscal bailouts was around 290 billion euros.
- These were loans provided by other EZ countries (via the EFSF, ESM, etc) and the IMF so they counted as public debt.

The global financial crisis and the Greek great depression: 2008 to 2016

- The total amount of these three official fiscal bailouts was around 290 billion euros.
- These were loans provided by other EZ countries (via the EFSF, ESM, etc) and the IMF so they counted as public debt.
- This money was used for public debt servicing payments, for the financing of primary budget deficits, the financing of the cost of the haircut in 2012 and the cost of private banks recapitalization.

The global financial crisis and the Greek great depression: 2008 to 2016

- The total amount of these three official fiscal bailouts was around 290 billion euros.
- These were loans provided by other EZ countries (via the EFSF, ESM, etc) and the IMF so they counted as public debt.
- This money was used for public debt servicing payments, for the financing of primary budget deficits, the financing of the cost of the haircut in 2012 and the cost of private banks recapitalization.
- In the end of 2019, close to 70% of Greek public debt was owned by EU public institutions.

The global financial crisis and the Greek great depression: 2008 to 2016

- At the same time, the ECB provided a plethora of supportive quantitative, or balance-sheet, policies that included:

The global financial crisis and the Greek great depression: 2008 to 2016

- At the same time, the ECB provided a plethora of supportive quantitative, or balance-sheet, policies that included:
  - intervention in the secondary market for Greek government bonds to support their market price;

The global financial crisis and the Greek great depression: 2008 to 2016

- At the same time, the ECB provided a plethora of supportive quantitative, or balance-sheet, policies that included:
  - intervention in the secondary market for Greek government bonds to support their market price;
  - the support of Greek private banks through a full allotment lending policy, the relaxation of collateral requirements and the provision of ELA under the guarantee of the Greek NCB, etc; and, perhaps more importantly,

The global financial crisis and the Greek great depression: 2008 to 2016

- At the same time, the ECB provided a plethora of supportive quantitative, or balance-sheet, policies that included:
    - intervention in the secondary market for Greek government bonds to support their market price;
    - the support of Greek private banks through a full allotment lending policy, the relaxation of collateral requirements and the provision of ELA under the guarantee of the Greek NCB, etc; and, perhaps more importantly,
    - the issuance of cross-border liquidity that compensated for abrupt private capital inflows and known as TARGET2 liabilities.

The global financial crisis and the Greek great depression: 2008 to 2016

- All the above complex financial assistance was offered at more favorable terms than those justified by the fundamentals of the Greek economy.

The global financial crisis and the Greek great depression: 2008 to 2016

- All the above complex financial assistance was offered at more favorable terms than those justified by the fundamentals of the Greek economy.
- On the other hand, it was conditioned on a severe fiscal austerity plan monitored by the EC, the ECB and the IMF.

The global financial crisis and the Greek great depression: 2008 to 2016

- All the above complex financial assistance was offered at more favorable terms than those justified by the fundamentals of the Greek economy.
- On the other hand, it was conditioned on a severe fiscal austerity plan monitored by the EC, the ECB and the IMF.
- Although the real motives behind the financial assistance, as well as the rationale of a severe fiscal austerity in the middle of a deep recession, have been lively debated (see e.g. Alesina et al (2019, chapter 8)), this so-called Economic Adjustment Program enabled Greece to avoid a disorderly default, which could have had dramatic social consequences, and remain in the EZ.

The global financial crisis and the Greek great depression: 2008 to 2016

- However, fiscal austerity and economic depression, fuelled by political polarization, led to a further worsening of institutional quality.

The global financial crisis and the Greek great depression: 2008 to 2016

- However, fiscal austerity and economic depression, fuelled by political polarization, led to a further worsening of institutional quality.
- The latter is reflected into the index measuring the protection of property rights in Figure 6; institutional quality shows a sharp deterioration between 2008 and 2016.

