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BRAIN DRAIN: THE IMPACT ON TAXATION AND MEASURES TO COMBAT THE BRAIN DRAIN

During the debt crisis the number of highly specialized Greek scientists who had migrated abroad surpassed 250,000. The reasons that led to this result include the mismatch of supply and demand for skilled human capital in Greece, the high rates of unemployment, as well as underemployment, and the increased in the tax burden and social security contributions. In order to tackle brain drain, a number of measures have been announced, focusing on reducing the individual income and corporate tax, lowering VAT rates and streamlining tax incentives for investors. Tax-related measures must take into account the new environment that has been shaped after the implementation of the OECD Base Erosion and Profit Shifting project. In addition to that, they also must respect the fundamental freedoms and general principles of European Union law in general.

Key words: *Bhagwati tax. – Free movement of workers. – Harmful tax practices. – Special economic zones. – Tax competition.*

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1. INTRODUCTION: THE PHENOMENON OF BRAIN DRAIN IN NUMBERS

According to a 2017 report by the European Commission, about 17 million people in the EU moved to another member of the community; 32% of them were up to 34 years old. Germany and Britain were the top destinations. The top countries of origin were Romania, Poland, Italy, and Portugal.

Similarly, according to Eurostat figures, during the debt crisis the number of highly specialized Greek scientists who migrated abroad almost doubled. This has resulted in more than 250,000 Greek scientists working abroad today. The figure corresponds to 12% of Greek university graduates, according to a May 2018 report by the General Secretary of Strategic and Private Investments. Of these, a vast majority are doctors and engineers, as demand in these sectors is huge, while job prospects at home are extremely limited. According to data from the Ministry of Economy and Development's Knowledge Bridges Platform (although, precisely because of freedom of movement, it is virtually impossible to accurately identify how many Greeks work in each EU country) it is clear that the largest number is concentrated in the United Kingdom, followed by the Netherlands, Germany, and Sweden.

According to the latest survey by ICAP People Solutions, 60% moved abroad after having already worked in Greece; 61% left Greece five or more years ago; moreover, over 50% between the ages of 30 and 40 years old, while 29% of Greeks abroad are 41 years or older. In 2015 the latter figure was just 12%. Today 48% of them are single. In 2015, the single persons amounted to 71%. According to the ICAP research, the brain drain population is growing older, living overseas, forming relationships, building a family. At the same time, it is evolving, taking up higher hierarchical positions, and earning more money. But the more that they achieve in their new homes, the more distant the prospect of returning to Greece begins to show.

The reasons that led to brain drain include the mismatch of supply and demand of skilled human capital due to the profile of the Greek economy, the high rates of unemployment as well as underemployment, part-time and related lower-skilled jobs due to the financial crisis, the political unrest, the perception of reduced meritocracy and increased corruption in the country, the general uncertainty, the prospects of personal and professional development abroad, the severe taxation and the enormous increase of social security contributions due to the measures adopted in Greece based to the economic adjustment programs.

2. FREE MOVEMENT OF WORKERS AND BRAIN DRAIN WITHIN THE EUROPEAN UNION

The free movement of workers is one of the fundamental rights enjoyed in the European Union by EU citizens. It is one of the four economic freedoms to which EU citizens are entitled, together with the free movement of goods, services and capital.

Article 45 of the Treaty on the Functioning of the European Union (TFEU) provides that the free movement of workers will be secured within the Union.

Free movement of workers entails the right to accept offers of employment actually made and to move freely within the territory of Member States for this purpose. It includes the right to stay in a Member State for the purpose of employment in accordance with the provisions governing the employment of nationals of that State laid down by law, regulation or administrative action and also to remain in the territory of a Member State after having been employed in that State, subject to conditions which is embodied in regulations drawn up by the Commission.[1]

This freedom of movement of workers within the EU has facilitated intra-EU labour mobility. However, in some regions ('sending regions') this freedom has led to a significant out-migration of their highly educated workforce to the advantage of other regions ('receiving regions'). This is determined by the growing competition for talent and the limited capacity of sending regions to create attractive conditions for these workers. Local and regional authorities (LRAs) in sending regions have to cope directly with the socio-economic effects caused by the significant loss of talent or brain drain. Addressing these effects may require the formulation of appropriate policies and/or measures to retain, attract, or regain a highly educated workforce.[2]

However, the free movement of workers has not only facilitated brain drain, it has also favoured related phenomena such as brain regain, which is the return to a region of the same high skills and/or competencies that were previously lost, and brain circulation, which is the continuous gain-loss of high skills and/or competencies.[3]

[1] Article 45(3) TFEU.

