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Emigration and Fiscal Austerity in the Greek Depression

GREEK & EUROPEAN ECONOMY OBSERVATORY

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Summary

- We study the role of emigration in a deep recession when the government implements fiscal consolidation.
- Fiscal austerity accounts for 1/3 of the output drop in the Greek Depression and more than 10% of migration outflows.
- A counterfactual without emigration underestimates the fall in output by 20%.
- The link between emigration and austerity is bi-directional.
- Labour income tax hikes induce prolonged migration outflows, while spending cuts exert a smaller effect on emigration.
- Emigration increases the required tax hike and time to meet a given debt target.
- In terms of unemployment, the temporary gains from emigration are reversed over time.

Introduction

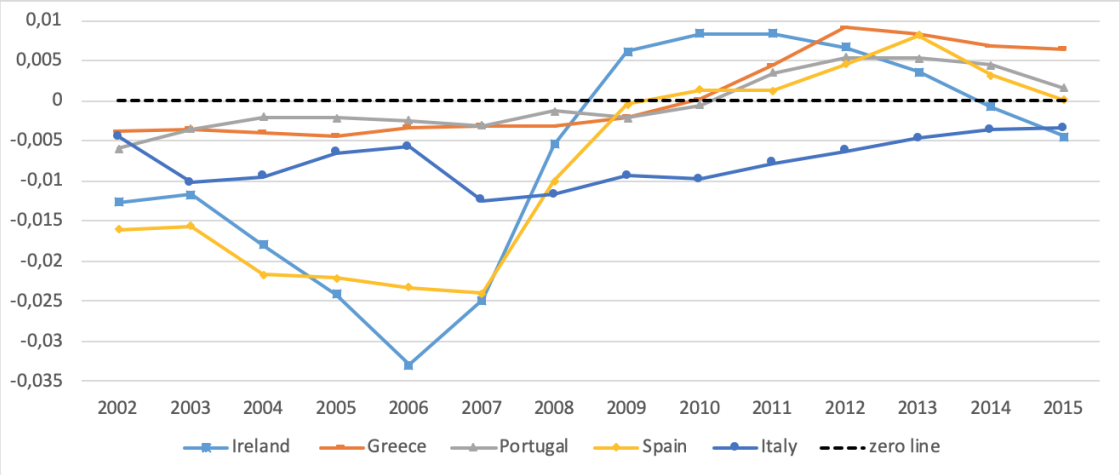
"Over the period 2010-2015, around half a million of Greek residents, amounting to roughly 7% of the active population, left the country."

Adverse labour market conditions and fiscal tightness during the Great Recession led to net emigration from many European countries that suffered a deep deterioration of the economy, Greece being the most obvious case (see Figure 1). Over the period 2010-2015, around half a million of Greek residents, amounting to roughly 7% of the active population, left the country_in search of employment, better pay and better social and economic prospects. Over the same period, the unemployment rate reached 25% in Greece and the economy shrank by a quarter. On the fiscal front, Greece experienced the biggest bailout in global financial history, with austerity measures being a condition.

What is the role of emigration in a deep recession when the government implements fiscal austerity policies? The goal of our analysis is twofold. First, we investigate whether the mass exodus of Greek workers exacerbated the recession. Second, we examine whether fiscal austerity contributes more strongly to the depth of recession in the presence of emigration.

Figure 1: Net migration flows, defined as outflows minus inflows (% of active population)

"What is the role of emigration in a deep recession when the government implements fiscal austerity policies?"



Source: Eurostat

"…nearly half of those leaving Greece after 2010 were employed before emigrating."

Although mobility in response to disparate labour market conditions might result in improvements in aggregate employment, the impact on local adjustments hinges on a number of factors. First, emigration puts upward pressure on wages and hampers firms' marginal costs. Additionally, and insofar as employed workers also emigrate, firms not only find it more costly to hire new workers but also face a shortage of labour. Survey evidence suggests that nearly half of those leaving Greece after 2010 were employed before emigrating_(see Labrianidis and Pratsinakis 2016).[1] Second, migrants take with them not only their labour supply, but also their purchasing power, which reinforces the fall in demand during bad times. Although this impact can be mitigated if emigrants send some of their earnings back home, remittances' inflows to European countries of the Periphery did not increase at the same rate as emigration, amounting only to a small portion of GDP. For instance, World Bank figures on remittances over GDP in 2013 are as follows: Ireland: 0.33%, Greece: 0.34%, Spain: 0.75%, and Portugal: 1.95%.

The emigration of unemployed and employed workers entails different implications for the public treasury**.** The outflow of employed workers who are net payers leads to a reduction in the income tax base, while the outflow of unemployed acts as a fiscal stabilizer, mitigating

[1] Labrianidis, L. and Pratsinakis, M.: 2016, Greece's new emigration at times of crisis, Technical report, Hellenic Observatory, LSE.

