

The case and role for development banks; the European example

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I Introduction

A well-functioning financial sector, both national and international, needs to play important roles to achieve the aims of sustained and inclusive growth.

To achieve this key positive role, the financial sector needs to encourage and mobilise savings, intermediate these savings at low cost, ensure savings are channelled into efficient investment, including in innovation and structural change, as well as helping manage the risks for individuals and enterprises. Because the financial sector has such important effects throughout the economy it also needs to adhere to a key principle of the Hippocratic oath that medical doctors swear to, which is to do no harm to the rest of the economy. Therefore there should be as few and as small crises that stem from the financial sector, as these have huge costs, both fiscal and on growth, employment and investment.

In recent decades the private financial system has not performed any of these functions well. It has created risk, instead of managing it, leading to many major crises. It has been deeply pro-cyclical in that it tends to over-lend in boom times, and ration credit during –and long after–crises, limiting both working capital and long term finance crucial for investment. In both tranquil, but even more in turbulent times, it has not funded sufficiently the long-term investment in innovation and skills which businesses need to grow and create jobs; key sectors like infrastructure, renewable energy and energy efficiency have also been insufficiently funded.

The problems with the private financial sector have increasingly drawn attention to the positive role that effective public development banks can play. In recent years, the valuable role that national, regional and multilateral development banks can and often do play received recognition in wider and ever-growing circles. The positive role these banks have played in providing counter-cyclical finance as private credit in, and flows to, developing countries collapsed during the North Atlantic crisis which started in 2007, is widely seen as valuable. Furthermore, the greater need for instruments to implement more long term national or regional development strategies has been increasingly recognized. This coincides with growing recognition of the value of a modern “industrial policy” and the importance of an “entrepreneurial State”, that encourages and leads, providing the vision and the dynamic push for private innovation and structural transformation (Mazzucato, 2013)

The value of development banks, at a multilateral, regional, and national level, to help implement and finance development strategies and visions (by funding both the public and private sector) has thus received greater support. It is also interesting that the role of development banks has not just been highlighted as important in developing and emerging economies, but also in developed ones. Thus the European Investment Bank-the bank of the European Union member states- has played a

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prominent role in the provision of long term lending during and after the European debt crisis, as private lending fell. Since its creation in 1956, the EIB, and EU Structural Funds, had provided significant funding for the inter-connection of national infrastructure on a massive scale, to support the creation of the Common Market and to reduce economic divergence between poorer and richer regions (see Griffith-Jones et al., 2006). More recently, it is engaged in helping fund the creation of a “smart” intra-European electricity grid, to facilitate transmission of renewable energy.

At a national European level, Germany’s public development bank, KfW, now the second largest commercial German bank, has played a very positive role in increasing lending counter-cyclically - for example to SMEs-, during the crisis, as well as funding on a significant scale key sectors-such as investment in renewables and for innovation more broadly. In Europe these actions are perceived and highlighted as a valuable model for other countries. France has just created a new public development bank; and the United Kingdom is contemplating the creation of a similar institution.

The favourable experience of many development banks in emerging economies, such as BNDES in Brazil, and CAF in the Andean region, spreading increasingly in Latin America, are very important, as are positive Asian experiences, as in China, South Korea and India, which have had effective development banks. BNDES for example has taken important risks in financing important new sectors, like biotechnology and renewable energy. Furthermore, countries like Chile have in the past used their development banks for promoting and funding private investment in sectors, such as for example massive expansion of forestry in Chile, that generated major exports of paper and cellulose, as well as wood. In all these experiences, development banks have pioneered investment in new sectors and new technologies, following national or regional priorities, defined by government often in consultation with the private sector.

The next section (II) will elaborate more the analytical reasons why development banks need to play a bigger role in developing, emerging and developed economies.

In section III we make specific proposals on how the major EU development bank, the European Investment Bank, (EIB) has and can further expand its lending significantly, in ways that will make a meaningful contribution to growth, investment and innovation, particularly in the countries, whose economies and citizens have suffered most from the sovereign debt crisis; this will help deal with the clear fragmentation of banking and financial and banking markets, which emerged in Europe since the crisis, which implies that in the periphery, enterprises are extremely credit rationed.

After outlining in some detail the type of measures that can be taken, as well as their scale, we model the likely impact on GDP, investment and employment, which would be significant. Using the Cambridge-Alphametric Model (CAM) we compare and contrast two alternative scenarios for Europe. In the first, we assume the continuation of current austerity policies and that private investment remains subdued across Europe as a result of low growth rates, low expectations of profitability, and limited access to credit, especially in the countries most affected by the Eurozone crisis. We compare and contrast this scenario with an ‘investment-focused’ scenario where investment rates are significantly increased in the context of an expansion in lending by both EIB and national development banks, whilst public investment does not fall, as government spending is reduced less than in the business as usual scenario.

This gives a strong illustration of the positive role that development banks can and do play, both in helping economies recover after crises, and doing so by funding investment which will lead to long term transformation and innovation. One important advantage of this approach, that we will highlight, is that with fairly limited public resources, a very large impact can be achieved, due to leverage. Indeed, in this and other cases, public development banks have the advantage that they can leverage public resources, as they fund their loans by bonds issued in the private capital markets, as well as co-financing with private banks and/or private investors. The contribution of public resources is mainly through an increase in paid-in capital.