[2] See the European Committee of the Regions, Commission for Social Policy, Education, Employment, Research and Culture (2018).

[3] *Ibid.*, 5.

3. THE IMPACT OF BRAIN DRAIN ON TAXATION

Academic literature has extensively studied the impact of the brain drain on the sending regions. It has been found that brain drain has a negative impact on the sending regions with severe fiscal consequences as it results in the reduction of taxable income and the unavoidable reduction of income tax as well as a decline in consumption, which also affects state revenue.[4] At the same time, however, a positive impact is also observed, as sending regions may also experience benefits with regards to brain drain such as return migration, remittances, incentives for investment in education and training and an improvement of governance.[5] Consequently, a country may experience a loss of tax revenue when the size of workforce shrinks. The labour market is also subject to other changes due to the emigration of highly skilled workers. In particular, when highly skilled workers migrate, the labour market shifts towards workers with lower skills. This in turn may result in an overall reduction of wages, which also affects tax revenue.

Indeed, income tax is closely linked to the constitutional principle of the ability to pay. This principle, enshrined in Article 4 of the Greek Constitution, is linked to the general principle of equality. According to the principle of ability to pay, each person shall contribute to the public revenues according to their capacity. The ability to pay principle imposes limitations on the burden of income taxation that a person can bear. Income tax cannot go beyond the minimum subsistence level; a taxpayer should be left with enough income after tax to provide for their basic needs. Therefore, as a result of the ability to pay principle, the lower the income of a taxpayer is, the lower their ability to pay is and consequently the lower the tax revenue for the state.

Similarly, the reduction of consumption, due to the lower level of income gained, may lead to a reduction of revenue from indirect taxes. Indirect taxes do not have the same limitations as income tax, as far as the ability to pay principle is concerned. Indeed, in the case of VAT, a mechanism of reduced rates for certain categories of goods is used to ensure that the basic needs of taxpayers are met and that they are not overburdened in an inflexible way. Nonetheless, consumption is directly linked to disposable income, i.e. income after tax: when disposable income is reduced, consumption is also negatively affected.

On the other hand, there is also a positive impact of brain drain on sending regions, even in terms of taxation. First of all, the spending power that might be reduced because of the brain drain, can be mitigated by the

[4] *Ibid.*, 16.

[5] *Ibid.*

fact that workers that have migrated keep sending remittances back to their state of origin, therefore, at last partially, closing the created gap. However, remittances could also amplify the negative effect on tax revenues by negatively affecting the decisions to work, for instance by increasing the reservation wage, and de facto further reducing the tax basis. Another effect of emigration is that, as it mostly concerns working age population, the elderly left behind will increases the relative weight of pension and health spending on expenditure.[6]

4. TAX REASONS THAT MAY LEAD TO BRAIN DRAIN

From the diverse causes described, we will focus only on those related to taxation. The following interesting facts come from the OECD report Revenue Statistics 1965–2017.

1. In 2007–17, taxes in Greece increased by 8.2 percentage points of GDP, while in the memorandum years tax revenues increased from 32% to 39.4% of GDP. It is noted that although GDP was down 25% during the crisis, tax revenues totalled $ 95.9 billion in 2010, totalled $ 71.6 billion in 2015 and jumped to $ 78.9 billion in 2017. In fact, in the two years 2016–2017 Greece country was seventh in tax increases. In 2017 income and profit taxes amounted to 9% of the GDP and amounted to 22.8% of total government revenue.

2. Property taxes increased by 516%. In 2010, real estate taxes accounted for only 0.2% of GDP or close to € 600 million. Based on recent data, in 2017 taxes amounted to € 3.7 billion, i.e. 10 times the GDP percentage (2.1%). It should be noted that the situation is the same in Belgium, France and Luxembourg.

