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*Vladimir Gligorov*

The Transfer and Adjustment Problems in the Balkans





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## *About*

Shortly after the end of the Kosovo war, the last of the Yugoslav dissolution wars, the Balkan Reconstruction Observatory was set up jointly by the Hellenic Observatory, the Centre for the Study of Global Governance, both institutes at the London School of Economics (LSE), and the Vienna Institute for International Economic Studies (wiiw). A brainstorming meeting on Reconstruction and Regional Co-operation in the Balkans was held in Vouliagmeni on 8-10 July 1999, covering the issues of security, democratisation, economic reconstruction and the role of civil society. It was attended by academics and policy makers from all the countries in the region, from a number of EU countries, from the European Commission, the USA and Russia. Based on ideas and discussions generated at this meeting, a policy paper on Balkan Reconstruction and European Integration was the product of a collaborative effort by the two LSE institutes and the wiiw. The paper was presented at a follow-up meeting on Reconstruction and Integration in Southeast Europe in Vienna on 12-13 November 1999, which focused on the economic aspects of the process of reconstruction in the Balkans. It is this policy paper that became the very first Working Paper of the wiiw Balkan Observatory Working Papers series. The Working Papers are published online at [www.balkan-observatory.net](http://www.balkan-observatory.net), the internet portal of the wiiw Balkan Observatory. It is a portal for research and communication in relation to economic developments in Southeast Europe maintained by the wiiw since 1999. Since 2000 it also serves as a forum for the Global Development Network Southeast Europe (GDN-SEE) project, which is based on an initiative by The World Bank with financial support from the Austrian Ministry of Finance and the Oesterreichische Nationalbank. The purpose of the GDN-SEE project is the creation of research networks throughout Southeast Europe in order to enhance the economic research capacity in Southeast Europe, to build new research capacities by mobilising young researchers, to promote knowledge transfer into the region, to facilitate networking between researchers within the region, and to assist in securing knowledge transfer from researchers to policy makers. The wiiw Balkan Observatory Working Papers series is one way to achieve these objectives.



# The wiiw Balkan Observatory

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*This study has been developed in the framework of research networks initiated and monitored by wiiw under the premises of the GDN–SEE partnership.*

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The Vienna Institute for International Economic Studies is a GDN Partner Institute and acts as a hub for Southeast Europe. The GDN–wiiw partnership aims to support the enhancement of economic research capacity in Southeast Europe, to promote knowledge transfer to SEE, to facilitate networking among researchers within SEE and to assist in securing knowledge transfer from researchers to policy makers.

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For additional information see [www.balkan-observatory.net](http://www.balkan-observatory.net), [www.wiiw.ac.at](http://www.wiiw.ac.at) and [www.gdnet.org](http://www.gdnet.org)

# The Transfer and Adjustment Problems in the Balkans

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Vladimir Gligorov

## The Issue

How to deal with significant external imbalances due to persistent cross-border financial flows which eventually dry out while accumulated foreign debts need to be financed from increased exports? Keynes and Ohlin, primarily, debated an apparently more specific issue of unilateral transfers in the case of German reparations after the World War I and that debate has had lasting influence on the theory of trade and international finance and even on the understanding of the dynamics of exchange rates in financial and fiscal adjustment. These issues have resurfaced in the discussions of financial crisis in a monetary union, like that of the euro area.

The aim of this essay is to use the arguments presented in this debate and in subsequent clarifications and extensions to understand the development of external imbalances in the Balkans and the prolonged adjustment in the context of the financial crisis after 2008. The motivation is that this is an important topic in international macroeconomics and a recurrent problem in this region, though I will look more thoroughly only into the last episode of the financial crisis from 2008 onwards.

The essay follows the arguments advanced in this classic debate and applies them to examples of post-crisis adjustment in the Balkans (not just in the post-socialist countries, but also looking at the problems that Greece is having with servicing its large foreign debt). The essay should provide the framework for the understanding of Balkan problems of adjustment to outward transfers to service in some cases of unsustainable foreign debts. It also seeks to develop hypotheses that invite a detailed look at the data and their assessment by somewhat more in depth discussion of particular cases.

*I tried to imagine a fella smarter than myself.  
Then I tried to think, 'what would he do?'*

David Mamet, Heist

## Introduction

This essay is an interpretation of Keynes' debate with Ohlin on reparations (Keynes 1929a, 1929b, Ohlin 1929a, 1929b) which should help the understanding of the crisis of cross-border financial flows primarily in the Balkans. The issue in the debate was whether the terms of trade needed to change, and in what direction, in order to fully service (post-World War I German) reparations. The focus of the debate was on the feasibility, sustainability, and the unintended effects of unilateral international transfers. However, the arguments invoked are applicable to problems of imbalances in trade and financial flows in general, as well as to issues of monetary and fiscal policies in the international context, which is why this debate has inspired such a large number of assessments and reassessments. Some interpretations here may be mildly novel, or rather some of the arguments may be looked at from a different angle. But I cannot be sure given my less than comprehensive acquaintance with the secondary sources (for some selected surveys of the literature see Viner 1937, Meade 1951, Samuelson 1952, 1954 and 1971, Mundell 2002; see Brakman and van Marrewijk 1998 for detailed discussion of the economics of transfers).<sup>1</sup>

The main point made here is that Keynes was mostly worried about the effects of reparations on deflation and employment (his long lasting preoccupation, Keynes 1919, 1923, 1926, 1936) in the payer country rather than with trade theory or policy, which is what the subsequent discussions were mostly concerned with however.<sup>2</sup>

In *The Tract on Monetary Reform* he compares the ills of inflation with those of deflation (Keynes 1923: 40):

‘... Inflation is unjust and Deflation is inexpedient. Of the two Deflation is, if we rule out exaggerated inflations..., the worse; because it is worse, in an impoverished world, to provoke unemployment than to disappoint the *rentier*.’<sup>3</sup>

He thought that the imposition of reparations on a country would require cuts in

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<sup>1</sup> I quote extensively from Keynes' and Ohlin's pieces because they express themselves so well and because so many substantial claims are contained in such short contributions. As Krugman pointed out, modelling the issues tends to lead to loss of discursive content (Krugman 2002). On how I approach interpretation or what used to be called hermeneutics, i.e. study of texts, perhaps it is enough to say the following: I assume that fundamental disagreements arise from different views on how to solve an important problem that all sides take to be well defined. The problem at hand structures the different opinions about the appropriate policies rather than the differences in opinions leading to different policy proposals.

<sup>2</sup> See Gligorov (2012) on Keynes' view of trade theory and policy in *The General Theory*. In this context, the chapter on mercantilism in that book is of primary importance. I also take Robinson (1937 and 1945) to contain one elaboration of the Keynesian view on trade theory. The adjustment problem was clearly recognised when the Bretton Woods system based on the dollar as the world currency was being set up with its reliance on periodic devaluations.

<sup>3</sup> It is interesting to note Keynes' juxtaposition of fairness with expediency and his preference of the latter over the former as the guide for policy.

wages and employment in that country that may prove unfeasible and unsustainable, and opposed them on that ground (fairness may require reparations to be paid, but that may not be an expedient policy). The issue in the debate with Ohlin (and Jacques Rueff too, but I put that on the side) was whether his worries were substantiated, theoretically and empirically, or not. This aspect of the debate might not have been appreciated enough at the time, but proved to be influential after the Great Depression and had apparently influenced the approach to reparations after World War II (Johnson 1975).

The transfer problem has also been revisited in the context of the adjustment of the current account imbalances in financially globalised world (Obstfeld 2012) and in the current debt crisis in the European Monetary Union (Farhi and Werning 2012; also Krugman referred to it several times in his blog posts). Of course, it is also central to the sudden stop type of crisis, though it is not often interpreted that way. That is why it may be interesting to look into it all over again.

I follow the arguments with examples from the Balkans hoping that eventually by applying the claims developed in this and the follow up debates I will account for the effects of foreign trade and international finance on the current prolonged crisis in the Balkans. I take the current crisis not to be terribly different from those that befell that region in the past and will occasionally attempt to cover especially the one in the 1980s too. To do that, I develop hypotheses and some arguments in support of them based on this famous debate. In that, I am encouraged by Krugman's application of the transfer problem to the adjustment in external balances in the 1980s, and to dealing with the Asian Crisis in late 1990s (Krugman 1991 and 1999 respectively) and by the references to the transfer problem in the discussions of the euro crisis (especially in Farhi and Werning 2014).

## The Excess Burden

The country, Germany in this debate, paying reparations faces two problems. One is the budgetary problem, which refers to the ability (and willingness) to collect the necessary taxes to pay the reparations (or pay down foreign debt more generally). The bill may simply be too large. In addition, there is the transfer problem, the secondary or excess burden of reparations, which springs from the required deterioration in the terms of trade so that exports of the country paying the reparations can increase enough to cover the costs of the reparations fully. But the problem applies more generally to foreign debts, investments, aid, remittances and practically all types of international financial flows; e.g. in a sudden stop crisis, which indeed is the one that the Balkans faced after 2008 (and some of the countries in this region in the 1980s too).

Keynes puts the difference between these two problems in the following way in his paper on *The German Transfer Problem* from 1929 (1929a) which kicked off the debate, though he has been making the same kinds of points since his 1919 book:

‘The *Budgetary Problem* depends on the wealth and prosperity of the German people; the *Transfer Problem* on the competitive position of her industries on the international market.’

His argument on why it is difficult to service a large reparations bill is probably summarised the best in this sentence:

‘...(W)e are trying to fix the volume of foreign remittance and compel the balance of trade to adjust itself thereto.’

The operative word in the quote is “compel”, that is to say the required increase of exports would not have normally arisen within the prevailing, or whichever one might call the equilibrium, terms of trade.

Writing  $X'$  for additional exports and  $M'$  for additional imports, the changes in the trade balances<sup>4</sup> of these two countries, A and B, ( $TB'A$ ,  $TB'B$ ), given the trade balance of the world ( $TB$ ), due to transfers from country A (the transferor) to country B (the transferee) are:

$$X'A - M'A = T = TB'A \quad (1)$$

$$X'B - M'B = -T = TB'B \quad (2)$$

$$TB = X' - M' = TB'A - TB'B = T - T = 0 \quad (3)$$

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<sup>4</sup> Those could be thought of as a net change, in the sense that net financial outflows, due to transfers, which need to be paid from the earnings due to the net change in the trade balance. See Obstfeld 2012 on the importance of the difference between gross and net financial flows; Keynes looks mostly at net changes, why Ohlin brings in gross flows too.

The improvement in the trade balance of the transferor country equals the deterioration in the trade balance of the transferee country (or the rest of the world) within the overall global trade balance. If the terms of trade need to change in order to make the transfers, there is the transfer problem. There is also the budgetary problem of collecting additional taxes to pay back the reparations, which in a more general setting of international financial flows is the issue of the sustainability of foreign debts, private as well as public ones.

Keynes points to two cases when there is only the budgetary but no additional transfer problem.

First: ‘...(L)et us suppose that’ transferor’s ‘factors of production produce nothing but exports and consume nothing but imports; in this case it is evident that there is only a Budgetary Problem and no Transfer Problem...’

In other words, the reparations paying country only needs to raise taxes, if it wants and can, and thus reduce its imports appropriately so that it can generate the needed trade surplus to pay the reparations.

Second: ‘If £1 is taken from you and given to me and I choose to increase my consumption of precisely the same goods as those of which you are compelled to diminish yours, there is no Transfer Problem.’

The second example proved to be the starting point for Ohlin’s response (and much of the subsequent discussions, e.g. Samuelson 1952, Mundell 1960) because it introduced income effects and general equilibrium considerations. Starting with this example, there is or there is not a transfer problem depending on the following.

If there are two countries, A and B (and implicitly the world), and two goods, x and m,<sup>5</sup> the overall demand for good x, say, would be the sum of the demand of the two countries for that good,  $DA_x$  and  $DB_x$ . So for transfer T:

$$(DA_x + DB_x)T - T = 0 \tag{4}$$

which implies  $DA_x + DB_x = 1$ .

That will be the case, if aggregate demand, with given supply, does not change: irrespective of the distribution of spending between the countries. There will be only income, i.e. the effects of the transfer, and no substitution effects, i.e. changes in the relative prices of x and m. (Change here is in the comparative statics sense, i.e. it means evaluating at the

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<sup>5</sup> There could be many more goods also, but those can be aggregated into exports and imports of any particular country even though there is a continuum of goods as in Dornbusch, Fischer, and Samuelson 1977



initial prices the adjustment needed in order for the required change to take place. In this case, the change of the initial prices needed to effectuate the transfer).

Given that there are two goods, if demand for good x does not change, it will not change for good m too, by Walras Law, and so the relative prices of m and x, or the terms of trade, will not change too (Mundell 1960, Brock 2008) – and there is no transfer problem. Otherwise, prices need to change in order for the exports and imports to adjust so as to effectuate the transfers. Which is the transfer problem: the same value of transfers will require a transfer of more real income than at the initial, pre-transfer, prices.

Clearly, demand for exports and imports may change due to the required transfers on both or all sides. Those changed demands will induce changes in relative prices and in the terms of trade, which in turn will initiate the additional income effects that define the transfer problem.

Samuelson (1952) following Pigou (1932), put down the general criterion for changes in the terms of trade due to international (and inter-regional) financial flows. In the model of two countries, A and B, and two goods, x and m, A exporting x and B exporting m, in order for transfers to be made, the terms of trade need to change in either direction or stay the same depending on whether:

$$Ax'/Am' <=> Bx'/Bm' \quad (5)$$

i.e. A's marginal propensity to consume its export good (x') compared to its import good (m') is higher or lower than or equal to B's propensity to consume its import good over its export good at the given terms of trade.

In other words, trade surplus of the transferor country, the left hand term in 5, can match the trade deficit of the transferee country, the right hand term in 5, at the existing terms of trade, if their marginal propensities for consumption of exports and imports will not change due to transfers (or investments). Otherwise, they will either deteriorate or improve e.g. for the transferor.

The case with the transfer problem, i.e. terms of trade need to worsen for the transferor country, is called orthodox (or classical). It requires the alignment of preferences and production within a country, e.g. that the transferor country has a higher marginal preference to consume the good it produces and exports than the importing or the transferee country. The opposite, usually referred to as a transfer paradox, where terms of trade turn favourable for the transferor country, is called nonorthodox (or modern).