The global financial crisis and the Greek great depression: 2008 to 2016

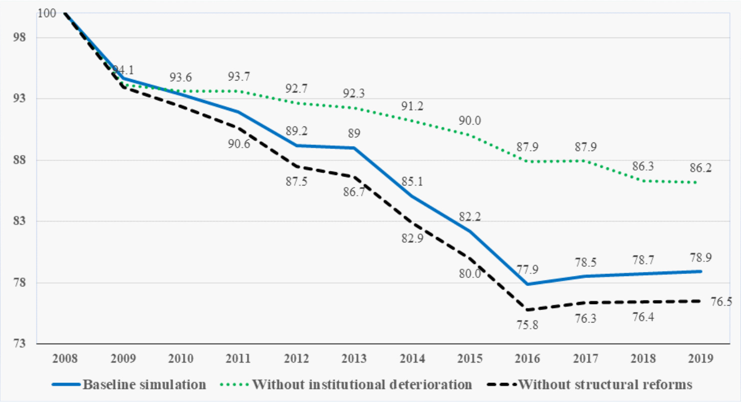
- However, fiscal austerity and economic depression, fuelled by political polarization, led to a further worsening of institutional quality.
- The latter is reflected into the index measuring the protection of property rights in Figure 6; institutional quality shows a sharp deterioration between 2008 and 2016.
- A formal type of work is needed if one wants to evaluate the role of each of the above complex developments in the sharp rise of public debt-to-GDP and the big loss in GDP between 2009 and 2016.

The global financial crisis and the Greek great depression: 2008 to 2016

- However, fiscal austerity and economic depression, fuelled by political polarization, led to a further worsening of institutional quality.
- The latter is reflected into the index measuring the protection of property rights in Figure 6; institutional quality shows a sharp deterioration between 2008 and 2016.
- A formal type of work is needed if one wants to evaluate the role of each of the above complex developments in the sharp rise of public debt-to-GDP and the big loss in GDP between 2009 and 2016.
- It is thus useful to report the main findings of Economides et al. (2021, Open Economies Review).

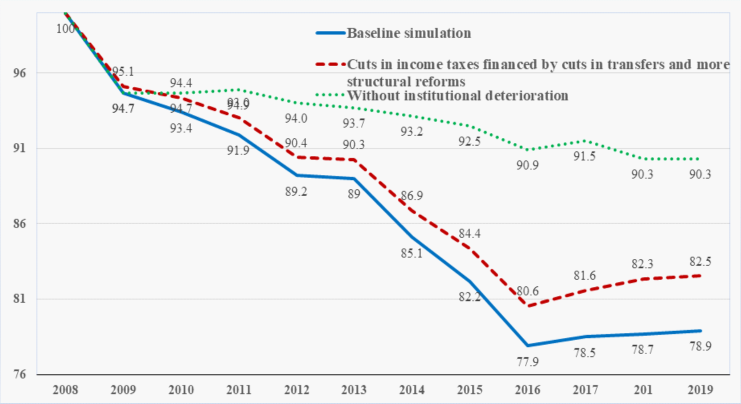
The global financial crisis and the Greek great depression: 2008 to 2016

Figure 6a: Output loss and its main drivers



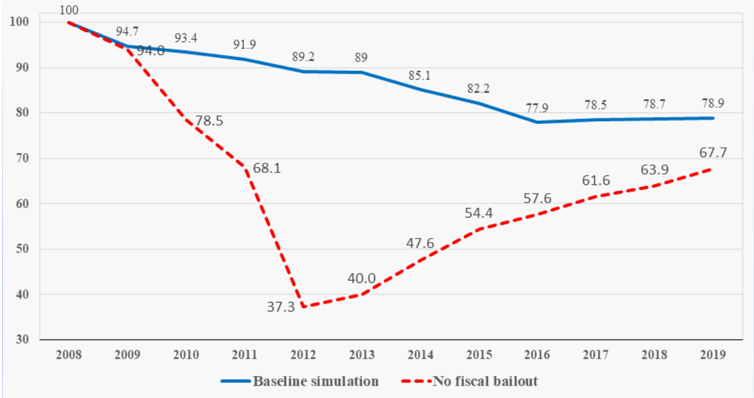
The global financial crisis and the Greek great depression: 2008 to 2016