3. Greece has the lead also in the indirect taxes. Taxes on goods and services reached 15.4% of GDP in 2017, i.e. 39.1% of total taxes. A comparison with the Eurozone ‘big ones’ illustrates the huge differences: in Germany, indirect taxes accounted for 26.2% of revenue in 2018, 29.2% in Spain, 24.4% in France. Only Portugal exceeds Greece, with indirect taxes accounting for 39.8% of total tax revenue.

5. BRAIN DRAIN AND TAX COMPETITION BETWEEN COUNTRIES

Apparently brain drain affects the tax competition between countries, as they compete to offer a better tax environment in an attempt to reverse brain drain or to attract highly skilled workers (brain gain).

[6] See Alcidi, Gros (2019).

Workers usually reside in the place (country) where they earn their income and pay taxes. Given differences in (pre-tax) wages, the decision to relocate then must take into account a package of national tax rates combined with local public goods (e.g. infrastructure and other amenities). This can then lead to beneficial competition among jurisdictions regarding the best package of taxes and local public goods.[7]

Overall, while the temptation to lower taxation on labour to prevent further shrinking of the tax base is strong, this may not work as other factors could be much more important when deciding about moving. Satisfaction with standards of living, including opportunities for children, may be much more relevant than a lower marginal tax rate on income. This could especially be the case for high-skilled workers.

Therefore tax competition for mobile labour should not be an important concern. It would anyway be at odds with the idea that the free movement of workers in the EU is a beneficial aspect of the single market and it also seems to contradict the idea that the movement of workers is a channel for absorbing country-specific shocks.[8]

6. MEASURES TO TACKLE BRAIN DRAIN

One of the first measures in order to tackle brain drain introduced by the previous government in Greece was instated on 31 December 2018. Specifically, the Greek parliament approved new provisions that specified the conditions for the application of Article 71D of the Income Tax Code (law 4172/2013), introducing a “super tax deduction” of the gross revenues for employers’ social security contributions, for the creation of new full-time jobs[9].

More specifically, under the above provision, 150% of an employer’s social security contributions for the creation of new full-time jobs are deductible from the gross revenues of legal persons and legal entities (including physical persons engaged in a business activity), up to a maximum of 14 times the minimum wage of an unmarried employee over 25 years of age, provided there is an increase of the average number of employees during the year, compared to the average number the previous year, and there is an increase of the total cost of employee wages during the year, compared to the previous year.

Furthermore, administrative decision No. 1244 provides that the tax incentive applies for the recruitment of young people up to 30 years

[7] *Ibid*.

[8] *Ibid*.

[9] The incentive applies starting with the 2019 tax year.

old, at the date of recruitment, and long-term unemployed persons registered with the labour employment office (OAED), or other unemployment funds similar in operation to the OAED, at the time of their recruitment. The incentive also applies to the conversion of part-time or rotation contracts, and service or project-based contracts, into full-time employment contracts.

Finally, it is worth mentioning the measures adopted within the framework of the initiative “We Choose Greece – Building Bridges of Knowledge and Cooperation”, which aims to help tackle the brain drain phenomenon abroad by ‘connecting’ all Greek scientists, no matter where in the world they are, by connecting them with Greece, for as long as they remain outside the country. In this context, after an evaluation of the proposals submitted by a special committee, prizes are awarded to transnational scientific-research cooperation networks, involving higher education degree holders[10] or business partnership proposals for the production of a specific product or service in Greece involving higher education holders[11], who are either of Greek or EU origin, or third country nationals who have residence in Greece under specific conditions. In order to ensure that the eligible persons actually receive the prize money, it is provided that the cash prizes cannot be confiscated, they are not subject to any kind of withholding tax and are not offset by any liabilities of the beneficiary to the Greek State[12].

The new Greek government, elected on July 2019, is planning “a comprehensive tax reform that will have a four-year horizon and will accelerate growth”. The overhaul will focus on reducing income and corporation tax, cutting VAT, streamlining tax incentives for investors and abolishing emergency levies imposed during the Greek debt crisis to meet conditions set by bailout creditors. Starting 1 July 2020, the insurance contributions will start to decrease gradually. It will only be provided for full-time employees.

The recently voted Law 4621/2019, which was approved by the Greek parliament on 31 July 2019 (several days after the elections),

[10] Specifically, those who are either of Greek or EU origin, or third country nationals who have had residence in Greece for at least three years, and who reside and work in the country they represent for at least one year at the time of application. Each network is represented by at least two (2) countries, one of which must be Greece.