In both of the Keynes' cases, the sum of the marginal elasticities for spending on

imports of the two countries (or the world) is equal to 1 (Mundell 2002), which is the condition that needs to be satisfied so that there is no transfer problem (Pigou 1932, Meade 1951, Samuelson 1952, Mundell 1960). Put simply, imports of the transferring country need to shrink and exports increase sufficiently or just enough to cover the transfer.

Writing marginal propensities to consume the imported goods  $A_m'$  and  $B_x'$ , the trade balance, TB, needs to adjust, and exports and imports jointly will adjust more or less than the amount of the transfer, T, at the initial terms of trade, depending on the marginal elasticities of consumption of the two countries. There is a transfer problem if terms of trade need to change in order for the trade balance of the transferor country to adjust enough to cover the mandated transfers:

$$TBA = -T + A_m'T + B_x'T = T(A_m' + B_x' - 1) \quad (6)$$

So for trade (or the current account) to change just enough to take account of the transfer, exports and imports of the two countries need to change more or less than T, at the initial prices, to balance the payments depending on whether  $A_m' + B_x'$  is larger than 1, equal to 1, or less than 1 (Pigou 1932, Meade 1951, Samuelson 1952, Mundell 1960, Brakman, van Marrewijk 1998). In other words, terms of trade need to change so that the needed increase of exports together with the decrease of imports will move the trade balance to surplus large enough to cover the reparations. In the case that the sum of elasticities of spending on imports in the two countries falls short of one, adverse change in the terms of trade of the transferring country will be required so that it can reach the needed trade (or current account) surplus in view of the balance of payments constraint.

In the two Keynes' examples, the adjustment of the TB requires no additional change in the terms of trade because  $A_m' + B_x'$  equals 1 or the additional export surplus of the transferring country is equal to the financial transfer. The donor country is worse off and the recipient country better off for the amount of the transfer. Differently stated, the additional surplus in the donor's trade balance (current account) is equal to the amount of paid reparations. There might be a budgetary, fiscal problem, but not a transfer problem.

Ohlin states the same with an example of a barter transfer:

'... (T)here can be no doubt that deliveries in kind, i.e. *an organized shifting of demand* can bring about an export surplus in Germany...' <sup>6</sup> In other words, in barter economy,

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<sup>6</sup> Bernanke puts this simply in a recent article (Bernanke 2015): 'For intuition about the link between foreign investment and exports, think of the simple case in which the foreign investment takes the form of exporting, piece by piece, a domestically produced factory for assembly abroad. In that simple case, the foreign investment and the exports are equal

or moneyless economy, there can be no transfer problem, just the budgetary one.

So, in these special cases, terms of trade need not change for reparations to be paid, assuming that there is no budgetary problem, which means that the country paying reparations is able and willing, even under coercion, to transfer some of its income abroad without compensation.

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and simultaneous.’ Indeed, after the Second World War, Soviet Union exacted reparations from Germany in kind in the way quite close to the one described by Bernanke.

## The Supply Side

In general, in accordance with the accounting identity of the balance of payments, a country that is a net transferor, donor, or investor abroad will see an improvement in its current account (it will run a surplus that is; trade balance and current account are, for the most part, used interchangeably in this debate). The issues, when it comes to the transfer problem, in this debate, are:

(i) which side of the balance of payments drives (causes or constraints) the other one (there is no dispute over the two having to balance),

(ii) whether prices and more importantly terms of trade have to change and in which direction, and

(iii) does the net transferor or investor country need to experience a deflation and a deterioration of employment?

Keynes takes the first, (i), to be an empirical issue and argues for the primacy of trade over finance. He assumes that the trade balance is a binding constraint because in the end exports and imports, trade that is, need to balance, in other words that imports are paid for with exports, eventually, but not just in a very long run; expenditure cannot be higher than income, sustainably. He also argues that prices and terms of trade, item (ii), need to adjust to support the growth of exports that should match the financial costs of reparations, which adjustment has to be disadvantages to the transferring country – its terms of trade need to deteriorate. Finally, item (iii), his main claim is that net financial outflow, or increased trade surplus, will necessitate deflation in the transferor or the investor country.

Keynes argued that a country might not be able to increase its exports enough to pay the reparations if it either

(intensive margin) already exported all that it could ‘on any terms on which the rest of the world will buy them’, or

(extensive margin) produced only few types of goods that it could expect to sell on the foreign markets.

In the latter case, even if production for export can be increased, there will be a problem for the following reason:

‘...(L)et us suppose that...’ output of exportable goods can be increased ‘... but unfortunately the demand of the rest of the world for these articles has elasticity of less than one. In this case the more she exports, the smaller will be the aggregate proceeds.... (T)he

transfer problem will be a hopeless business.’

That would have to mean, in both cases, that the sum of two countries’ elasticities for imports is less than 1, and thus the donor country’s trade surplus will not be enough to cover the reparations bill at the existing terms of trade. Keynes, ostensibly, does not consider the import elasticity of the country that is paying the reparations because he assumes that it will have to cut its imports sufficiently, e.g. by rising taxes, to achieve the needed trade surplus (Brock 2008).

So, Keynes argues that in general there will be a transfer problem because without the decline in the terms of trade of the transferring or financing country the needed trade surplus will not be achieved and thus transfer or investment cannot be made. He did not claim that this was inevitable, only that it was quite likely.<sup>7</sup> He does, however, say that if the required reparations are too large and the elasticity of demand for imports of the transferee country, or of the world, is below 1, then the more the terms of trade deteriorate, the less will be earned from exports, and so the transferor country will not be able, even if it is willing, to earn enough from exports to fully finance the reparations.

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<sup>7</sup> Krugman (1991 and 1999) and Krugman and Obstfeld 2006 have sided with Keynes, as have many others, with Krugman arguing that transfers without price adjustments rely on a mechanism of immaculate causality, which is a valid point but is not a mistake that Ohlin made in this debate.

## Balkan Trade

The argument for the existence of the additional burden has been made in the current case of the crisis in the euro area. Especially the Greek case seems as if it supports Keynes' position. Even though Greek terms of trade can be expected to have declined dramatically in the last 5 or 6 years, due to strong internal devaluation, i.e. fall in wages, the country has been unable to start repaying its foreign debts due to an almost non-existent increase of the value of its exports and thus to persistent trade deficit. Similar is the case of Croatia, though the current account has recently moved into surplus in the case of that country. This could be thought to have been the consequence of the adverse change in the terms of trade so that declining prices of Greek exports, e.g. touristic services, do not lead to sufficient increases in the value of Greek exports.

Keynes' argument may apply to this case:

‘...(I)f a reduction of prices of 10 per cent. stimulates the volume of trade by 20 per cent. this does not increase the value of the exports by 20 per cent., but only by 8 per cent. ( $1.20 \times 90 = 108$ ).’

So, terms of trade may have turned against Greek exports so much that the increased volume of export of, mostly, services have proved insufficient to bring in sufficiently increased value of exports. Preliminary check of the data, at the Eurostat, however, does not reveal significant changes in Greece's terms of trade (prices of exports by prices of imports) in the last five or six years. Similar picture emerges for Croatia and Bulgaria. Other Balkan countries show more flexibility in their terms of trade, with those improving in countries like Serbia and Romania, which have flexible exchange rate regimes. However, in barter terms, exports buy much less imports now than they did in 2008 and before 2009 in any case. Though, the behaviour of exports and imports differs across countries.

In the context of this debate, one reason could also be high propensity to spend on imports compared to the propensity of the countries Greece owes money to – to spend on Greek exports, e.g. tourism. It might be that there is only so much that can be exported from Greece (or Croatia) that there is a demand for. This could be due to the lack of response at the extensive margin of Greek exports and to low elasticity of demand at the intensive margin of Greece's exports, i.e. for tourist services.

This is generally characteristic of the Balkans, though most countries besides Greece and Croatia have actually seen significant growth of exports with slowdown in growth of

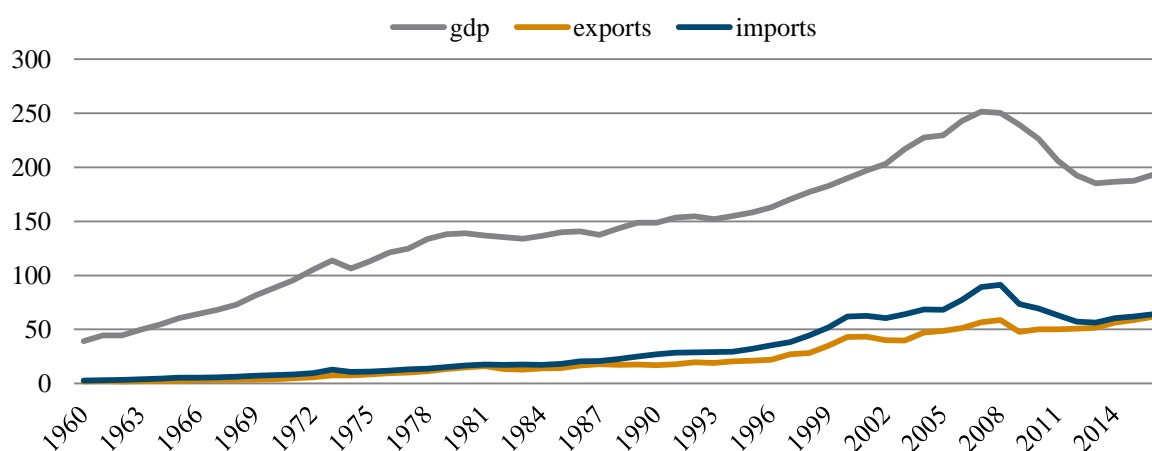
imports in the post-2009 period. Exports increased by about a half during the crisis years (e.g. 2014/2008). The difference between countries that have increased exports after 2009 and those that have not and the role of foreign finance and trade deficits is not due to more diversified export offer but mostly due to expenditure switching at sometimes sharply changing terms of trade.

### The Example of Greece: Closed Economy

Greece's economy is an example of Keynes' argument that it is hard to compel a country to adjust the structure of its trade to increased needs for outward financing. Here the long term Greek economic development will be described.

Going back to 1960, the period that there is readily available data for, it is clear that exports have not been the driving force of the Greek economy (Figure 1). Overall exports of goods and services have reached only 20 percent of GDP before the crisis of 2008-2009 and have gone up to 30 percent by 2014, but the latter is due to the decline of GDP, as the value of exports has hardly increased. For a small economy, Greece's is quite closed.

**Figure 1: GDP, exports, and imports in €2010bn**

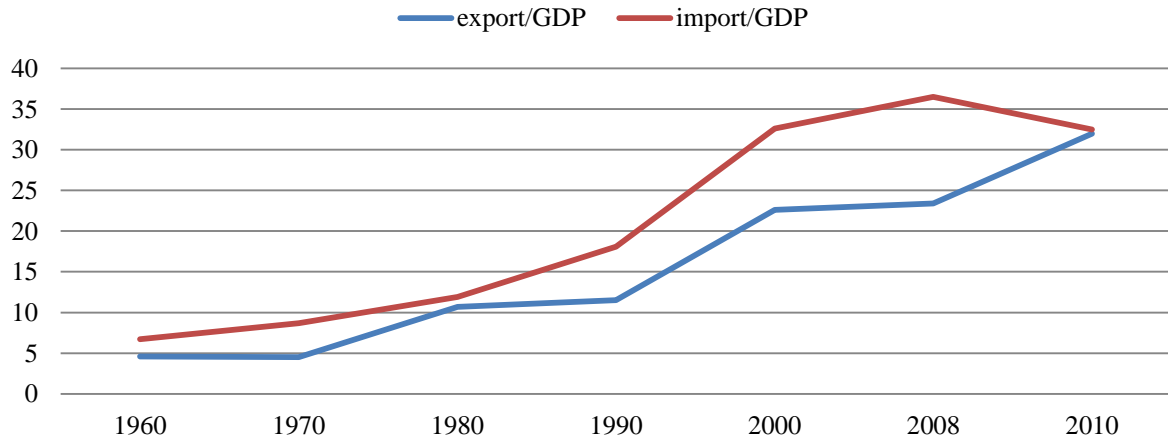


Source: All data if not stated otherwise is from Eurostat.

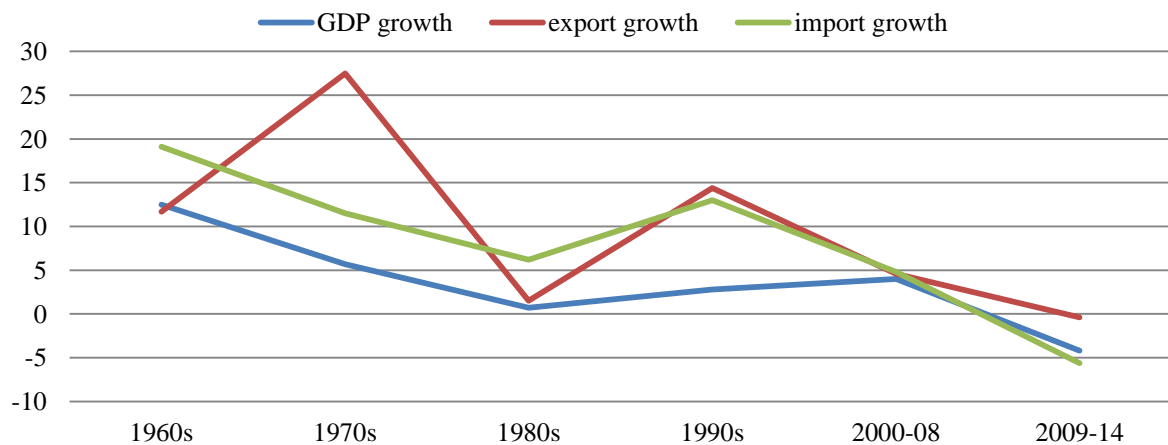
Imports (Figure 1) have been larger than exports throughout, but by at most a factor of 10 percentage points, and that much mostly after 2000 (Figure 2). Imports have gone up to about 30 percent of GDP in 2014, which again for a small economy is not a very large number. Both exports and imports have tended to grow faster than GDP (Figure 3). Clearly, the gap widened in the 1990s and before 2009. Since then, exports in euro have stagnated and

imports have plummeted so that close to balanced trade has emerged (deficit came down to about 2 percent of GDP in 2014).

**Figure 2: Exports and imports, share of GDP, average per decade**



**Figure 3: GDP, export and import growth, average per decade**



So, foreign trade data point to a rather closed economy, given its size, certainly before the current crisis.