Figure 6b: Things could be much better



The global financial crisis and the Greek great depression: 2008 to 2016

Figure 6c: No fiscal bailout



The global financial crisis and the Greek great depression: 2008 to 2016

- In particular, the output loss during 2009 and 2016, instead of 25%, could have been around 10% only (always relative to the pre-crisis 2008 level):

The global financial crisis and the Greek great depression: 2008 to 2016

- In particular, the output loss during 2009 and 2016, instead of 25%, could have been around 10% only (always relative to the pre-crisis 2008 level):
  - if the country had followed an alternative fiscal policy mix

The global financial crisis and the Greek great depression: 2008 to 2016

- In particular, the output loss during 2009 and 2016, instead of 25%, could have been around 10% only (always relative to the pre-crisis 2008 level):
  - if the country had followed an alternative fiscal policy mix
  - if reforms in the product market had been adopted and implemented in a faster pace and/or more effective way and, more importantly

The global financial crisis and the Greek great depression: 2008 to 2016

- In particular, the output loss during 2009 and 2016, instead of 25%, could have been around 10% only (always relative to the pre-crisis 2008 level):
  - if the country had followed an alternative fiscal policy mix
  - if reforms in the product market had been adopted and implemented in a faster pace and/or more effective way and, more importantly
  - if institutional quality had not deteriorated since 2008. The latter could have happened if for instance:

The global financial crisis and the Greek great depression: 2008 to 2016

- In particular, the output loss during 2009 and 2016, instead of 25%, could have been around 10% only (always relative to the pre-crisis 2008 level):
  - if the country had followed an alternative fiscal policy mix
  - if reforms in the product market had been adopted and implemented in a faster pace and/or more effective way and, more importantly
  - if institutional quality had not deteriorated since 2008. The latter could have happened if for instance:
    - the political system had cooperated to take the necessary steps for overcoming the crisis - as it was the case in Portugal or Ireland - and if the extreme political polarization had been avoided.

The covid-19 pandemic crisis and the current situation

- Greece exited its Economic Adjustment Program in August 2018 but, its moderate recovery path that started in 2017 has been abruptly disrupted by the pandemic shock in early 2020.

The covid-19 pandemic crisis and the current situation

- Greece exited its Economic Adjustment Program in August 2018 but, its moderate recovery path that started in 2017 has been abruptly disrupted by the pandemic shock in early 2020.
- To counter the economic consequences of the pandemic, the Greek government has taken a number of fiscal measures in the form of spending rises and tax cuts.

The covid-19 pandemic crisis and the current situation

- Greece exited its Economic Adjustment Program in August 2018 but, its moderate recovery path that started in 2017 has been abruptly disrupted by the pandemic shock in early 2020.
- To counter the economic consequences of the pandemic, the Greek government has taken a number of fiscal measures in the form of spending rises and tax cuts.
- As a result, the public debt-to-GDP ratio was around 206% at the end of 2020 and around 193.4% in 2001, while the growth rate was -9% in 2020 and the real economy is recovered only partially in 2021 (8.3%).

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:
  - purchase of Greek government bonds in the secondary market under PEPP and

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:
  - purchase of Greek government bonds in the secondary market under PEPP and
  - a new increase in TARGET2 liabilities.