[11] Specifically, those who are either of Greek origin or EU or third country nationals who have resided in Greece for at least one year three years, and who have resided and worked abroad for at least one year at the time of the application.

[12] Financing of the total amount of money distributed is financed by the national part of the Public Investment Program (PIP). The total amount of funding may not exceed three million euros per year. The total annual amount of aid is the budget of the number of projects in the Public Investment Program and is determined by decision of the Minister of Finance and Development.

significantly reduces the Annual Real Estate Ownership Tax (ENFIA) paid by individuals. The ENFIA, which is comprised of a main tax and a supplementary tax, is levied on real estate located in Greece, owned by legal entities and individuals. The new legislation also makes improvements to the instalment payment option for tax liabilities that was introduced in May 2019 (law 4611/2019).

Furthermore, the prime minister presented at the 84th Thessaloniki International Fair the main tax measures that his government intends to submit for a vote to Greek parliament, in order to promote economic growth in Greece and also deal with brain drain. He announced the reduction of the corporate income tax rate from 28% to 24%, the reduction from 10% to 5% of the withholding tax on dividends and the reduction of the lower income tax rate for individuals, for income up to 10.000 euros, from 22% to 9%. Furthermore, in order to promote the construction sector, he announced the introduction of a 40% discount on costs related to building renovations. In addition to the above tax incentive for building renovations, he announced the suspension of the payment of VAT on new buildings (for three more years) and the postponement of the imposition of capital tax on the transfer of real estate.

Finally, the prime minister announced further tax measures to be introduced in the next fiscal years, after 2020 and 2021, and specifically the abolishment of the business duty on entrepreneurs and self-employed, the introduction of an accelerated depreciation rate (up to 200%) for specific investments, the progressive reduction of the solidarity contribution on income that was introduced as an urgent measure during the economic crisis, and the income tax reduction on benefits in kind provided by companies to executives and employees, such as vehicles, etc.

The new tax measures announced by the Greek government intend to support the effort for growth and to deal with the brain drain. Lowering tax rates would help the Greek government to achieve the above goals, since higher tax rates influence people choices regarding the location of work and life and generally the mobility of young workers.

Furthermore, at the 84th Thessaloniki International Fair the prime minister announced the creation of a technology park that will host cutting-edge companies, free zones of commerce/free economic zones/ special economic zones (SEZs), which can be a model for other free zones of commerce in Greece, especially in some border areas that are very important because of competition to the north. Moreover, the government announced the simplification of the relative procedures specifically for industrial zones.

However, in the course of introducing such free zones of commerce, the Greek government should be cautious, since according to a new report

from the OECD and the European Union Intellectual Property Office, titled Trade in Counterfeit Goods and Free Trade Zones the illicit trafficking of products-monkey strengthens, unintentionally, the continuous growth of free trade zones, where economic activity is driven by reduced taxes and customs controls, less regulation and limited supervision. The report notes that exports of counterfeit and pirated products from a given country or economy increase with the number and size of the free trade zones it hosts.

The Greek government has not yet announced the details of these Special Economic Zones. In any case, the government should take into account the Base Erosion and Profit Shifting considerations in order to avoid generating harmful tax practices and competition. In this respect, it should adopt tax measures aimed at avoiding undesirable tax planning structures used by Special Economic Zones, and notably the requirement of substantial activity, controlled foreign company rules, etc. Also, the Greek government should not be overoptimistic, since in addition to tax incentives, other factors also influence the location of incorporation of the companies and corporate decision making in general. Such factors are political and economic stability, legal and tax certainty and transparency, availability of skilled labour, land policy, etc.

Furthermore, until now the Greek government has not introduced measures such as exemption from income tax for young people up to a certain age, which is the case with other countries, such as Croatia and Poland. In any case, analysts have strong doubts about whether such tax reliefs would reverse the brain drain of talented and educated youths to other countries that offer higher wages and other important job opportunities. According to them, tax exemptions, even full exemption, are probably not enough to tackle the brain drain. "They fail to address the root of the problem", explains an Economist Intelligence Unit (EIU) analyst and warns that the flight will be intensified in the long run if there are no effective initiatives to stimulate growth and improve labour market conditions.