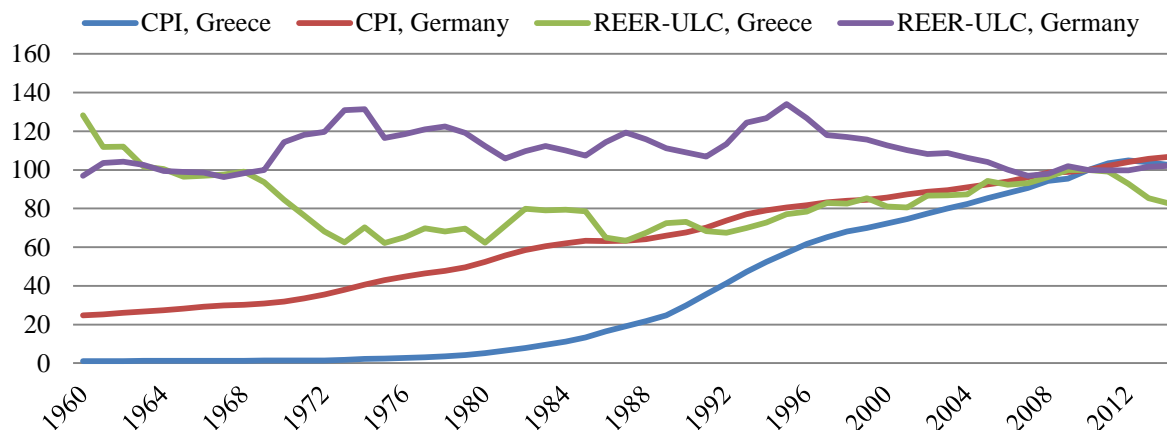
### Real exchange rate, inflation, and interest rates

What supported this economic development? Before the 1970s, real exchange rate tended to depreciate with relatively stable inflation. Since then, and until mid-1980s, real exchange rate tended to depreciate, though often not sustainably, with some acceleration of inflation, while since then inflation and real exchange rate appreciation went hand in hand (Figure 4). In Figure 4 Greece's developments can be compared with those in Germany.



Clearly, the period from the beginning of the 1990s provides for a contrast between the two economies which suggests steady erosion of Greece's competitiveness.

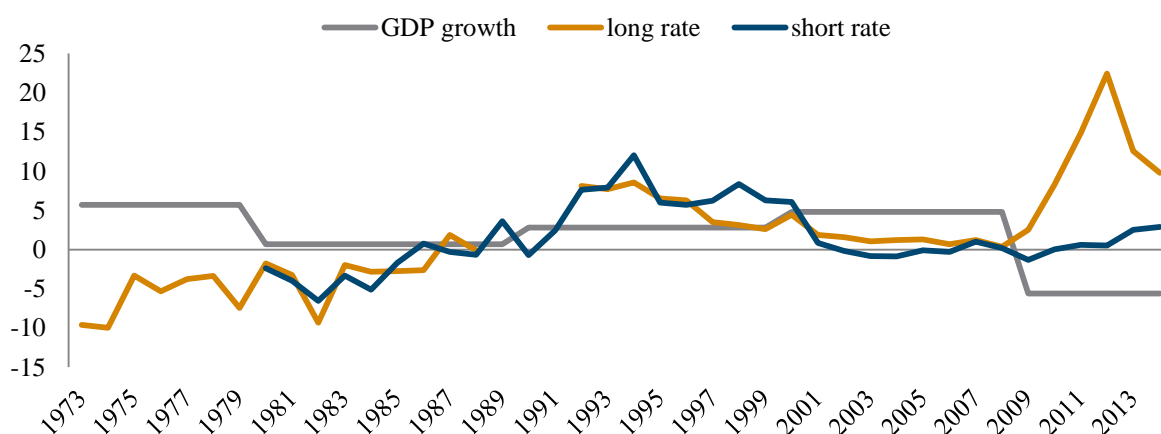
**Figure 4: REER, ULC based (EU15), CPI, 2010=100**



Note: REER-ULC, real effective exchange rate based on unit labour costs (compared to EU15).

In the early decades, the real interest rates tended to be negative, which changed from the beginning of the 1990s when real exchange rates shot appreciated continuously (Figure 4). The main change after the adoption of euro was a sharp decline of real interest rates (Figure 5). Inflation and real exchange rate appreciation continued, however, and there was significant acceleration of growth (Figures 4-5).

**Figure 5: Short and long term real interest rates, and GDP growth, decade averages**



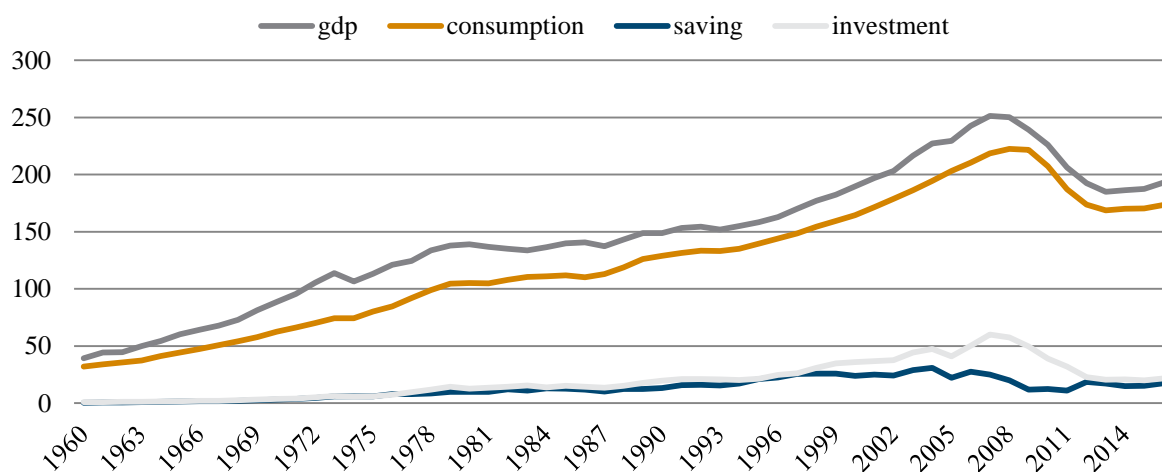
This relationship of low real interest rate and relatively fast growth is the key effect of joining the European monetary union on Greek economy before the crisis of 2008-2009. It supported the sustainability of both foreign and public debts and induced the growth of private debt, in particular those of households. As in a number of Southern European countries, private debts were mostly invested in real estate. Eventually, financial crisis led to

plummeting real estate prices and to the problem of sustainability of foreign and public debts, which is where the transfer problem comes in.

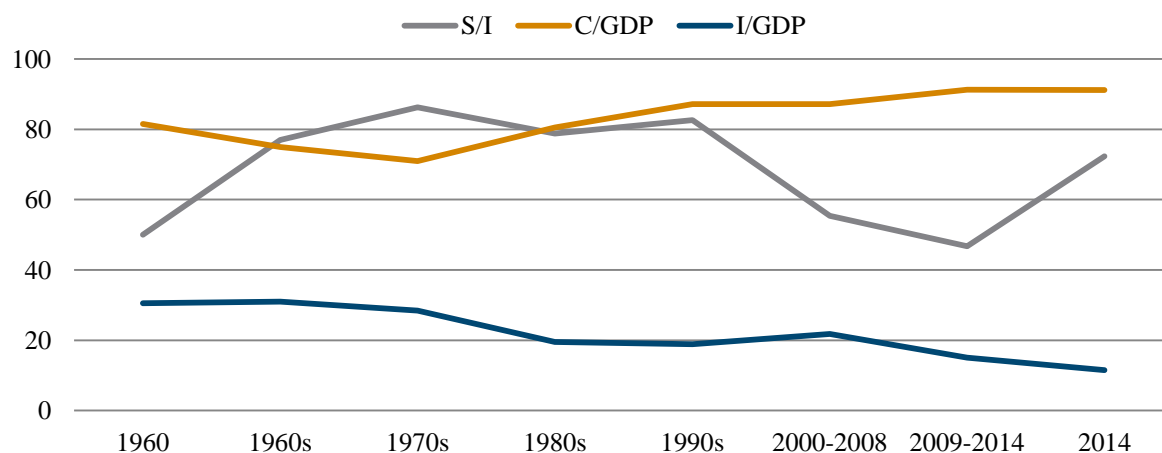
### Consumption, Saving, and Investment

Given relatively low levels of exports, the growth of the economy has depended on the strength of domestic demand, throughout the last five or so decades. Figures 6-7 show the importance of consumption and also the steady decline of investments as a share of GDP. Again, in the 1900s and also after the introduction of the euro, consumption increased significantly, while investment stayed flat at around 20 percent of GDP for close to three decades since the early 1980s (Figure 7). Again, from mid 1990s savings started to decline and investments were increasingly financed from abroad, i.e. trade and current account deficits tended to widen (Figures 6-7).

**Figure 6: GDP, consumption, investment, and saving in €2010bn**



**Figure 7: Savings/Investment, Consumption/GDP, Investment/GDP per decade**

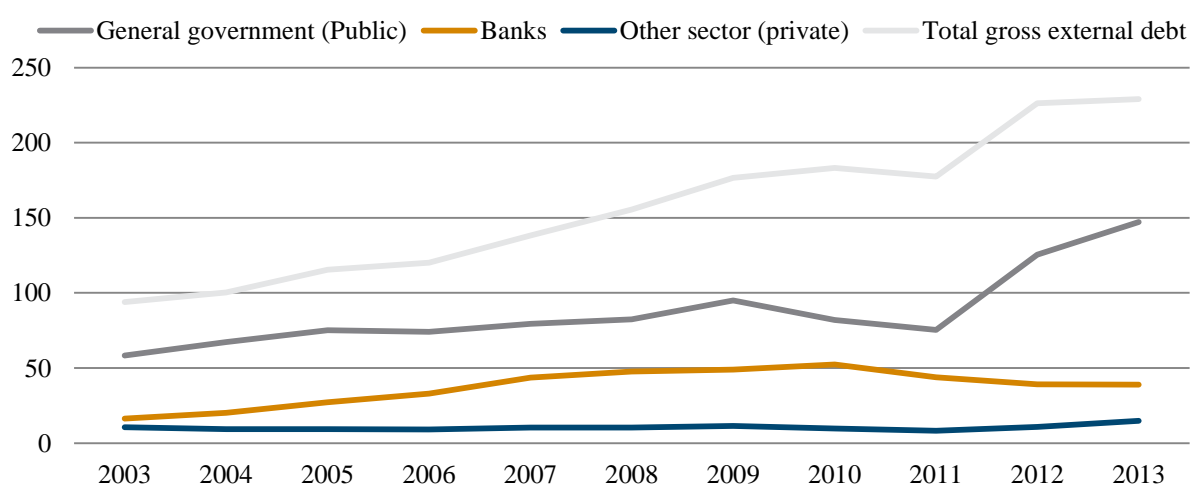


Thus, persistent gap between saving and investment and the need to close it is the other way to state the adjustment problem.

### The Three Debts

Figure 7 shows the gap between saving and investment that has been around from the beginning and which means that there has been an enduring reliance on foreign finance, which of course translates into increases in foreign debt, especially after the adoption of euro (Figure 8). Overall debt development shows significant increase in household indebtedness (Figure 9), and thus overall private debt, from about the year 2000 all the way to 2008 (that is, after the adoption of euro; Figures 9-10), while foreign debt is interestingly enough mostly owned by the government and the banking sector (Figure 8).

**Figure 8: External debt/GDP by sectors**

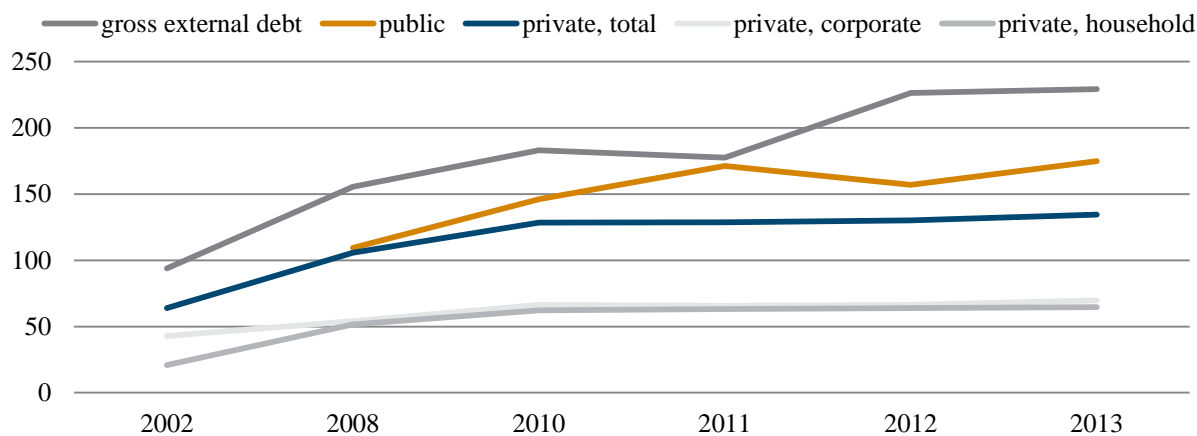


Gross foreign debt is currently about 230 percent of GDP and the aim of adjustment is to achieve GDP growth without further increase of foreign debt, or rather of the foreign debt to GDP ratio, and indeed the intended target is the prolonged decline of that ratio. That requires growth with current account surpluses (or small deficits), which means that growth needs to be increasingly driven by exports while investments need to be financed from domestic savings.

The adjustment to sustainable growth is mostly the task for the government and the banks, as the households and the corporations do not hold too much foreign debt, and their demand for foreign financing is not increasing. Figure 8 shows a sharp increase in public debt after 2011, mostly due to GDP collapse, and assuming that some of the debt of the banks is also public debt in one way or another, that means that practically all public debt is foreign

owned or that practically all foreign debt is publicly owned. Private debt, which is sizable and mostly reflects growing increase of household debt before 2009, is apparently domestically owned (Figure 10).