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:
  - purchase of Greek government bonds in the secondary market under PEPP and
  - a new increase in TARGET2 liabilities.
- while it can benefit from resources from the EU Recovery Fund, which:

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:
  - purchase of Greek government bonds in the secondary market under PEPP and
  - a new increase in TARGET2 liabilities.
- while it can benefit from resources from the EU Recovery Fund, which:
  - amounts to 32 billion euros which translate to 17.5% of Greek GDP in 2019, and

The covid-19 pandemic crisis and the current situation

- In addition, the country benefited by the new measures taken by the ECB, which included in addition to negative interest rates for credit to private banks:
  - purchase of Greek government bonds in the secondary market under PEPP and
  - a new increase in TARGET2 liabilities.
- while it can benefit from resources from the EU Recovery Fund, which:
  - amounts to 32 billion euros which translate to 17.5% of Greek GDP in 2019, and
  - can be spent between 2022 and 2026 and, if used efficiently, can contribute significantly to the restructuring of the Greek economy.

- Borrowing results from Dimakopoulou et al (2021, Economic Modelling), Figures 7 and 8 report the simulated paths of GDP and the public debt-to-GDP ratio respectively under three scenarios:

The covid-19 pandemic crisis and the current situation

- Borrowing results from Dimakopoulou et al (2021, Economic Modelling), Figures 7 and 8 report the simulated paths of GDP and the public debt-to-GDP ratio respectively under three scenarios:
  - first, what would have happened with pandemic-type shocks without any policy reaction (labeled S0);

The covid-19 pandemic crisis and the current situation

- Borrowing results from Dimakopoulou et al (2021, Economic Modelling), Figures 7 and 8 report the simulated paths of GDP and the public debt-to-GDP ratio respectively under three scenarios:
  - first, what would have happened with pandemic-type shocks without any policy reaction (labeled S0);
  - a "real-world" scenario with policy reaction at both national and EU level as described above (labeled S1); and finally

The covid-19 pandemic crisis and the current situation

- Borrowing results from Dimakopoulou et al (2021, Economic Modelling), Figures 7 and 8 report the simulated paths of GDP and the public debt-to-GDP ratio respectively under three scenarios:
  - first, what would have happened with pandemic-type shocks without any policy reaction (labeled S0);
  - a "real-world" scenario with policy reaction at both national and EU level as described above (labeled S1); and finally
  - what would have happened in the counter-factual case without the assistance provided by the Recovery Fund and the ECB since the eruption of the pandemic (labeled S2).

The covid-19 pandemic crisis and the current situation

- Borrowing results from Dimakopoulou et al (2021, Economic Modelling), Figures 7 and 8 report the simulated paths of GDP and the public debt-to-GDP ratio respectively under three scenarios:
  - first, what would have happened with pandemic-type shocks without any policy reaction (labeled S0);
  - a "real-world" scenario with policy reaction at both national and EU level as described above (labeled S1); and finally
  - what would have happened in the counter-factual case without the assistance provided by the Recovery Fund and the ECB since the eruption of the pandemic (labeled S2).
- These results show how necessary the policy reaction has been and also confirm the importance of financial assistance from EU institutions.

- Actually, the role of EU institutions (European Commission and ECB) is more important than what Figures 7 and 8 imply at first sight.

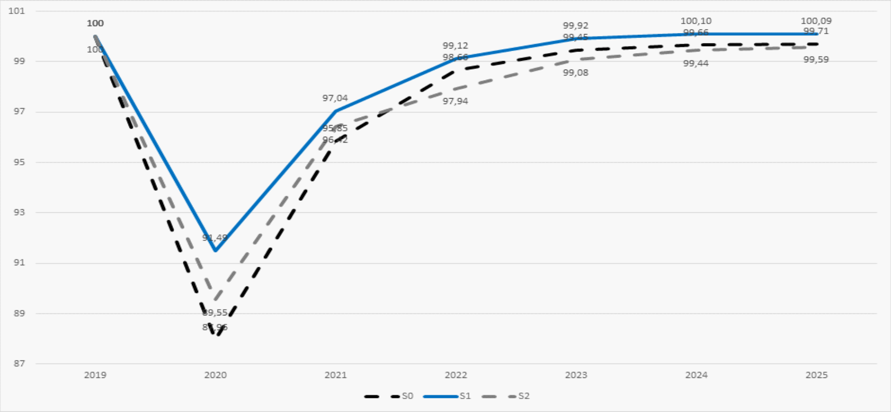
The covid-19 pandemic crisis and the current situation

- Actually, the role of EU institutions (European Commission and ECB) is more important than what Figures 7 and 8 imply at first sight.
- One of the benefits that Greece receives from membership in these supra-national institutions is “the import of credibility”.