"The emigration of unemployed and employed workers entails different implications for the public treasury."

increases in unemployment and lifting fiscal pressure off governments. The latter occurs through a reduction of payments for unemployment benefits. On the other hand, the emigration of the employed may mitigate the exodus of the unemployed by freeing up jobs. In the present study, we therefore focus on the composition of emigrants in terms of their labour market status (i.e., employed or unemployed) before departing.

We build a macroeconomic model of a small open economy with price rigidities, fiscal policy in the form of taxation and government expenditure, and labour market frictions. Both the employed and the unemployed have an incentive to migrate abroad where better wage and employment opportunities exist. To keep the macroeconomic model tractable, we abstract from different skill types. Apart from supplying labour and paying taxes in the receiving economy, emigrants buy the foreign consumption good and send remittances to the country of origin. The government finances its expenditure via public debt and taxation.

Our research uncovers a novel bi-directional link between fiscal austerity and emigration. Fiscal policy affects emigration decisions through, for instance, its impact on after-tax income. On the flip side, emigration has fiscal implications for the economy, shifting the tax base by affecting private demand and taxable income.

"…fiscal austerity accounts for 1/3 of the output drop and more than 10% of the migration outflows."

Anatomy of the Greek Crisis

We first offer a model-based anatomy of the Greek crisis, studying jointly the impact of the implemented fiscal austerity mix during the period 2010-2015 and the amplification through the emigration channel. Specifically, we focus on the labour income tax hikes and the cuts in government's final consumption expenditure -- excluding the compensation of employees which we do not model -- government's gross capital formation, and government's expenditure on health and education.

"In a no-emigration scenario, the model predicts a smaller output fall by 20%."

Our model simulations reveal that fiscal austerity accounts for 1/3 of the output drop and more than 10% of the migration outflows, whereas the rest is attributed to the macroeconomic environment. In a no-emigration scenario, the model predicts a smaller output fall by 20%. We find that emigration amplified the decline in consumption, investment, vacancies, and employment.

Impact of Fiscal Austerity on Emigration

Next, we investigate the impact of fiscal austerity policies on emigration. We find that tax hikes and spending cuts have very different effects on emigration**.** Labour income tax hikes induce significant and persistent emigration. The effects are more attenuated for spending cuts, as in our macroeconomic model households expect lower taxes in the future (positive wealth effect), and this not only curbs emigration but also helps sustain aggregate demand and therefore GDP and government revenues. These results are in line with the findings in the literature about the more adverse effects of tax-based consolidations compared to spending-based consolidations (see, e.g., Alesina et al. 2019).[2]

"…tax hikes and spending cuts have very different effects on emigration."

Since the link between emigration and austerity is bi-directional, we then consider the opposite direction of the relation. Specifically, we focus on the implications of emigration for (a) the success of fiscal consolidations in meeting a given debt target, and (b) the output and unemployment costs of consolidations.

[2] Alesina, A., Favero, C. and Giavazzi, F.: 2019, Austerity: When it Works and when it Doesn't, Princeton University Press.

"…emigration implies an increase in both the tax hike and the time required to meet a given target of debt reduction."

Impact of Emigration on Fiscal Austerity Success

The next question we ask is about the impact of emigration on fiscal austerity measures being successful in achieving a given target of debt reduction. To provide an answer, we design a theoretical exercise as follows. We assume that the level of each fiscal instrument (labour income tax rate or government spending) is set in each period so as to achieve a reduction in the debt-to-GDP ratio of 5% after ten years in an economy without emigration. Allowing, then, for emigration to take place, we find that its presence in the economy implies an increase in the required tax hike of at least 30% at the peak and of the time needed to meet the given debt target by at least two years. We thus conclude that emigration implies an increase in both the tax hike and the time required to meet a given target of debt reduction.

Intuitively, when people can "vote with their feet", austerity policies face a more elastic tax base and can potentially lead to higher public debt as the tax base is being eroded. A higher tax hike is then required to reach a given debt target, which depresses economic activity further and generates another negative effect on the tax base. For spending cuts, a similar result is obtained for sufficiently strong price rigidities. When firms cannot adjust prices immediately, they may react to the negative effect of spending cuts on aggregate demand (Keynesian effect) by hiring fewer workers. This reinforces the increase in unemployment and therefore emigration. In turn, emigration amplifies the drop in aggregate demand and tax revenues. Consequently, the required spending cut becomes larger with emigration. Our results therefore show that emigration can decrease tax revenues per capita and increase the government debt to GDP ratio. The converse has been confimed by Storesletten (2000) who demonstrates that an immigration inflow in the US increases tax revenues per capita and reduces government debt, serving as a deficit-financing alternative to tax hikes or spending cuts.[3]

"…the short-run unemployment gains from emigration may be reversed over time."