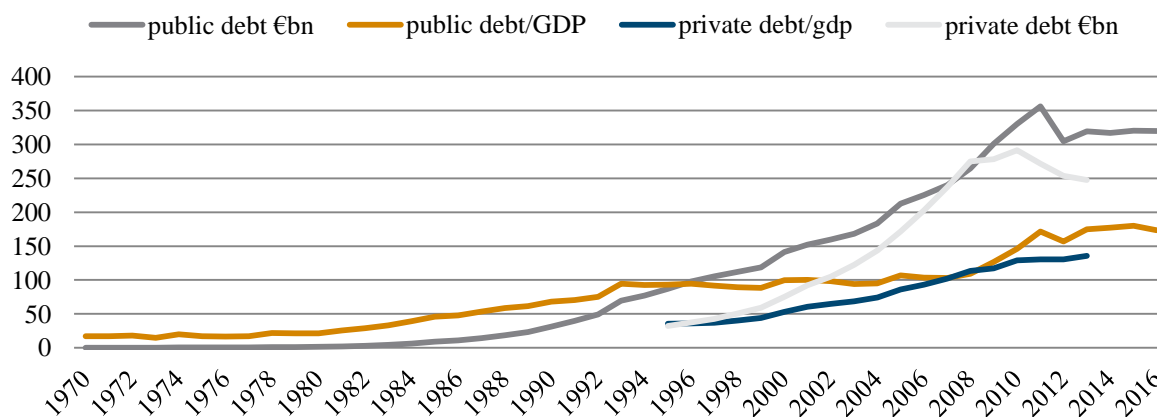
**Figure 9: Debts to GDP**



Source for Figures 1-9: AMECO

So, the adjustment problem in the Greek case requires primary fiscal surpluses, supported by higher saving and with growth of exports, as it is the government that needs to reduce its foreign debt.

**Figure 10: Private and public debt/GDP and in €bn**



Source: Ameco and Eurostat

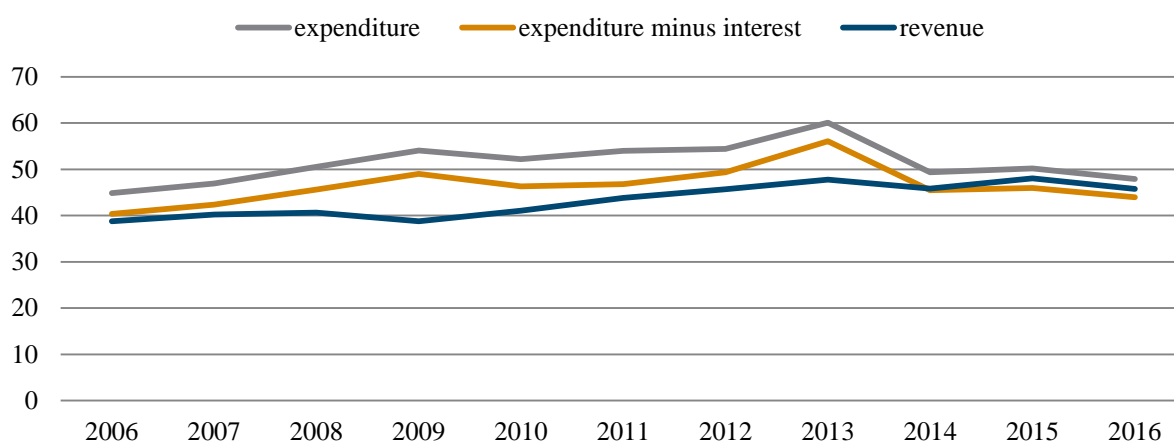
### Demand Adjusts, but not Supply

So, in summary, even with exchange rate adjustments, before the adoption of euro, export performance, though improving, has been unremarkable. After the adoption of euro, households and the government took advantage of lower real interest rates to borrow (Figures

10-11), while the corporate sector did not. So, consumption went up, but not investment. After the crisis erupted, real exchange rate adjusted sharply, but mainly imports declined due to lower consumption and investment, while exports mostly held their ground.

Also, even though private debt declined and public revenues, as a share of GDP, increased while expenditures, again as a share of GDP, declined (Figure 11) from 2013, the burden of private debt, as a share of GDP, did not decline and that of public debt, both in euro and as a share of GDP, shot up rather dramatically as GDP collapsed.

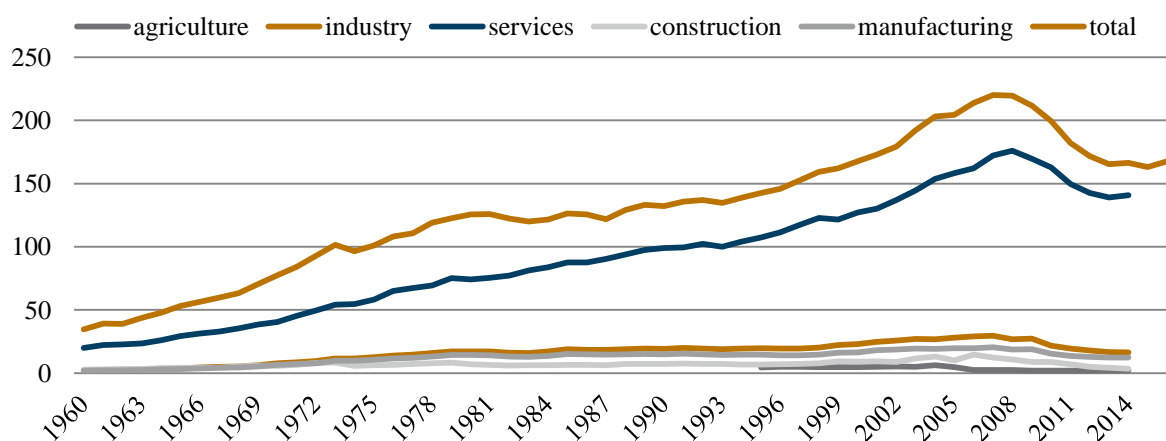
**Figure 11: Public expenditures and revenues/GDP**



Source for Figures 10-11: Ameco

So, demand has adjusted, but not the supply, or rather it just shrank. On the demand side, consumption has declined and brought the imports down, but also investment. On the supply side, decline is visible in all main branches (Figure 12), but there is scant evidence of the change in the structure.

**Figure 12: Gross value added total and by main branches in constant 2010 prices**



Greece's is basically a services economy (about 80 percent of gross value added in 2008 and around 85 percent in 2014), of which tradable services, e.g. tourism is not a large part. The tradable sector – industry, agriculture, and tradable services – is quite small, and its share in the economy is not increasing, except as a consequence of large GDP decline in the last five-six years.

That is the third necessary aspect of the adjustment problem: increase of the tradable sector as a share of total economy.

### Borrowing to Transfer

Ohlin summarizes his criticism of Keynes' claim about the existence of a transfer problem as assuming that:

'International capital movements... do not involve any changes in *demand*, which tend to bring about the relative increase of exports.'

He introduces his criticism with a discussion of Keynes' second example, which he thinks Keynes fails to follow through:

'(N)o account is taken of the fact that, if Keynes has given me £1 and I have returned £2 to him, the effect on our trade balances must be the reverse of what it would be, if only the first transaction had taken place.'

That is, there is no need for the trade balance, or rather the current account, of the transferor country to be in surplus in order for the financial outflow on reparations to be covered, and can in fact be in deficit, if they are paid from borrowing, which would mean, on Keynes' assumptions, that the terms of trade may in fact turn favourable for the country paying the reparations.

More important is Ohlin's criticism of Keynes' claim that low, below one, elasticity for exports from the reparations paying country makes the transfer problem insolvable (B is the transferor country in these quotes). For that, Ohlin introduces non-traded or non-tradable or home market goods.

In other words, Ohlin argues that it is the real exchange and not the terms of trade that matter. His argument goes as follows:

'A borrows a large sum of money from B this year and the same sum during each of the following years. This transfer of buying power directly increases A's demand for foreign goods while it reduces B's. Thus A's imports grow and its exports fall off.'

'It is not necessary that A's export prices should rise and B's fall. Thus, B need not

offer its goods on cheaper terms of exchange to induce A to take a greater quantity of them.’

From the orthodox point of view:

‘(T)he primary price change is one between the prices of import and export goods in both countries, not between prices of these international goods and of home market goods...’

So that:

‘(A) discussion of elasticity of demand for B’s export goods, which tacitly assumes demand conditions to be unchanged, must reach the conclusion that considerable increases in the value of its exports are impossible.’

Terms of trade, prices, and the nominal exchange rate, may not have to change at all, or may even improve for the donor country, but can also deteriorate, depending on the elasticity for imports (and by Walras Law for exports) and on income effects, AY and BY (Metzler 1942, Brakman, van Marrewijk 1998):

$$TB = -T + AY_m + BY_x \quad (6)$$

If, as Samuelson showed, markets are stable in the Walrasian sense, i.e. excess demand pushes the price up, the country receiving transfers will benefit and the country paying the reparations will lose (Samuelson 1941). There will be the transfer problem, i.e. deterioration of the donor’s terms of trade, if recipient country’s marginal propensity to consume donor’s export good is lower than is that of the donor country itself (Pigue 1932, Obstfeld and Rogoff 1996, Krugman and Obstfeld 2006).

But, as Ohlin argued, there is in general no presumption about the effects of transfers or any other financial flows on the terms of trade (Samuelson 1952; Guesnerie and Laffont 1978 refer to the Debreu-Mantel-Sonnenschein Theorem that income effects are in general unpredictable, so the stability problem is different from that of comparative statics, with which the literature that followed Samuelson and Mundell mostly relied on).

The mechanism through which the income effects influence adjustments in production and trade Ohlin describes thus:

The ‘... amount of borrowed buying power deserves special attention.... The increased demand for home market goods in A will lead to an increased output of these goods. In a progressive country this means that labour and capital, that would otherwise have passed to export industries and industries producing goods which compete directly with import goods, now go to the home market industries instead... Thus, there is a relative decline in exports and increase of imports and an excess of imports is created... A corresponding adjustment takes place in B. Home market industries grow less as a result of

reduced demand for their products, and the labour and capital turns in greater proportion to export industries and industries manufacturing goods which compete directly with imported goods. The outcome is an excess of exports. B finds a widened market for its goods in A as a result of the adaptation which takes place in that country. Thus, the readjustment of production is the consequence of the change in buying power in the two countries... The character of... price changes must be discussed briefly. Home market prices tend to rise in A and fall in B, relative to prices of export and import goods and prices of the goods which compete with import goods.” In other words, the transferor country experiences a depreciation of the real exchange rate, while the transferee country experiences an appreciation of its real exchange rate.

The net borrowing, or transfer receiving, country (A in the above quote) will import more and export less and the opposite will be the case of the creditor or transferor country. If reparations are paid with borrowed money, the excess of borrowing over the reparations bill will tend to lead to the same change in the production of home versus international goods. The key difference with Keynes’ treatment is that not only the share of tradable versus non-tradable goods needs to change in the transferring country, but will change in the transferee country too, so the change in the real exchange rate is what matters.

In general, transferor or investor country will see faster growth of exports than of nontraded goods, while the transferee or investment receiving country will see faster increase of nontraded goods than of exports. Terms of trade may not change or may change in either way, while the real exchange rate will tend to improve for the transferor in comparison to the transferee country (Samuelson 1971 reminds of the possible different behaviour of exchange rates and terms of trade). Or, to anticipate the macroeconomic argument, wages will tend to rise in the transferee country as opposed to those in the reparations paying or the investing country.

However, as Ohlin will also argue, increased production of non-tradable goods, e.g. of services, in the receiving country may lead to additional demand for imports, and contribute to growing exports in the donor country, which will both tend to ease the increase of exports by the transferring country.

“... (T)he volume of exports of a country is not function solely of its export prices relative to prices abroad. More or less capital and labour may be used for the building up and support of marketing organisations with corresponding effects on sales abroad.”

So, export supporting services will indirectly add to increased exports, because:



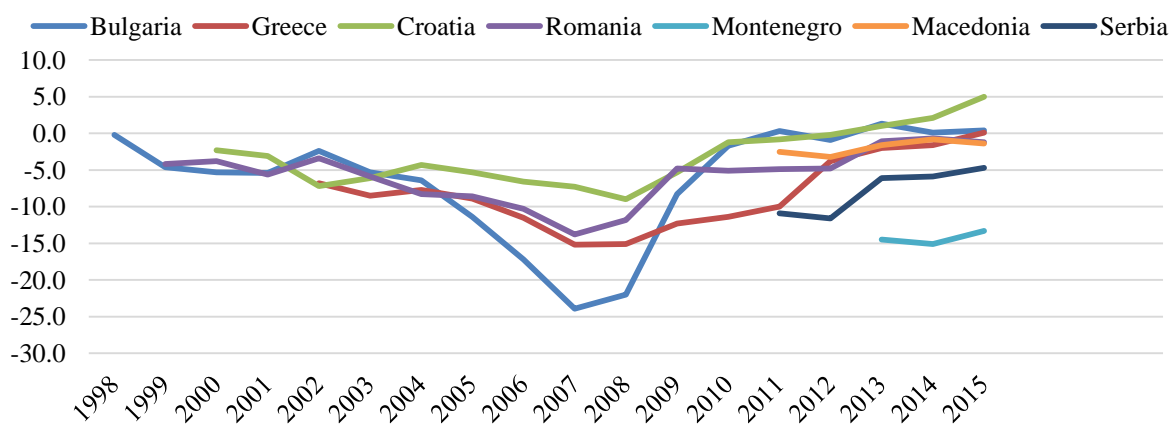
“If it were not for these and other similar circumstances, it would be difficult to see, for instance, how import duties can reduce the export trade considerably and, reversely, how a return to free trade, which in many cases would reduce costs in export industries only a little, can substantially increase the volume of exports.”

It is interesting to note that Keynes did not argue for protectionism in this debate and in most of his writings. In fact, at least as long as international economic relations were concerned, he did support free trade. His protectionism, if that is what it can be called, is primarily restricted to his support for flexible exchange rates at least up to the time of the General Theory.