The covid-19 pandemic crisis and the current situation

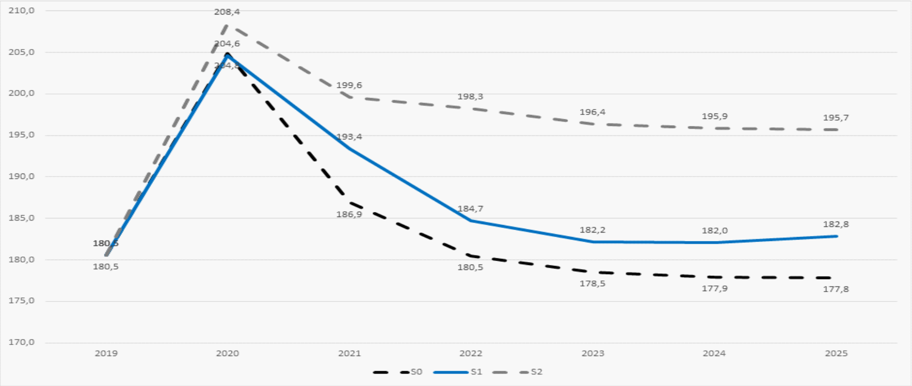
- Actually, the role of EU institutions (European Commission and ECB) is more important than what Figures 7 and 8 imply at first sight.
- One of the benefits that Greece receives from membership in these supra-national institutions is "the import of credibility".
- The results also imply that the above-mentioned policy measures should not be hastily withdrawn before the Greek economy but also the Eurozone as a whole, enter in an era of growth.

Figure 7: Simulated GDP



The covid-19 pandemic crisis and the current situation

Figure 8: Simulated public debt to GDP



- Since 2019, despite the fall in economic activity and the big rise in public debt-to-GDP ratios, even countries with heavy public debt burdens, like Greece, have been enjoying very small government bond spreads.

The covid-19 pandemic crisis and the current situation
The importance of trust

- Since 2019, despite the fall in economic activity and the big rise in public debt-to-GDP ratios, even countries with heavy public debt burdens, like Greece, have been enjoying very small government bond spreads.
- This happened for several complementary reasons.

- Since 2019, despite the fall in economic activity and the big rise in public debt-to-GDP ratios, even countries with heavy public debt burdens, like Greece, have been enjoying very small government bond spreads.
- This happened for several complementary reasons.
  - One reason is that Greece, after the disastrous crisis years of 2009-2016, has started to take steps in the right direction.

The covid-19 pandemic crisis and the current situation

The importance of trust

- Since 2019, despite the fall in economic activity and the big rise in public debt-to-GDP ratios, even countries with heavy public debt burdens, like Greece, have been enjoying very small government bond spreads.
- This happened for several complementary reasons.
  - One reason is that Greece, after the disastrous crisis years of 2009-2016, has started to take steps in the right direction.
  - Another reason is the financial assistance from the ECB and the EC and, perhaps more importantly, the signals of support sent by these EU institutions if something goes wrong.

- Since 2019, despite the fall in economic activity and the big rise in public debt-to-GDP ratios, even countries with heavy public debt burdens, like Greece, have been enjoying very small government bond spreads.
- This happened for several complementary reasons.
  - One reason is that Greece, after the disastrous crisis years of 2009-2016, has started to take steps in the right direction.
  - Another reason is the financial assistance from the ECB and the EC and, perhaps more importantly, the signals of support sent by these EU institutions if something goes wrong.
  - All this has calmed down markets' anxiety about the ability of the country to repay its debts, at least so far.