It is noted that, in addition to effectiveness considerations, the introduction of such measures, i.e. tax exemptions for young people, may pose issues regarding their conformity with the constitutional principle of tax equality.

If, however, lower tax rates or other tax incentives are not effective in reversing brain drain, can the same be considered responsible for causing brain drain? In 2017 Greece recorded the highest tax rates on labour in the European Union, reaching 43.3%, whereas Bulgaria recorded the lowest rates, at 24.3%.[13] There is concern that high tax rates might constitute an incentive for emigration, especially in the case of highly skilled persons.

[13] Alcidi, Gros, CEPS (2019), section 5.1.

However, up to now, there is limited evidence that mobile labour locates on the basis of tax reasons. This seems to be the case even if the semi-elasticity of migration appears higher for higher incomes and some countries had successful preferential tax treatment for high-earning foreigners.[14]

7. OTHER PROPOSALS TO TACKLE BRAIN DRAIN: THE EU LAW PERSPECTIVE

Literature has proposed that (usually temporary) restrictions on emigration be imposed on highly skilled or highly educated persons who have received educated at the public expense.[15] Such restrictions, however, on the free movement of workers, even temporary, are not compatible with the freedom of the movement of workers with in the EU, as protected by the TFEU, and therefore do not constitute a realistic proposal.

Another measure that has been proposed is the imposition of what is referred to as a 'Bhagwati tax' on emigrating skilled workers. A Bhagwati tax is, most generally, an 'exit tax' paid by a would-be emigrant with the intent of compensating their country of origin and for the training investment made in their skills.[16] Again, an exit tax that would constitute an obstacle to the free movement of workers within the EU would be very difficult to reconcile with the fundamental freedoms and therefore this measure would not be a viable proposal for addressing brain drain in the EU. The proposal of a form of tax credit would not entail such concerns.

Under this proposal, the receiving country, which is the country of residence of the highly skilled/educated worker, would take on the responsibility to assess the taxpayer with the tax due in their origin country, remit the tax so due to the origin country itself, and give an equivalent tax credit from the tax due in the worker's country of residence.[17] Within the EU there is a very high level of cooperation between tax authorities and this would make this proposal feasible and easy to implement. Such a measure, however, would require political consensus within the EU and with the states competing for tax revenue this seems rather far reaching at this stage of integration of the EU.

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[14] *Ibid*.

[15] See the analysis in Lister (2017, 73 et seq., and n 4), who refers to the proposal by Gillian Brock, Prosperity in Developing Countries, the Effects Departing Individuals Have on Those Left Behind, and Some Policy Options, in *Debating Brain Drain: May Governments Restrict Emigration?*, edited by Gillian Brock and Michael Blake. 36, 37 (2015), aimed at protecting the workforce in developing countries.

[16] See the description and comments in Lister (2019, p. 79, n 26).

[17] See Lister, *ibid*. Lister has loosely based his proposal on the foreign tax credit that is available to US citizens living and working abroad.

8. CONCLUSION

The use of tax policy to address brain drain has been proposed by several authors, institutions and governments around the globe. In this regard, the proposed or introduced tax measures include the co-called 'Bhagwati tax', a form of exit tax, the use of tax credits, some of them modelled on the foreign tax credits US citizens receive in certain situations for taxes paid in other countries, tax incentives for the increase of investments, or even more the suppression of income tax or other tax reliefs for young people up to certain age (e.g. 25 or 30 years old).

Tax policy can contribute to the effort to address drain brain, and specific tax measures can be more efficient than others in stimulating growth in general. Nevertheless, it is strongly proposed that, having in mind fiscal considerations of course, to adopt a larger tax reform, with a reduction of the effective top/marginal rate and the adoption of tax incentives for businesses aimed at the recruitment of young workers, especially the highly skilled. But the brain regain cannot be resolved only by tax policy, but rather through large scale fiscal and social reform, which would deal with the causes of the drain brain phenomenon. Also, if we wish the Greek scientists who moved abroad to return in Greece, or at least to prevent others from making the same decision, we must eliminate the reasons that led them abroad, i.e. to change the country's economic growth pattern in order to match the supply and demand of skilled human capital in Greece.

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