### Disequilibria in the Balkans

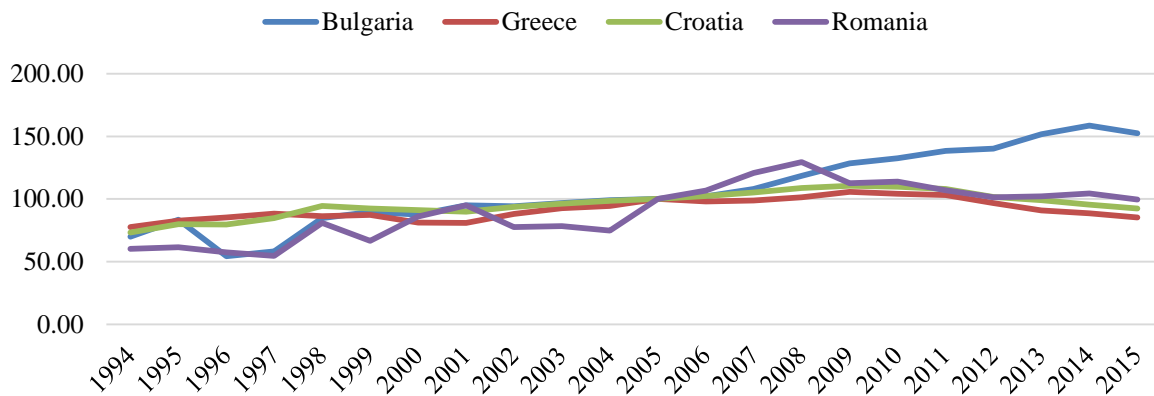
Ahead of the crisis of 2008-2009, Balkan economies ran extraordinary trade and current account deficits (Figure 13). In that, there were two groups of countries. Serbia, Croatia, Greece on one hand with Bulgaria, Macedonia, Bosnia and Herzegovina, and possibly Montenegro and Romania on the other.

**Figure 13: Current account, % GDP**



The former group suffered from real exchange rate appreciation, while the latter did not (Figure 14). So, the adjustment of the two groups of countries to financial distress and to the need to service their foreign debts was different. In the case of first group of countries, either real or nominal exchange rates had to depreciate with real wages declining and unemployment increasing. As for the second group of countries, wages in fact continued to grow while current accounts tightened or went into surplus due to drying up of foreign financial inflows. In addition, exports increased much faster than imports. This is true for Serbia too which was able to adjust through sharp nominal exchange rate devaluation.

**Figure 14: REER, unit labour costs, 2005=100**



### **A Digression on Micro and Macro**

Ohlin makes an important point that should have had an appeal for Keynes (Gligorov 2012), though he in fact does not take it up:

‘I suspect that one of the reasons why most people are inclined to exaggerate the difficulty in creating a German export surplus is the impression of the “practical” business man, who has already a large export trade, that it is difficult for him to increase his sales abroad. This impression, however, is misleading, as it is based on a tacit assumption of unchanged demand conditions and fails to take into account the fact that many firms may pass from exporting practically nothing to considerable sales abroad during a period of five to six years.’

This is clearly the key problem of what will come to be called the microeconomic foundations of macroeconomics, that Keynes contributed so much to in his *General Theory* and later writings. But, he might have thought that there is no macro level in international trade and finance, which is in part supported by his discussion of foreign trade and monetary policy in the *General Theory*.

Parallel to this is the reliance on partial rather than general equilibrium changes (Samuelson 1971 is an extensive treatment of that issue). In this debate, Ohlin points to the mistake in looking only at what is happening in the tradable sectors, that is assessing the changes in exports and imports, both in consumption and production. The reason is that if, to stay with the example, 1 pound of transfer is accompanied by 2 pounds of borrowing, 1 pound of imports from the net lending country will be needed (in a two country world, or from the rest of the world otherwise) even if the borrowed money is spent on non-traded goods. Ohlin describes this mechanism as follows:

‘If the sum borrowed is 100 mill. marks a year, the excess of imports in A brought about in this direct manner may be 10 mill. marks. For in large countries only a small part of demand turns directly to foreign or export goods. The rest, 80 mill. marks, increases the demand in A for home market goods.

Evidently Mr. Keynes and the school of economists who share his view think that this is the end of these 80 mil. marks. As they do not directly increase the excess of imports, they can have no effect whatever on the balance of trade. They can be left out of reasoning altogether.

I venture to suggest that, on the contrary, this amount of borrowed buying power deserves special attention. It sets in motion a mechanism which indirectly calls forth an excess of import in A of about the same magnitude.’

In other words, if 100 million is net foreign borrowing, 100 million additional imports will be needed or the same amount of exports will be forthcoming in order to earn money to pay back the loan. Ohlin goes on to describe one possible mechanism of adjustment where exports increase. However, it is not the case that Keynes is actually relying on a partial equilibrium argument. He only has a different mechanism in mind, which will be clear later on.

### **An Example: Germany Then, Greece Now**

Keynes argued from the specific case of Germany, but Ohlin pointed out that facts do not support his opponent’s claims:

‘(E)xperience speaks very strongly in favour of the conclusion that adjustments of trade balances go much easier and even quicker than the orthodox theory would have it. To take the latest example only: is it not surprising that one had heard so little of transfer difficulties during the last five years, when one single country has had net import of capital (over and above its own payment to other countries) of six or seven milliards of marks?

That country is Germany.’

In general, country investing abroad will also tend to increase its exports abroad and decrease production of nontraded goods. It will also see the wages of its workers grow more slowly than in the receiving country. So, in the case of Germany and Greece now, there should be wage deflation in Germany compared to Greece as long as the latter runs trade deficits with the former.

Indeed, rather than the problem of paying the reparations being the main story, the investment boom in post-World War I post-hyperinflation Germany was the most prominent development. There was not much of a problem to paying the reparations, though those were unpopular and were mostly not paid and were eventually repudiated and discontinued (Schuker 1968). This of course is the issue of willingness rather than ability to pay.

By contrast, investments, domestic as well as foreign, private as well as public, have dried up in Greece after 2008. Though the trade balance remained in deficit (though not the current account eventually), this was in great part because consumption was not shrinking fast enough while exports were not increasing too. This was not because the debts were being paid down, but rather because they were mostly refinanced and the risk that they will never be repaid has remained rather high. Thus, the mechanism that Ohlin describes of reallocation of productive resources to the exporting sector did not happen also.

So, unlike in the case of Germany who lacked the willingness to service the reparations rather than the ability, in the Greek case the lack of willingness to service the accumulated foreign debts has led to almost the state of inability to pay the debts back, especially those that are owned by the state.

To what extent the Greek case can be generalised to the Balkans as a whole is the question to be looked into. There is no doubt, however, that foreign debt accumulation was very strong in the years comping up to 2008 crisis. That has also led to real exchange rate appreciation, in the way argued by Ohlin. In a complementary manner, the reversal of financial flows, where those happened, has led to strong recovery of exports and a slump in imports. And even more so in countries that have already had larger tradable sectors.

There is no doubt that in the case of a sudden stop crisis like the one that emerged in the Balkans after 2008, it is the financial flows that drive trade flows, though that was true also before the crisis only in the opposite direction.

### **Substitution and Income Effects**

In the example with two countries and two goods, terms of trade will change favourably to the donor or investor country or not, depending on the interplay of the substitution and income effects. Writing S for substitution effect (which aggregates all the substitutions) and I for the income effect (which aggregates all the distributional changes), the price elasticity of demand for, e.g. good x that the transferor country exports, will be positive if the relative price declines and negative if it rises, if the sum of these effects is

positive or respectively negative. Let the price elasticity of demand for  $x$  be  $W$ , then (Jones 1985):

$$W = S + I \quad (7)$$

Pigue (1932 and 1947) argued for the orthodox presumption that reparations will have to be paid with the excess burden of adverse change in the terms of trade because preference for goods to be exported was higher than that for the import good. Jones (1985) argues that the substitution effect is always of the right sign for the presumption in favour of the orthodox case, assuming market stability (Samuelson 1942), e.g. positive in the case of lower price increasing the demand, and otherwise if the price goes up, while the income effect depends on whether preferences are aligned with production or not, and he assumes that nonorthodox presumption of preference for imports over exports makes more sense. It probably follows from the general logic of comparative advantages also.

Simple way to see the basis for this nonorthodox presumption is to consider Adam Smith' "butcher, brewer, and baker" who do not consume (at least not significant amounts) of what they produce, on one hand, and us, in this example, who are not butchers, brewers, or bakers, and "our dinner", on the other hand.<sup>8</sup> Their preference for whatever we produce is higher than for what they themselves produce, and the same goes for us. If that is the case,  $I$  (income effect) will be positive. This is indeed equivalent to Keynes' first special example where there is no transfer problem (transferor country exports whatever it produces and imports whatever it consumes).

However, if that is the case, if consumers tend to have higher propensity to spend on imports than on goods they produce for exports (i.e. there are significant producer and consumer surpluses or, put differently, gains from trade), then the terms of trade will turn positively for the transferor country (which is the non-orthodox case) and against it otherwise (the orthodox case).

So, given that the transferor country needs to cut imports and increase exports, its exporting good will tend to fetch better terms of trade if the importing country is more eager to spend on that good than on the one it exports. Indeed, if the propensity to spend on imports is so much higher, and the substitution effect is relatively weak, e.g. because the donor country is small, then the improvement may be such that it will outweigh the negative effect of the transfer. The donor country will be better off, it will experience higher gains from

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<sup>8</sup> Smith in the Wealth of Nations: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."

trade, than the recipient country due to transfers or to aid or to investments. In any case, there will be no transfer problem, only a budgetary one.

### **Another Example: Transition and Trade Reorientation**

So, how quick is the trade reorientation? One example is that of the Eastern Europe after the collapse of the Berlin Wall. Transition countries, at least those in Central Europe, succeeded to reorient their trade relatively quickly and dramatically towards the market of the more developed EU countries. By contrast, the countries in the South of Europe were less successful both in the amount of reorientation and even more importantly in the overall increase of exports. This reorientation of trade, where it happened, went together with large inflows of foreign investments and, in some cases, transfers from abroad.

So, in the case of Central European transition countries, foreign investments improved the terms of trade of the receiving countries while in the case of the Balkans they did not and went along in most cases with the decreased exports as a share of GDP, i.e. these countries became more closed to foreign trade.

Perhaps two claims could be made (subject to further detailed review of the data). One is that trade reorientation happened relatively quickly and mostly in such a way to align actual trade flows with the potential. Given that the EU has a very high weight and tends to be rather close to Central European and Balkan economies, it took few years to turn to selling to its market and for exports of Central European countries to increase dramatically.

The other is that preference for exports over domestic consumption is high in developed Central Europe while the preference for imports over exports is high in less developed central European countries. So, the latter tended to benefit from high financial inflows from the former. Indeed, terms of trade tended to improve for the transition countries during the process of trade reorientation.

In the case of the Balkans, terms of trade actually worsened for the receiving countries and improved for the investor countries. This has led to the issue of sustainability of foreign debts in this region.

### **The Third Party**

Immediately after introducing his first case, Keynes qualifies it with the introduction of the rest of the world, thus going beyond the two countries, two goods case.

‘...(I)n this case... the Transfer Problem is removed from the shoulders of Germany

and becomes a problem as between the recipients of reparation and the countries from which Germany previously drew her imports.’

Adding the rest of the world, C, Pigue-Samuelson criterion for stability can be written in the following way (Jones 1984):

$$A_x/A_y <=> B_x/B_y <=> C_x/B_y \quad (7)$$

So, if the transferor or investor country succeeds to run additional trade surplus required to effectuate the transfer, the needed trade deficit has to be divided between the two remaining parties. If that cannot be done without change in prices, those changes may be such to push the price of exports of the transferor country so that it in the end benefits from the changes in the terms of trade.

As Germany, in this example, only produces an export good, it pays the reparations by cutting its imports. That leaves the transferee and the third countries with a surplus of their goods for exports. If, for instance, the transferee country exports goods that are not in demand in the rest of the world, while the transferor country’s export good is in demand in the third countries, the price of the transferor’s export good will go up, and that of the transferee country will go down, so that the transferor and the third parties will benefit from the transfer, while the transferee country will lose. These income effects may not dominate the effect of the transfer, but they may ease the burden of the transferor country by improving its terms of trade.

In general, the introduction of the third country, or the rest of the world, has been one of the reasons for paradoxical outcomes of reparations in which the recipient county can do worse after receiving the reparations or both the donor and the recipient countries may benefit from the transfer and the rest of the world may bear the costs. This will in general depend on the marginal propensities for imports and on the income effects.

Keynes, for his part, believed that the introduction of the rest of the world, in the general case, would tend to dissipate the possible positive income effects on the transferring country:

‘...(I)n so far as Germany can affect demand conditions in the reparation-receiving countries by exporting to them gold or its equivalent in foreign bills, this puts her at no advantage compared with all the rest of the world other than the reparation-receiving countries. There is the whole of the rest of the world in purchasing from which the receiving countries can employ their increased buying power. So we are, even in this case (which I cannot admit to be quantitatively important), brought back to the (to my way of thinking)

crucial question of the extent of the elasticity of the world-demand for German exports. Professor Ohlin has not expressed any opinion about the extent of this elasticity or whether he thinks it important. Yet – on the assumption that Germany will have to increase her exports of finished goods by more than 40 percent to pay reparations without borrowing – this is to me the kernel of the whole problem.’

Ohlin, in response, points out:

‘An increase by 20 per cent as a result of a 10 per cent prices reduction may appear as a very great elasticity of demand, and yet the value of exports grows only by 8 per cent. How violent, then, must the price reduction be, if export values are to increase by 40 per cent as in the German case, when the borrowings have ceased and the reparations have to be paid by means of export surplus.

The impression becomes quite different if it is remembered that the mechanism of adjustment indicated above will be at work and that exports from the lending (indemnity-paying) country will, therefore, grow even if export prices are not reduced at all relative to prices of international goods in other countries. In this connection it should also be noted that – even regardless of changed demand conditions – the volume of exports of a country is not a function solely of its export prices relative to prices abroad. More or less capital and labour may be used for the building up and support of marketing organisation with corresponding effects on sales abroad. If it were not for these and other similar circumstances, it would be difficult to see, for instance, how import duties can reduce the export trade considerably and, reversely, how return to free trade, which in many cases would reduce costs in export industries only a little, can substantially increase the volume of exports. Remember also that many German goods which lay on the border line of “exportability” may sold in large quantities if their prices fall 10 per cent. With this background and increase of exports by 30, 40 or 50 per cent does not seem impossible.’

As for the effects on the rest of the world, Ohlin follows through with one possible outcome:

Transfer of reparations “assumes a readjustment of production in the countries which are to receive the indemnity payments. As everybody knows, this is not Great Britain or Italy, but partly France, partly and largely the United States (reparations being used to pay the inter-allied debts). Almost certainly, however, the United States will continue to export huge sums of capital to South America. It may be argued, therefore, that the ultimate recipients of the reparation amounts are France and South America. In principle, the safest and simplest



way of organising the reparation payments would be a policy of deliveries in kind from Germany to France and the South American nations, which require imports of many commodities German industry is well able to produce.”