The covid-19 pandemic crisis and the current situation

The importance of trust

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.
- If a negative shock hits a country with weak fundamentals:

The covid-19 pandemic crisis and the current situation

The importance of trust

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.
- If a negative shock hits a country with weak fundamentals:
    - sentiments can suddenly change;

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.
- If a negative shock hits a country with weak fundamentals:
  - sentiments can suddenly change;
  - investors will start selling domestic assets;

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.
- If a negative shock hits a country with weak fundamentals:
  - sentiments can suddenly change;
  - investors will start selling domestic assets;
  - risk premia will emerge;

- But, as the experience of the European debt crisis of the previous decade has shown, a mix of weak economic fundamentals and negative shocks can very easily change the situation for the worse.
- If a negative shock hits a country with weak fundamentals:
  - sentiments can suddenly change;
  - investors will start selling domestic assets;
  - risk premia will emerge;
  - debt burdens will rise as interest rates rise, and the country will be again on the razor edge as in 2015.

- Various shocks can work as triggers of the crisis like:

- Various shocks can work as triggers of the crisis like:
    - unrealistic policy promises that violate inter-temporal budget constraints;

- Various shocks can work as triggers of the crisis like:
    - unrealistic policy promises that violate inter-temporal budget constraints;
    - a denial to address pressing problems;

- Various shocks can work as triggers of the crisis like:
  - unrealistic policy promises that violate inter-temporal budget constraints;
  - a denial to address pressing problems;
  - an institutional deterioration, fuelled by political polarization, that signals poor growth prospects;

- Various shocks can work as triggers of the crisis like:
  - unrealistic policy promises that violate inter-temporal budget constraints;
  - a denial to address pressing problems;
  - an institutional deterioration, fuelled by political polarization, that signals poor growth prospects;
  - a sudden loss of trust between national policymakers and EU institutions;

- Various shocks can work as triggers of the crisis like:
  - unrealistic policy promises that violate inter-temporal budget constraints;
  - a denial to address pressing problems;
  - an institutional deterioration, fuelled by political polarization, that signals poor growth prospects;
  - a sudden loss of trust between national policymakers and EU institutions;
  - a report by an international organization expressing doubts about debt sustainability; etc., and last but not least....

- A pure negative economic shock...such as the current energy crisis.

- A pure negative economic shock...such as the current energy crisis.
- In fact, this is a typical supply shock easily met at standard macro-textbooks.

- A pure negative economic shock...such as the current energy crisis.
- In fact, this is a typical supply shock easily met at standard macro-textbooks.
- Commodity prices rise (not only energy prices) and at the same time growth prospects are mitigated.

- A pure negative economic shock...such as the current energy crisis.
- In fact, this is a typical supply shock easily met at standard macro-textbooks.
- Commodity prices rise (not only energy prices) and at the same time growth prospects are mitigated.
- Inflation expectations are amplified (this is on top of the inflation presssures caused by the disruption of the supply chain due to pandemic).

- A pure negative economic shock...such as the current energy crisis.
- In fact, this is a typical supply shock easily met at standard macro-textbooks.
- Commodity prices rise (not only energy prices) and at the same time growth prospects are mitigated.
- Inflation expectations are amplified (this is on top of the inflation presssures caused by the disruption of the supply chain due to pandemic).
- The lack of the necessary caution and wisdom in conducting fiscal policy can prove fatal especially for indebted countries like Greece.

The covid-19 pandemic crisis and the current situation

The importance of trust

- A pure negative economic shock...such as the current energy crisis.
- In fact, this is a typical supply shock easily met at standard macro-textbooks.
- Commodity prices rise (not only energy prices) and at the same time growth prospects are mitigated.
- Inflation expectations are amplified (this is on top of the inflation presssures caused by the disruption of the supply chain due to pandemic).
- The lack of the necessary caution and wisdom in conducting fiscal policy can prove fatal especially for indebted countries like Greece.
- Then sovereign debt risk premia will rise; the latter reflect an increase in the probability of debt default.