Impact of Emigration on Fiscal Austerity Costs

Regarding the implications of emigration for the output and unemployment costs of consolidations, our exercise demonstrates that emigration can mitigate the costs of fiscal austerity in terms of GDP *per capita*, by reducing the resident population. As stated in the Introduction, the emigration of unemployed can mitigate increases in unemployment. Yet, the short-run unemployment gains from emigration may be reversed over time. This happens because emigration offers an extra outside option for workers and therefore sustains higher wages. Also, given that emigration leads to a reduced tax base, it implies an increase in the tax hike required for a given debt reduction, hurting demand and employment, which together with the higher wages sustained, can offset the unemployment gains from the reduction in labour supply. The emigration of the employed reduces further the short-run unemployment gains and reinforces the costs over time.

"Rather than stabilising the Greek business cycle, labour mobility therefore led to a deeper and more protracted recession."

Income Tax Hikes versus VAT Hikes

So far, we have considered the effects of income tax hikes. In accompanying work, we examine the case of VAT hikes.[4] We find that VAT hikes induce a fall in private consumption,

[3] Storesletten, K.: 2000, Sustaining fiscal policy through immigration, *Journal of Political Economy*, 108, 300-323.

[4] Bandeira, G., Caballé, J. and Vella, E.: 2020, Productivity shocks, VAT hikes and emigration. In *Understanding Migration with Macroeconomics* (pp. 187-222). Palgrave Macmillan, Cham.

which reduces labour demand and increases emigration. The departure of emigrants reinforces the fall in internal demand and employment, and therefore unemployment costs of VAT hikes over time can be higher than in an economy without emigration. Yet, the effects of VAT hikes are significantly smaller than in the case of labour income tax hikes.

"Further analysis could therefore examine the interaction of public wage bill cuts with emigration."

Summary and Policy Implications

Most of the academic literature and public debate has focused on the issues raised by migration in receiving countries. Our analysis, instead, takes the point of view of the economies that are left behind by investigating the role of emigration in a deep recession when the government implements fiscal consolidation.

Our analysis shows that the mass exodus of Greek workers during the period 2010-2015 exacerbated the recession by amplifying the drag in consumption and investment. Similarly, Oikonomou (2021) shows that emigration flows during the Greek crisis implied strong negative effects for capital formation, leading to a more than 15% drop in investment.[5] Rather than stabilising the Greek business cycle, labour mobility therefore led to a deeper and more protracted recession.

"The Covid-19 crisis raises profound challenges for public finances and the macroeconomy."

We also investigate the bi-directional relation between fiscal austerity and emigration, highlighting the heterogeneous effects of spending cuts and tax hikes on emigration. Regarding the impact of emigration on fiscal austerity success, we find that labour mobility increases the size and time of required consolidations due to an endogenous leakage in revenue. Finally, we investigate the effects of emigration on the output and unemployment costs of fiscal austerity to answer whether fiscal austerity contributes more strongly to the depth of recession in the presence of emigration. When fiscal austerity induces a strong response of emigration, such as with labour tax hikes, emigration acts as an absorber of the austerity shock by diluting the output costs per resident through a population reduction. However, in terms of unemployment, gains are only temporary and are reversed over time due to the distortionary effects of taxes on employment.

"The current policy agenda has identified the reversal of the recent emigration wave as a main avenue through which the country can enter a path of sustainable growth after the end of the Covid-19 pandemic."

In the aftermath of the Great Recession, restrictions in recruitment of public employees were part of the fiscal adjustment of countries with a sizeable public sector (e.g., Greece, Spain, Italy) and led graduates, previously absorbed in public sector jobs, to emigrate. Further analysis could therefore examine the interaction of public wage bill cuts with emigration. Another interesting extension could be to incorporate high and low skill workers in a macroeconomic model with emigration and fiscal austerity, which is a topic of work in progress.

The Covid-19 crisis raises profound challenges for public finances and the macroeconomy. Government deficits are rising, while the experience of fiscal austerity measures during the European Debt Crisis is still fresh for many countries. The experience of these countries can offer valuable lessons for policymakers. Financing rising deficits with tax hikes can trigger future labour flows within the euro area from countries worst hit to core countries, like Germany. This will reduce the national tax base, forcing the governments to hike the tax rate even more, which will exacerbate the Covid-19 recession in the worst-hit economies.

The current policy agenda has identified the reversal of the recent emigration wave as a main avenue through which the country can enter a path of sustainable growth after the end of the

[5] Oikonomou, M.: 2021, Migration, search and skill heterogeneity, mimeo, Oxford University.

Covid-19 pandemic. Over the past months, the Greek government has put in place a set of tax incentives targeted at foreign tax residents, namely expats and digital nomads, high net worth individuals, and retirees, who are considering redomiciling to Greece. Whether these policies will work or not will play a crucial role in the recovery of the Greek economy.