As has been discussed intensely (Jones 1985), income effects with more than two countries, or more generally with more countries than goods to trade, may lead to paradoxical outcomes so that the country paying reparations or, for instance, transferring aid, or investing in another country for that matter, may benefit as may the third country (or the rest of the world) while the recipient country may suffer. It is also possible that donor and recipient countries benefit at the expense of the third country or the rest of the world (Gale 1974, Chichinisky 1980, 1983, 1997).

In the case of two countries, Leontieff (1936) showed that if price effects of the transfers are strong enough, and in the right direction, i.e. the good in which transfer is made sees a relative prices increase, the transferor country might benefit from the transfer. More specifically, if the transfer increases the prices of the exporting goods enough, unilateral transfer may lead to the transferor country making more in exports than it is losing from the transfer. Similarly, the price effect may be large enough to enrich a country that destroys part of its exporting industry.

These perverse effects are easier to encounter if there are more countries. Generally, endogenous redistributions can be expected and those can benefit the donor country, the recipient country, or both at the expense of the rest of the world. There is no general presumption which way the final effects will go.

Interesting applications of the three party paradoxes have been developed to look into investment policies and income distribution between classes. One interesting case is Preobrazhensky’s proposal to use price scissors to bias development towards industry away from agriculture (Sah and Stiglitz 1984 and 1986). There are three parties: peasants, workers, and the state. The transferors are the peasants, and the recipients are the workers via the state budget and there are two goods: industrial and agricultural. The instrument is price setting power by the state, i.e. it sets the terms of trade so that agricultural goods fetch less of industrial goods. The budget collects the profits and reinvests them in industry. So, the country finances, through transfers, the town so to speak. However, for the budget to benefit from these transfers, not only the wages of the peasants need to decline, but those of the workers too. The beneficiary is the third party that is the state budget.

## The Balkan Curse

Keynes takes Russia as an example to argue that specialisation in exports may increase the burden of the transfer problem. One can call this The Russian Curse. Suppose that exports of Germany:

‘...(N)ot so unlike Russia today’... ‘are limited to caviare and platinum, of which the output cannot be increased—then the Transfer Problem is paramount and, indeed, insoluble. Or, again, let us suppose that, whilst, as before, Germany’s exports are limited to caviare and platinum, she is, this time, in a position to increase their output, but unfortunately the demand of the rest of the world for these articles has an elasticity of less than unity. In this case the more she exports, the smaller will be the aggregate proceeds. Again the Transfer Problem will be a hopeless business.’

That, however, does not take into account the possible change in the extensive margin. If one assumes that the receipts from exports of, e.g. oil and gas, will not suffice, new tradable products may be developed moving resources away from the production of non-tradable goods (see Corsetti, Martin, Pesenti 2013).<sup>9</sup>

Keynes’ Russian curse may also be seen as the Balkan curse because of limited offer of goods to export and low elasticity of demand for goods it indeed offers. So, transfers and investments from abroad do not influence positively the Balkan terms of trade. It seems to be the case that working on the extensive margin is particularly difficult for the Balkan countries. Even at the intensive margin, it appears that firms do not tend to be particularly innovative both in tradable and non-tradable sectors.

## Investments Drive Trade

Keynes assumes that it is difficult to increase the production for exports because the structure of production and of foreign trade changes only slowly.

‘...(A)t a given time the economic structure of a country, in relation to the economic structures of its neighbours, permits of a certain "natural" level of exports, and... arbitrarily to effect a material alteration of this level by deliberate devices is extremely difficult. Historically, the volume of foreign investment has tended, I think, to adjust itself – at least to a certain extent – to the balance of trade, rather than the other way round, the former being

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<sup>9</sup> Keynes visited Russia in 1925, had discussions with the Gosplan and wrote three pieces on politics, ideology, and economics of the soviet system (which was following the so-called New Economic Policy at the time). The first two were published in Keynes (1926) while the third one was to be found in the expended edition as part of his Collected Writings.

the sensitive and the latter the insensitive factor.’

Ohlin argues that the structure of production can be changed more quickly if income effects are taken into account and uses the argument of the interregional, rather than international, transfers to show that (again B is the transferor country in these quotes):

‘It is the very fact that buying power is greater than incomes in A and lower than incomes in B, which brings about the necessary commodity movements. Yet Mr. Keynes reasons all the time as if a country could not buy more than its income, and as if the only way of changing its buying power were to change its income.’

‘Let us return now to the case of A and B being separate countries with different currency systems.... Credit will expand in A and fall in B. In B the buying power is directly reduced by the purchases of foreign bills by the people who lend the capital to A (or pay reparations). There will also probably be a secondary credit expansion in A and reduction in B. These changes in buying power... can occur before the commodity movements take place and tend to bring them about...’

Keynes, again, does not dispute that argument, but repeats that different assumptions are more appropriate for the case of reparations:

‘Of course if B (Germany) can pay A (the reparation-receiving countries) in foreign bills expressed in the currency of a third country, there is no difficulty. But this is begging the whole question. The problem arises precisely because, on our hypothesis, Germany has no such foreign bills. Germany can only acquire such bills if she has already sold the necessary exports; so that these bills cannot be part of the mechanism which is to establish the situation which will permit her to sell the exports...’

More generally, Keynes’ point is about the sustainability of the Ohlin’s mechanism. A country may be in a position not to be able to borrow if not immediately than eventually. In the end, expenditure cannot outrun income: imports need to be paid with exports. So, if the reparations paying country relies on borrowing, it will eventually have to cover the trade deficits with additional exports. However, this problem will be faced by the recipient country too, if it will be running trade deficits.<sup>10</sup>

Balkans: CEFTA and EU

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<sup>10</sup> In the analytical work that followed, the conditions for stability and instability were clarified by Samuelson (1941, 1947, 1952, 1954, 1972; also Balasko 1978 and 2014). Also, sustainability issues have been discussed extensively (see e.g. Obstfeld and Rogoff 1995, 1996 and Obstfeld 2012). Keynes and Ohlin continued the discussion on these issues a decade later in the context of the role of expectations (*ex ante* savings and investment decisions) with Keynes acknowledging that he had missed to account for the role of financing, though he continued to maintain that its role is minor.

Balkan countries, in particular those that are still outside of EU, have rather extensive free trade agreements, though some are yet to join The World Trade Organisation (WTO). In any case, for the point to be made here, it is important to notice that there is practically free access to the EU market and there is also a multilateral regional free trade agreement, CEFTA. In the period preceding the 2008-2009 crisis, trade with both markets increased significantly, though it was imbalanced as it led to the growing trade deficit. The post-crisis adjustment has however seen stagnating trade within CEFTA and strong increase of exports to the EU market, in particular to Germany and Italy. This is somewhat curious because growth within the CEFTA has been stronger than within EU.

However, growth was driven by exports rather than domestic consumption, and it is easier to export to a large market where the prices are given to a small open economy while within CEFTA market is sensitive both to substitution effects and to adverse income effects. So, in this case, the argument for free trade being advantages to a small open economy seems to have been vindicated. Indeed, deleveraging towards the foreign creditors have led to growth of exports through expenditure switching – domestic demand was substituted with the foreign i.e. EU demand.

## **Home Bias**

Keynes assumes that wages will have to decline in order for the trade balance to improve as much as is needed to pay down the reparations (or debts). The problems he sees are connected with the importance of the non-traded goods.

‘Now, a reduction in the money-rate of efficiency-wages does not help’ Germany, ‘and may injure her, in the following cases:

(i) Where the output, *e.g.* personal services or buildings, cannot be exported anyhow;

(ii) Where the world’s demand for Germany’s goods has an elasticity of less than unity, *i.e.* where a reduction in price stimulates demand less than in proportion, so that the greater quantity sells for a less aggregate sum;

(iii) Where Germany’s foreign competitors fight to retain their present trade connections by reducing their own rates of wages *pari passu*;

(iv) Where Germany’s foreign customers, reluctant to allow this more intensive competition with their home producers, meet it by raising their tariffs.’”

Assume, to see the argument somewhat more clearly, that most production is targeting

the domestic market rather than foreign ones, i.e. specialisation is determined by the conditions in the domestic market rather than by foreign trade. Then it will be difficult to change the amount of traded goods and their composition. Almost by definition, price elasticity for imports will be below one. Or, to put it differently, production and taste will be aligned nationally, i.e. there will be a strong home bias. And if they were not, in a free trade and globalised world, tariffs and exchange rate policies will tend to make them so.

Ohlin acknowledges that, having in mind that transfers will influence the transferee's country production of tradable and non-tradable goods, high home bias may prove to be a problem and protectionist measures may be introduced:

“If the policy of protection and preference to home-made goods... is intensified... and is used consistently to prevent... exports, then the reparation payments may become virtually impossible.”

Samuelson discussed these issues extensively (1952, 1954, 1972). In the context of the Keynes-Ohlin debate, given Ohlin's mechanism, it makes sense to consider the possibility that the receiving country will introduce protective measures to support its exporting sector. That will make it more difficult to the transferor or the foreign investor or to the creditor country to achieve the needed current account surplus to balance its payments: in other words, the transfer problem will emerge. To effectuate the transfer, then, negative change in the terms of trade of the transferor country cannot be avoided. Differently put, real exchange rate needs to depreciate in order to achieve the needed level of exports to cover the transfers or investments.

In other words, it is hard to rely on the expansion of the intensive margin to achieve the needed increase of exports if the home bias, perhaps reinforced by tariffs and other protective measures, is high.

There are several cases of interest (Metzler 1942):

One is that of the investing country which faces higher tariffs in the recipient country, in which case (if there are only two countries) it will prove hard to invest because exports face higher barriers.

The other is when the investor country increases its own tariffs on imports from the country it invests in: then, it will be able to invest and export more than otherwise.

Finally, both countries may engage in protectionist policies with indeterminate overall impact on terms of trade.

Given that trade policy instruments can be substituted, the same goes for non-tariff

and non-trade barriers, that is for subsidies and various tax schemes targeting exports and imports positively or negatively. In particular, fiscal transfers can have the same desired effects. And more generally, the same goes for regulation, standards, and various types of patents or measures reinforcing the preference for home production, i.e. for home bias in production and consumption.

In general, if there is significant home bias, domestic goods are preferred to imports (due to tastes, transport costs, or protectionist measures of one kind or another, or due to rigid wages), cross-border financial flows will be limited and transfers or investments will have orthodox consequences.

### **An Example: The Balkans Tariff Paradoxes**

Well-known tariff paradoxes are connected with the transfer problem (Lerner 1936, Metzler 1949, Jones 1985). Tariffs could increase imports and hurt exports if, in one case at least, the budget depends on the revenues from imports and spends these receipts on import of these same goods that it taxes.

In the case of the Balkans, fiscal dependence on imports is high or very high. So, the tariffs do not protect from import competition, but rather increase imports. The worsened terms of trade also discourage exports, which in part accounts for low exports shares in overall production. Also, that accounts in part for high and persistent trade deficits.

So, not altogether paradoxically, trade liberalisation should improve export performance.

### **Inflexible Interest Rate**

Keynes brings up the issue of monetary policy to argue that German central bank cannot accommodate the budgetary and the transfer problems with additional interest rate cuts.

‘...(A) reduction in German incomes other than wage-incomes would be equally effective, provided the incomes in question are the earning of a factor of production, so that a reduction in them lowers the costs of the German entrepreneur. But this proviso takes away the practical significance from this proposal; for there is not much likelihood of rates of interest in Germany being lower than elsewhere.’

‘Nor is there any prospect for relatively cheap money for Germany, though there may be some future gain from fall of German interest rates below the present high level.’

This is of course problem in the case of the gold standard or Bretton Woods monetary system or within currency unions. This is in part the reason why Keynes favoured fiat money and flexible exchange rate regimes. However, his aim was not to improve foreign trade but to get access to instruments that could target full employment.

### **An Example: Monetary Policy in the Balkans**

Generally, there is significant interest rate margin, which is the consequence of the exchange rate regimes together with the need to sustain foreign financial inflows. Therefore, one problem that transferee country may face is the need to sustain an interest rate spread in order to borrow to finance trade deficits.

The interest rate margin is the consequence of the monetary regime or exchange rate regime. The regime is in part a policy choice and is in part a consequence of the lack of trust in the central banks in the region. To have a more active monetary policy, a country needs a flexible exchange rate and a preference for the use of domestic over foreign currency (Woodford 2013).

In any case, given high real interest rate, monetary policy in the Balkans is systematically too tight. This has been changing in the recent years due to strong deflationary pressures. These are due to, one hand, stagnation of imports and domestic consumption, and, on the other hand, because of falling prices of imported energy. Overall, it is not clear whether real interest rates have declined appreciably or at least as much as it would be needed to see significant increases of investment.

## Fiscal Transfers

To put monetary issues aside, Ohlin generalises his approach:

‘...(L)et me consider... a case of capital movements between two districts with the same currency system. Assume that A and B are parts of one country, and disregard the possibilities of labour migration between them. A borrows a large sum of money from B to build a railway. It can take the money in notes or in check, whereby the deposits in A banks grow, while they fall off in the B banks. In any case the buying power is increased in A and decreased in B independently of any commodity movements and certainly *before* they take place. The monetary transfer is primary to the real transfer, and tends to bring the latter about in the following way: A buys more and B less of the goods that go easily between them (“international goods”) whereby the “trade balance” is directly affected. Furthermore, people in the former district use a part of the increased buying power to purchase “home market goods,” which become more demanded than before, while the same class of goods becomes less demanded than before in B. Their prices may rise in A and fall in B, but whether this price changes are considerable or not, production of such goods is expended in the former and reduced in the latter district, while the production of “international” goods moves in the opposite direction, i.e. is reduced in A. In that way A’s imports increase and its exports fall off. B, on the other hand, will buy less and is able to sell more without offering its own export goods on cheaper terms of exchange than before.’

Ohlin argues that there is no difference between cross-border and inter-regional transfers and flows. He does not consider the fiscal balances and possible macroeconomic risks, which may be higher across borders than within one country. This is exactly the point made in recent discussions of the transfer problem within a currency union and could be extended to those that occur in countries that do not have reserve currencies. The latter e.g. being the case of the Balkans.