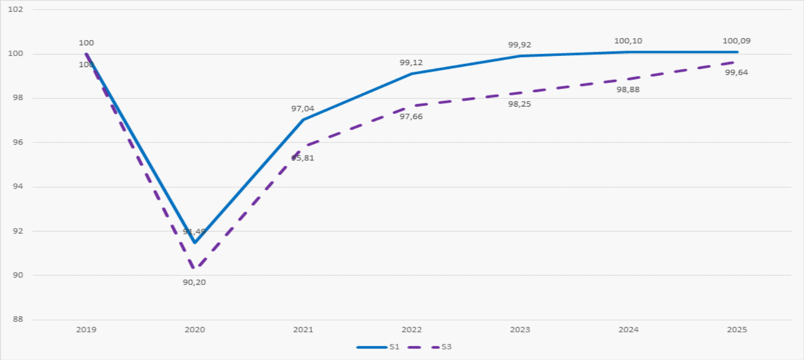
- To take an idea of the detrimental consequences of risk premia in Dimakopoulou et al (2021, Economic Modelling), we have studied a scenario in which an ex-ante default rate of, say, 20% during 2022-2025 is added on Greek government bonds.

- To take an idea of the detrimental consequences of risk premia in Dimakopoulou et al (2021, Economic Modelling), we have studied a scenario in which an ex-ante default rate of, say, 20% during 2022-2025 is added on Greek government bonds.
- The simulated paths of output and public debt-to-GDP under this hypothetical scenario (labeled S3) are shown in Figures 9 and 10 respectively.

- To take an idea of the detrimental consequences of risk premia in Dimakopoulou et al (2021, Economic Modelling), we have studied a scenario in which an ex-ante default rate of, say, 20% during 2022-2025 is added on Greek government bonds.
- The simulated paths of output and public debt-to-GDP under this hypothetical scenario (labeled S3) are shown in Figures 9 and 10 respectively.
- As can be seen, the emergence of risk premia makes the recession sharper and longer (see Figure 9) and, at the same time, the debt-to-GDP ratio skyrockets (see Figure 10).

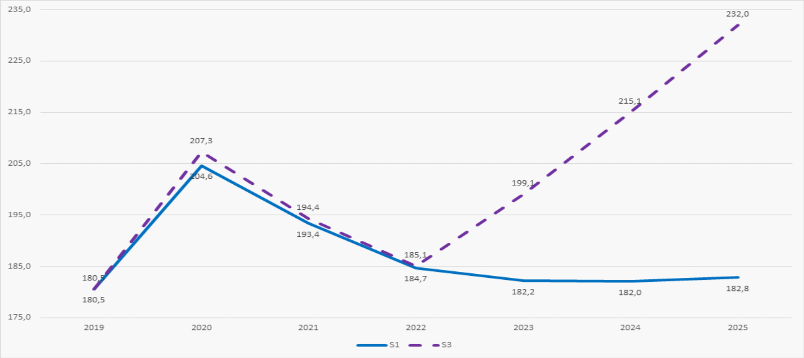
The covid-19 pandemic crisis and the current situation

The importance of trust (Figure 9: Simulated GDP with ex ante default)



The covid-19 pandemic crisis and the current situation

The importance of trust (Figure 10: Simulated public debt to GDP with ex ante default)



Concluding remarks

- Greece had just started to recover from its severe sovereign debt crisis when, like most countries, was hit by the pandemic shock in early 2020.

Concluding remarks

- Greece had just started to recover from its severe sovereign debt crisis when, like most countries, was hit by the pandemic shock in early 2020.
- The policy measures promptly taken by the Greek government, the EU and the ECB have helped the country to reduce the economic downturn but this has come at the cost of public finances.

Concluding remarks

- Greece had just started to recover from its severe sovereign debt crisis when, like most countries, was hit by the pandemic shock in early 2020.
- The policy measures promptly taken by the Greek government, the EU and the ECB have helped the country to reduce the economic downturn but this has come at the cost of public finances.
- With a public debt around 200% of GDP the country is vulnerable to economic and political shocks.