The mechanism described in the quote fits well with Mundell’s argument for the financial system providing enough insurance for asymmetric shocks within any country or in common currency areas. The difference between a country and a currency union, however, is that in the former unlike in the latter there is additional fiscal insurance to deal with the risks of asymmetric shocks.

Therefore, the key issue (Farhi and Werning 2014) is whether there is a need for cross-border fiscal insurance in the absence of e.g. monetary independence and flexible



exchange rates. In the case of a recession, and due to limited support from monetary policy, which means higher than needed real interest rates (the issue discussed by Keynes in the German case, but also in the General Theory), cross-border fiscal transfers are the appropriate substitute.

This is the budgetary problem discussed by Keynes. It may prove difficult to collect enough taxes, i.e. to run the needed primary surplus, to pay for the accumulated foreign debts, which are thus unsustainable. Keynes in (1919) argued for the thorough write-off of accumulated foreign debts to support free trading system in the post-World War I Europe with increased number of states.

### **The Balkan Example**

Clearly, foreign debts are important constraints on the economies in the Balkans and the ability to run primary fiscal surpluses is an additional problem. Important part of the problem is that most states in the region borrow in foreign currency. Thus, there is a widespread “original sin problem”, which magnifies the problems with the sudden stop financial crises, when they occur. In a way, like the transition countries before, Balkan economies tend to be pushed to increase their exports because of financial constraints, i.e. accumulate foreign debts or foreign financial positions that they have. This, as argued, does not seem to be working in Greece and so far also in Croatia, but does seem to be showing signs of working in the case of other Balkan economies.

### **The Issue of Sustainability**

Keynes argues that large trade deficits are not sustainable and that indeed imports need to be paid by exports, or trade deficits need to close down, in a rather short period. Ohlin mostly disregards the issue of sustainability.

Keynes sees problems from a macroeconomic point of view and the main risk to servicing large foreign obligations in its social sustainability, so in the budgetary problem in the end. Ohlin sees problems in possible maladjustment of wages in the transfer or investment receiving country.

Therefore, Keynes sees the risk of deflation being the problem for the transferor or investor country, while Ohlin sees the problem being mainly that of wage inflation in the net investment receiving country. Their positions are not theoretically different, though Ohlin does not discuss the sustainability issue in any detail.

In the case of the Balkans, internal devaluation has been seen as a way to deal with the financial crisis, i.e. with the reduced foreign financial inflows. The presumption is that Ohlin was right to see wage inflation as the key problem of sustainability.

However, wage developments before and after the financial crisis are, in most countries, not necessarily supportive of that presumption. In any case, internal devaluation, outside of Greece, has been rather hard to identify.

### **Internal Devaluation and Fiscal Transfers**

Keynes, finally, comes to the point that he really wants to make. The adjustment, required by the transfer problem, needs to be paid for with deflation. Most commentators have found it strange that Keynes was neglecting the income effects, but his main point was really about the negative effects of deflation on employment, which he basically argued consistently are high and unnecessary – from his early work up to *The General Theory* and beyond.

How exactly, Keynes asks, is this increase of production for exports to happen? He considers alternative mechanisms, but argues that deflation is needed in order for the real exchange rate to depreciate.

‘Now what prevents Germany from having a greater volume of exports at the present time? Is it that the export trades cannot attract more labour at the present level of remuneration? Or is it that they cannot sell an increased output at a profit unless they can first reduce their costs of production? The available facts seem to indicate that the first, namely, inadequate supplies of labour at present rates of remuneration, plays little or no part, and that the second is the real explanation. That is to say, the solution of the Transfer Problem requires a reduction of the German gold-costs of production relatively to such costs elsewhere.’

‘...(T)he Transfer Problem involves a reduction of  $x$  per cent in the rates of gold-wages in Germany relatively to rates elsewhere... The easiest method would be to allow the exchange value of the German mark to fall by the amount required to give the necessary bounty to exports and then to resist any agitation to raise money-wages... If, however, we suppose that, by agreement with the Reichsbank, deflation is enforced, how will this help? Only if, by curtailing the activity of business, it throws men out of work, so that, when a sufficient number of millions are out of work, they will then accept the requisite reduction of their money-wages. Whether this is politically and humanly feasible is another matter.’

Keynes assumes that a country that cannot borrow, but has to pay back a lot of debt, or unilaterally transfer resources to another country, that that country will have to go through a process of internal devaluation, which is this transfer problem that he is discussing, and will then be facing the budgetary problem too. More generally, he is arguing that a country that runs trade surpluses will tend to have depressed wages as opposed to the country that is running current account deficits.

To put this in more modern terms (Krugman 1999): A country experiencing a sudden stop crisis will have to devalue its currency but also increase unemployment and go through wage deflation in order to sustain its foreign financial position. That may very well lead to a fiscal crisis and to the problem of public debt if it is held in foreign currency (or there is a fixed exchange rate regime).

In the latter case, it makes sense to agree on a system of fiscal transfers to stabilise consumption and support the income effects *a la* Ohlin. One way to determine the amount of fiscal transfers, i.e. taxes and subsidies (Farhi and Werning 2014) is to:

Multiply the labour wedge (high in recessions and low in booms, which is Keynes' required wage deflation) with the expenditure share on non-traded goods.

In the case of the European Union, transfers could play the role that Ohlin assigns to borrowing. If a country, e.g. Greece hit by an adverse shock has difficulties borrowing in order to pay its debts, fiscal transfers could prove stabilising.

## **Real Exchange Rate**

Ohlin does not necessarily disagree with Keynes on deflation, though he counters with the reference to what is actually the reality in the German labour market: that inflation is faster as is the rise of wages than it would be needed to effectuate the payment of reparations.

‘It is ... clear that the rise in German wages and home market prices in recent years has been, although probably unavoidable, yet very unfortunate, as in the future it will almost certainly be necessary to deflate wages and prices to some extent, particularly in home market Industries, if an export surplus is to be created. Possibly this difficulty may be partly evaded if rationalisation continues at a rapid pace and thus the effectiveness of production is raised, while monetary wages are kept constant.’

Ohlin in referring to inflation and wages growth points out that real exchange rate may appreciate due to large foreign borrowing. A Dutch Disease could also develop if inflation is mainly in domestic assets and industries. This is happening in the country that is

eventually going to have to pay the debts back (or in the concrete case in the reparations paying country). That also means, as he indeed says when discussing the mechanism of adjustment, which was quoted above, that the net investing country will suffer deflation, so there is no disagreement in that between him and Keynes, though, as Samuelson warned, change in terms of trade should not be confused with the change in the exchange rate. Terms of trade could improve, while real exchange rate tends to appreciate due to the difference in the respective inflation rates.

## **An Application: Financial Crisis in the Balkans**

Krugman has argued for the orthodox i.e. Keynesian presumption of the transfer problem. Of particular interest is his application of it to the theory of crisis that he has so much contributed to. In Keynes' version, the sustainability of deflation is mostly a social problem. The social balance sheet will be in crisis, so to speak. Financial and corporate crisis was not what he really had in mind. In general, Keynes assumes that the private sector, corporations and banks, is efficient and their balance sheets are never the real problem, except that Say's Law is not satisfied in general without appropriate economic policy measures (Gligorov 2012).

Krugman, however, looked at the Asian crisis and concluded that indeed it is the corporate balance sheet, the corporate insolvency, which may cause the financial crisis like to one Asia in 1997-1998. The vulnerability is in the high private, corporate, foreign debt. Once the refinancing, for whatever reason, proves costly or impossible e.g. due to a shock of higher interest rates, corporate bankruptcies may prove unavoidable. If, in addition, domestic monetary policy can help only in a very limited way, because the country does not print its reserve currency, strong devaluation may prove to be the only way out with possible fire sales in the corporate sector.

In the Balkans, financial crisis is similarly hitting the corporate sector with limited monetary and eventually fiscal support. Unlike the Asian crisis, the Balkan financial crisis is usually predictable. This is because large and persistent trade deficits tend to lead to unsustainable foreign debt exposures. While, in addition, devaluations are either unavailable or costly due to widespread indexation. Consequently, fiscal and corporate balance sheet problems become unavoidable.

Therefore, the adjustment is the one sketched by Keynes, i.e. via the labour market; and mostly via decline in employment rather than wage deflation.

### **Current Structure**

Table 1 summarises the relevant demand and supply data for Bosnia and Herzegovina (B&H), Macedonia, Montenegro, and Serbia as it stood in 2014. On the demand side, consumption is quite high, that of the households rather than of the governments, investment is low as are exports, while trade deficit is high.

So, some rebalancing between consumption and investment with smaller trade deficits is needed.

**Table 1: GDP by sectors**

Structure of GDP (demand, shares 2014):				
	Serbia	Montenegro	Macedonia	B&H
Consumption	93	100	88	110
Households	75	80	70	90
Government	18	20	18	20
Investment	15	20	25	20
Exports	45	40	50	30
Imports	55	60	63	60

Structure of GDP (supply, shares, 2014)				
Industry	20	12	15	15
Manufacturing	15	7	10	10
Energy, mining	5	5	5	5
Agriculture	8	10	9	8
Construction	5	5	5	5
Services	67	73	71	72

Sources: wiiw, Eurostat, The World Bank

On the supply side, the share of manufacturing is small, and indeed the overall share of tradable goods and services is relatively small, which is in part the reason that these are rather closed economies (in terms of the share of exports in GDP). This has started to change since 2009, with export growth and import stagnation, but it will take some time before the appropriate level of openness is achieved. Particularly due to small share of manufacturing in GDP that has hardly increased in the last decade or so. Agricultural production does not contribute too much to value added, though not much less than manufacturing, and to exports (Serbia is an exception for the latter). Tradable services are primarily tourism and transport, the Balkan being a transit region.

So, some industrialisation, i.e. increased significance of manufacturing and of services connected with it needs to happen.

## **Target Structure**

The Balkan growth model after the crisis needs to be based on investment and export growth. This is due to financial constraints (foreign, public, corporate, households). What needs to happen, on the demand side, is:

- (i) investment increases to about 25 percent of GDP,
- (ii) final consumption of government stays in 18 to 20 percent range,
- (iii) household final consumption settles around 65 percent, and
- (iv) trade deficit declines to less than 10 percent (all in percent of GDP).

On the supply side:

- (v) manufacturing needs to increase (to between 15 and 20 percent of GDP; except in Montenegro) while
- (vi) the share of services and agricultural production need to decline (the former not in Montenegro).

This is some kind of transitional change, which has already been accomplished in the Central European countries in transition (though not necessarily in the other Balkan countries – so this is a Balkan delayed transition as it were).

## **Trend: Forget the Past**

The crisis has introduced a break, so the past trend growth of output is not necessarily relevant: e.g. 3 percent growth would be low if the period 2000-2008 is averaged, while it would be high if last 25 years are considered or the average growth rate since around 1980 is taken. So, in a sense, expected trend growth is what matters.

In the medium run, financial constraints will be binding, so assuming that household consumption increases by about 1 percent yearly and government consumption does not increase as a share of GDP (growth tracks the growth of GDP), with somewhat faster increase in capital outlays at the expense of slower growth of current expenditures, investment growth of e.g. 6 percent and net export improvement of 3 or so percentage points would give an output higher by about 15 percent (e.g. in Serbia, while that may be more or less in the other countries) by the time the structure is transformed, e.g. over a five year's period or a bit longer. Macedonia has a shorter way to go when it comes to the structure of demand, but not when it comes to the increase in the share of manufacturing and tradable services.

If it is realistic to turn things around in about 5 years that would imply a trend growth rate of 3 percent in that period. Currently, growth is below 3 percent, which can be seen as

potential growth rate, except in Macedonia and Montenegro, so current output gap is, depending on the country, between 3 and 1 percent, i.e. potential output is that much higher than the actual one currently.

## **Output Gap**

This adjustment in the structure of GDP is pushed by financial constraints (private, government, foreign). Assuming that those are relaxed in the medium run, i.e. in about 5 years, potential growth rate could be higher and the slack in the labour markets can start to be reduced quicker. Assuming that, as in most transition countries, growth is primarily driven by productivity, let us assume that two percent growth gives 1 percent increase in employment (this may be the so-called optimal rate of unemployment reduction), that would mean that with 15 percent higher GDP in five years, there would be a significant reduction in the rate of unemployment. If unemployment rates are between 18 and 27 percent, additional 15 to 25 percent higher GDP would be needed too. So, looked at it that way, output gap, the shortfall of actual GDP to the potential one, is 25 to 40 percent in this group of countries currently.

So:

Current output gap (in the next couple of years or so difference between the actual and the potential output) is between 0 in Macedonia, less than 1 in Montenegro, about 1 in B&H, and between 3 and 2 in Serbia.

In the medium term, i.e. 3-5 years, this output gap should be closed, i.e. GDP should be about 15 percent higher than currently at the end of the, more probably, 5 year period or perhaps a bit longer (because of underperformance in the first couple of years and still significant constraints afterward).

The overall output gap could take a decade or so to eliminate with trend growth rate above 3 percent as the constraints are loosened.

## **Closing the Gap**

What needs to happen? The structure in Table 1 needs to be transformed to something like Table 2. On the supply side, there is a relatively low share of tradable goods in the overall production, which is seen from the share of industry or manufacturing in GDP. Indeed, it is manufacturing that matters, as energy and mining will have to decline due to current high share in overall production. Assuming that exports need to increase to 50 percent of GDP (e.g. current share in Macedonia; less for B&H), manufacturing output would



probably have to increase to between 15 to 20 percent of GDP (except for Montenegro). That means that growth of manufacturing will have to be faster than that of GDP. In this respect, the foreign debt constraint, that is significant in countries like Serbia and Montenegro, may put the onus of development on local entrepreneurs, which are in short supply when it comes to manufacturing. A somewhat better state of affairs is in tradable services, although outside of tourism probably only in the sector of information technologies. So, it may prove hard to close the long term output gap from the supply side.