Concluding remarks

- Greece had just started to recover from its severe sovereign debt crisis when, like most countries, was hit by the pandemic shock in early 2020.
- The policy measures promptly taken by the Greek government, the EU and the ECB have helped the country to reduce the economic downturn but this has come at the cost of public finances.
- With a public debt around 200% of GDP the country is vulnerable to economic and political shocks.
- The current energy crisis is such an economic shock.

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
    - fueled social conflict

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
  - fueled social conflict
  - hurt institutions

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
  - fueled social conflict
  - hurt institutions
  - created uncertainty

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
  - fueled social conflict
  - hurt institutions
  - created uncertainty
  - raised risk premia

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
    - fueled social conflict
    - hurt institutions
    - created uncertainty
    - raised risk premia
    - leading to a vicious cycle of recession and debt.

Concluding remarks

- Although exogenous factors cannot be controlled for, the country should at least not repeat the same mistakes as during the sovereign debt crisis of the previous decade.
- Especially, political polarization that
  - fueled social conflict
  - hurt institutions
  - created uncertainty
  - raised risk premia
  - leading to a vicious cycle of recession and debt.
- When economic life is normalized, Greece needs to start growing out its public debt on a systematic basis so growth developments will be the essential thing.

Concluding remarks

- The engines of growth are well known (see e.g. Sala-i-Martin (2010)).

Concluding remarks

- The engines of growth are well known (see e.g. Sala-i-Martin (2010)).
- In the case of Greece robust development requires:

Concluding remarks

- The engines of growth are well known (see e.g. Sala-i-Martin (2010)).
- In the case of Greece robust development requires:
  - the productive use of the financial assistance from the EU Recovery Fund;

Concluding remarks

- The engines of growth are well known (see e.g. Sala-i-Martin (2010)).
- In the case of Greece robust development requires:
  - the productive use of the financial assistance from the EU Recovery Fund;
  - a growth-enhancing and credible over time tax-spending policy mix combined with social policy targeted to those in need; and

Concluding remarks

- The engines of growth are well known (see e.g. Sala-i-Martin (2010)).
- In the case of Greece robust development requires:
  - the productive use of the financial assistance from the EU Recovery Fund;
  - a growth-enhancing and credible over time tax-spending policy mix combined with social policy targeted to those in need; and
  - structural reforms.

Concluding remarks

- Structural reforms should aim:

Concluding remarks

- Structural reforms should aim:
  - at increasing competition in product markets

Concluding remarks

- Structural reforms should aim:
  - at increasing competition in product markets
  - at improving the efficiency of public administration (including the public education system), and

Concluding remarks

- Structural reforms should aim:
  - at increasing competition in product markets
  - at improving the efficiency of public administration (including the public education system), and
  - at credibly enhancing the quality of core institutions thereby improving the level of social trust.

Concluding remarks

- This cluster of conditions can help the Greek economy to grow out its public debt.

Concluding remarks

- This cluster of conditions can help the Greek economy to grow out its public debt.
- This is the good and feasible scenario, especially if we take into account that the recent fiscal bailout programs have extended significantly the time horizon of Greece's fiscal obligations.

Concluding remarks

- This cluster of conditions can help the Greek economy to grow out its public debt.
- This is the good and feasible scenario, especially if we take into account that the recent fiscal bailout programs have extended significantly the time horizon of Greece's fiscal obligations.
- But there is also a bad scenario if the above conditions are not met...

Concluding remarks

- This cluster of conditions can help the Greek economy to grow out its public debt.
- This is the good and feasible scenario, especially if we take into account that the recent fiscal bailout programs have extended significantly the time horizon of Greece's fiscal obligations.
- But there is also a bad scenario if the above conditions are not met...
- In addition to avoiding a self-defeating political polarization, the political and economic partners need to agree on a minimum reform agenda, and send the right signals to citizens, markets and institutions if they want to minimize the probability of a new accident.

Thank you for your attention!