**Table 2: GDP by sectors: medium term (current in brackets)**

	Structure of GDP (demand, shares 2014)				
	Serbia	Montenegro	Macedonia	B&H	Albania
Consumption	(93) 80	(100) 85	(88) 80	(110) 90	(93) 85
Households	(75) 62	(70) 65	(70) 60	(90) 70	(82) 70
Government	(18) 18	(20) 20	(18) 20	(20) 20	(11) 15
Investment	(15) 25	(20) 25	(25) 25	(20) 25	(28) 26
Exports	(45) 50	(40) 50	(50) 60	(30) 45	(34) 45
Imports	(55) 55	(60) 60	(63) 65	(60) 60	(55) 55

	Structure of GDP (supply, shares, 2014)				
Industry	(20) 25	(12) 15	(15) 20	(15) 20	(10) 15
Manufacturing	(15) 20	(7) 8	(10) 16	(10) 15	(5) 10
Energy, mining	(5) 5	(5) 7	(5) 4	(5) 5	(5) 5
Agriculture	(8) 6	(10) 6	(9) 7	(8) 6	(20) 15
Construction	(5) 6	(5) 7	(5) 5	(5) 7	(5) 5
Services	(67) 63	(73) 72	(71) 68	(72) 67	(65) 65

## Production Gap

Looked at the gap from the growth perspective, i.e. in terms of the production function, there is slack in the labour market while capital is scarce. Assuming that human capital endowment is in fact better than it is revealed in the output produced, institutional and infrastructural deficiencies in the total factor productivity are problematic. Realistically, those cannot be solved in short to medium run. So, the closing of the output gap in the sense of reaching the level of production with full employment is going to be hard. So, trend or potential growth rate is probably such that ambitious sustained growth of investment and of exports is also going to be hard.

In any case, potential growth rate is about 3 percent in the medium run, actual growth rate is still below it due to slow post-recession recovery, but could speed up in the second half of e.g. 5 years period due to recovery of investment and exports with some improvement in household consumption. Assuming that constraints are loosened after that period and there is improvement in institutional and the infrastructure set up, growth could speed up to around 4 percent and the slack in the labour market could be eliminated in the next 5 years, i.e. in 10 years altogether from now.

### **Balances and Prices**

To transform the current structure into the potential one, balances need to be sustainable and prices need to adjust. Assuming that government spending sustains its share in the GDP suggests that no significant fiscal adjustment is needed. This is because government spending is already low and probably cannot be cut given the social and demographic as well as development needs. External balances are one important constraint. As nominal exchange rate adjustment is not possible (except in Serbia, but probably not to a significant extent), real exchange rate needs to adjust which is why household consumption needs to decline. As investment has to increase with current account adjusting significantly, savings have to increase which implies lower discount rate on future consumption and also lower real interest rate so that the former reflects increased savings and the latter increased investments.

Now, given that consumption needs to decrease by 10 to 20 percentage points, that recessionary influence needs to be counterbalanced by combined increase of export and investment growth in the medium term. Once the structure is in place, consumption can resume growth with the GDP, so potential growth rate can speed up, as assumed.

## Conclusion: Risks of the Past Returning

Risks are on the down side. For two main reasons: discount rate on future consumption depends on the change in total factor productivity which grows quite slowly (i.e. overall uncertainty is still high); and entrepreneurial capacity is limited. That is in part the explanation for the low long term trend growth in the region in the last at least 40 years or so.

### Realistically Speaking

Keynes acknowledges that there is a theoretical argument to be made for the neglect of the transfer problem:

“Those who think that the Transfer Problem is secondary argue thus. The German people receive its income in return for its current output of goods and services. If an appropriate part of this income is sequestrated, there will be no buyers for a corresponding amount of goods, which will therefore be available (in addition to what would be available otherwise) to expand exports or in diminution of imports. Since not all the consumption of goods and services, which the German people are compelled to forgo, is suitable for export, there will have to be a certain amount of change-over in the character of production. There is, however, no reason to suppose that ordinary economic forces will not bring this about within a reasonable space of time. Thus—according to this school—the real question is, how much cash can the Government raise by sound financial methods and pay over to the Agent-General. Once this is settled, we can be sure that a way will be found of looking after the Transfer Problem.”

Keynes has been taken to have a rather antiquated, classical or orthodox view on trade and international finance in this debate. But his methodological stance is in fact the same as that in the *General Theory*. He argues that all the circumstances in which there is no transfer problem are special cases, while a general theory should be able also to cover the case in which there is the transfer problem that he is discussing.

Thus, it is very much an empirical question. That, however, does not mean that he is just going to look at the data and induce from it. Rather, he is searching for the general theory, which can accommodate both the special cases when there is no transfer problem and others when that problem exists. Keynes was not a positivist in the sense that he thought that one could induce laws from patterns found in the data, however sophisticated the statistical or

econometric instruments for pattern recognition are developed. He was also not an eclectic *a la* Krugman and indeed most of the macro-model builders who combine theory with *ad hoc* assumptions. He was aware of what came to be called the Duhem-Quine Theorem that one does not test assumptions, one by one, but models as a whole. His question was how general can a theory (or a model) be if it cannot account for instances in which e.g. there is persistent unemployment or, in this case, the transfer problem? His aim, however, was not to search the data for the answer, but to formulate a model that can explain both full employment and persistent unemployment or the existence or not of the transfer problem. Which, the model, importantly, can be used not only to advise the policy makers, but can also be used to persuade them and the public of what is the right thing to do. Ohlin shared the ambition, and may have been more right than Keynes in this particular debate.

## References

- Alvarez, F., R. E. Lucas, Jr. (2007), "General Equilibrium Analysis of the Eaton-Kortum Model of International Trade", *Journal of Monetary Economics* 54: 1726-1768.
- Aumann, R., B. Peleg (1974), "A Note on Gale's Example", *Journal of Mathematical Economics* 1: 209-211.
- Bernanke, B. (2015), "Why are Interest rates so Low, Part 2: Secular Stagnation," Ben Bernanke's Blog.
- Balasko, Y. (1978), "The Transfer Problem and the Theory of Regular Economies", *International Economic Review* 19: 687-694.
- Balasko, Y. (2014), "The Transfer Problem: A Complete Characterization," *Theoretical Economics* 9: 435-444.
- Bhagwati, J., R. Brecher, T. Hatta (1983), "The Generalized Theory of Transfers and Welfare: Bilateral Transfers in Multilateral World", *American Economic Review* 73: 606-618.
- Brakman, S., Ch. van Marrewijk (1998), *The Economics of International Transfers*. Cambridge University Press.
- Brock, Philip (2008), "Transfer Problem", *New Palgrave Dictionary of Economics* Vol. 8: 373-375.
- Chichilnisky, G. (1980), "Basic Goods, The Effects of Aid and the International Economic Order", *Journal of Development Economics* 7: 505-519.
- Chichilnisky, G. (1983), "The Transfer Problem with Three Agents Once Again", *Journal of Development Economics* 13: 237-248.
- Chichilnisky, G. (1997), "Market Arbitrage, Social Choice, and the Core", *Social Choice and Welfare* 14: 161-198.
- Chipman, J. (1974), "The Transfer Problem Once Again" in G. Horwich, P. Samuelson (eds.), *Trade, Stability, and Macroeconomics: Essays in Honor of Lloyd A. Metzler*, 19-78. Academic Press.
- Corsetti, G., Ph. Martin, P. Pesenti (2013), "Varieties and the transfer problem", *Journal of International Economics* 89: 1-12.
- Dornbusch, R., S. Fischer, P. Samuleson (1977), "Comparative Advantages, Trade, and Payments in a Ricardian Model with a Continuum of Goods", *American Economic Review* 67: 823-839.
- Eaton, J., S. Kortum (2002), "Technology, Geograpy, and Trade", *Econometrica* 70: 1741-1779.
- Farhi, E., I. Werning (2014), "Fiscal Unions", working paper.
- Gale, D. (1974), "Exchange Equilibrium and Coalitions: An Example", *Journal of Mathematical Economics* 1: 63-66.
- Gali, J., T. Monacelli (2005), "Monetary Policy and Exchange Rate Volatility in a Small Open Economy", *Review of Economic Studies* 72: 707-734.
- Gali, J., T. Monacelli (2008), "Optimal Monetary and Fiscal Policy in a Currency Union", *Journal of International Economics* 76: 116-132.
- Geanakoplos, J., G. Heal (1983), "A Geometric Explanation of the Transfer Paradox in a Stable Economy", *Journal of Development Economics* 13: 223-236.
- Gligorov, V. (2012), "Five Easy Pieces on Keynes", *Pescanik*.
- Guesnerie R., J-J. Laffont (1978), "Advantageous Reallocations of Initial Resources", *Econometrica* 46: 835-841
- Leontief, W. (1936), "A Note on the Pure Theory of Transfers", in *Explorations in Economics: Notes and Essays Contributed in Honor of F. W. Taussig*. New York: McGraw-Hill, pp. 84-92.

- Johnson, H. (1956), "The Transfer Problem and Exchange Stability", *Journal of Political Economy* 64: 212-225.
- Johnson, H. (1975), "The Classical Transfer Problem: An Alternative Formulation", *Economica* 42: 20-31.
- Jones, R. (1984), "The Transfer Problem in a Three-Agent Setting", *Canadian Journal of Economics* 17: 1-14.
- Jones, R. (1985), "Income Effects in the Theory of International Trade", *The Economic Journal* 95: 330-344.
- Kenen, P. (1969), "The Theory of Optimum Currency Area: An Eclectic View" in R. Mundell, A. Swoboda (eds), *Monetary Problems of the International Economy*. The University of Chicago Press, 41-60.
- Keynes, J. M. (1919), *The Economic Consequences of the Peace*. Macmillan.
- Keynes (1923), *A Tract on Monetary Reform*. Macmillan.
- Keynes, J. M. (1926), *Essays in Persuasion*. Macmillan.
- Keynes, J. M. (1929a), "The German Transfer Problem", *Economic Journal* 39: 1-7.
- Keynes, J. M. (1929b), "A Reply by Mr. Keynes", *Economic Journal* 39: 404-408.
- Keynes, J. M. (1936), *The General Theory of Employment, Interest, and Money*: Macmillan.
- Krugman, P. (1979), "Increasing Returns, Monopolistic Competition, and International Trade", *Journal of International Economics* 9: 469-479.
- Krugman, P. (1991), *Has the Adjustment Process Worked?* Institute for International Economics.
- Krugman, P. (1999), "Balance Sheets, the Transfer Problem, and Financial Crisis", *International Tax and Public Finance* 6: 459-472.
- Krugman, P. (2002), "Was it All in Ohlin?" in R. Findlay, L. Jonung, M. Lundahl (eds.), *Bertil Ohlin: A Centennial Celebration, 1899-1999*, 389-406. MIT Press.
- Krugman, P., M. Obstfeld (2006), *International Economics: Theory and Policy*. Pearson Addison-Wesley.
- Meade, J. (1951), *The Theory of International Economic Policy*. Vol. 1: *The Balance of Payments*. Oxford University Press.
- Metzler, L. (1942), "The Transfer Problem Reconsidered", *Journal of Political Economy* 50: 397-414.
- Metzler, L. (1950), "A Multiple-Region Theory of Income and Trade", *Econometrica* 18: 329-354.
- Mundell, R. (1960), "The Pure Theory of International Trade", *American Economic Review* 50: 67-110.
- Mundell, R. (2002), "Keynes and Ohlin on the Transfer Problem" in R. Findlay, L. Jonung, M. Lundahl (eds.), *Bertil Ohlin: A Centennial Celebration, 1899-1999*, 227-262.
- Obstfeld, M. (2012), "Does the Current Account Still Matter?", *American Economic Review*, 102: 1-23.
- Obstfeld, M., K. Rogoff (1995), "The Intertemporal Approach to the Current Account" in G. Grossman, K. Rogoff (eds.), *Handbook of International Economics Vol. III*. Elsevier, 1731-1799.
- Obstfeld, M., K. Rogoff (1996), *Foundations of International Macroeconomics*. The MIT Press.
- Obstfeld, M., K. Rogoff (2001), "The Six Major Puzzles in International Macroeconomics : Is There a Common Cause?" in B. Bernanke, K. Rogoff (eds.), *NBER Macroeconomics Annual* 15: 339-390.
- Ohlin, B. (1929a), "The Reparation Problem: A Discussion", *Economic Journal* 39: 172-182.
- Ohlin, B. (1929b), "A Rejoinder by Professor Ohlin", *Economic Journal* 39: 400-404.
- Pigou, A. C. (1932), "The Effects of Reparations on the Ratio of International Exchange", *Economic Journal* 42: 532-543).
- Pigou, A. C. (1947), *A Study in Public Finance*. Macmillan, third edition.
- Robinson, J. (1937), *Essays on the Theory of Employment*. Macmillan.

- Robinson, J. (1945), "The Pure Theory of International Trade", *Review of Economic Studies* 14: 1946-1947.
- Ruffin, R., R. Jones (2007), "International Technology Transfer: Who Gains and Who Loses?" *Review of International Economics* 15: 209-222.
- Sachs, J. (1984), *Theoretical issues in International Borrowing*. Princeton Studies in International Finance No. 54.
- Sah, R. K., J. Stiglitz (1984), "The Economics of Price Scissors", *American Economic Review* 74: 125-138.
- Samuelson, P. (1941), "The Stability of Equilibrium: Comparative Statics and Dynamics", *Econometrica* 9: 97-120.
- Samuelson, P. (1952), "The Transfer Problem and Transport Costs: The Terms of Trade When Impediments are Absent", *Economic Journal* 62: 278-304.
- Samuelson, P. (1954), "The Transfer Problem and Transport Costs II: Analysis of Effects of Trade Impediments", *Economic Journal* 64: 264-89.
- Samuelson, P. (1962), "The Gains from International Trade Once Again", *The Economic Journal* 72: 820-829.
- Samuelson, P. (1971), "On the Trail of Conventional Beliefs about the Transfer Problem" in: J. Bhagwati, R. Jones, R. Mundell, J. Vanek (eds.), *Trade, Balance of Payments and Growth*. Papers in International Economics in Honour of Charles P. Kindleberger. Amsterdam: North-Holland.
- Schuker, S. A. (1968), *American "Reparations" to Germany, 1919-1933: Implications for the Third-World Debt Crisis*. Princeton Studies in International Finance 61.
- Srinivasan, T., J. Bhagwati (1983), "On Transfer Paradoxes and Immiserizing Growth: Part I", *Journal of Development Economics* 13: 217-222.
- Srinivasan, T., J. Bhagwati (1984), "On Transfer Paradoxes and Immiserizing Growth: Part II", *Journal of Development Economics* 14: 111-115.
- Viner, J. (1937), *Studies in the Theory of International Trade*. New York: Harper & Brothers.