European leaders, in a visionary move doubled paid-in capital of the EIB by Euro 10 billion in 2012, which is facilitation at least an additional EIB lending of Euro 60 billion, and a total additional lending of at least Euro 120 billion, as the EIB requires 50% of co-financing with its loans. Our proposal is that they increase paid-in capital by a further Euro 10 billion, which will facilitate at least additional similar amounts, facilitating an important increase in private investment. Together with a less austere fiscal policy that does not allow public investment to fall, our simulations show an additional 5 million much needed jobs can be created in the European Union.

II The analytical case for good development banks

A Theoretical framework

Despite its size and importance to the economies, surprisingly little academic research has been conducted on the role of, and the rationale for, development banks. The discussion needs to be placed in the context of the broader debate on the desirable nature and structure of the financial sector.

In the three decades after World War II, it could be argued that the financial sector functioned quite well both in developing and developed countries. National and multilateral development banks were created and performed, and were broadly seen to perform, valuable roles. Private domestic financial sectors were relatively small and fairly tightly regulated.

However, there were policy concerns that “financially repressed” systems, as they were then called were inefficient. From a theoretical perspective, the idea that “financial markets were efficient” encouraged financial liberalization, with light or no regulation (Gurley and Shaw 1955, McKinnon 1973). This process was followed by frequent and costly crises. Diaz Alejandro (1985) perceptively synthesized this early on as: “Good-bye financial repression, hello financial crisis”. Within the efficient financial market school, the existence of public financial institutions, such as development banks, was –almost by definition- seen as negative. As a consequence, development banks were criticized -fairly and unfairly- and their role was reduced sharply in many countries.

An alternative approach emphasized credit rationing, which describes a situation in which, even when agents are willing to pay a higher interest rate to get the funds to finance their investments, banks may refuse financing. In this perspective, the approach of credit rationing justifies the existence of development banks, which would supply the necessary credit to investment, unavailable in the private financing system.

A first important approach is associated to the theory of market failures (Stiglitz and Weiss, 1981; Stiglitz, 1990). Credit rationing occurs due to a malfunction of the financial markets, caused by imperfect information or information asymmetry, which prevents financial market to function efficiently. If borrowers have more information on the expected return of their projects than the

lenders, there is a greater demand for credit than supply, but the adjustment would not be done by increasing interest rates. Furthermore adverse selection and moral hazard accentuate these market imperfections. Stiglitz (1994) argues that market failures in financial markets are likely to be endemic as those markets are particularly information intensive, thus making information imperfections and asymmetries as well as incomplete contracts more important and disruptive than in other economic sectors. Therefore in important parts of financial markets, market failures tend to be greater than government failures. In such cases government interventions are more desirable than in other sectors if their benefits outweigh their costs. This provides a first base for a strong case for public development banks and for robust regulation of private financial markets.

From a complementary theoretical perspective several commentators (e.g. Ferraz et al, op cit, Kregel 1988, Wray, 2009), argue there is a preference for liquidity amongst investors, as well as banks, responsible for the limitations of the supply of credit in the economy. There may be lack of credit for investment even when there are well-developed national and international financial systems. Therefore, as pointed out above, the importance of development banks goes beyond the question of "market failure", though it includes it. Given the uncertainty about the future, depending on the characteristics of the new sectors / projects that require resources, banks often offer no or insufficient credit, (especially long term one), even if the financial system is fully developed.

Therefore, the existence of development banks is justified by the existence of sectors / investment projects that require funding, for the future development of the economy, but imply high uncertainty as to their future success (Mazzucato, op cit). Because of that, they may not be funded by the private financial system which prefers sectors / investment projects whose expected returns are less uncertain. These are often highly complex and expensive sectors / projects, requiring sophisticated expertise in their evaluation that takes account positive impacts across the economy (positive externalities) and / or those in which social returns exceed private returns.

Thirdly, a key market imperfection in the operation of financial markets, basically across the board, is the tendency to "boom-bust", with feast of finance followed by famine, both in domestic and in international finance. Building on the theoretical tradition of Keynes (1936) and Minsky (1977), Kindleberger (1978) developed a historical analysis which considers financial crises as a response to previous excesses. Such excesses seem clearly far greater in financial and banking markets that are more liberalized and not properly regulated. The pro-cyclical nature of private finance implies the need for public development banks to provide both short- term, and especially long term, counter-cyclical finance, as well as the need for counter-cyclical regulation of banking and financial markets (Griffith-Jones and Ocampo, 2014). Griffith-Jones et al. (2012) and Ocampo et al. (2012) provide empirical evidence for the counter-cyclical response of regional and multilateral development banks, whilst Brei and Schlarek (2013) and Luna Martinez and Vicente (2012) provide evidence for the counter-cyclical role national development banks play.

B. Desirable functions and characteristics of development banks

The above theoretical context, as well as empirical evidence, help define the role that development banks do and need to play.

There are four valuable functions that seem crucial for national, regional and multilateral development banks to play: a) providing counter-cyclical finance, especially for supporting investment; b) supporting, through funding, a dynamic vision and strategy of growth and structural transformation c) mobilizing broader resources, for example by leverage and targeted subsidies d) financing public goods. (Culpeper, Griffith-Jones and Titelmann, forthcoming).

As regards b), a particular focus of this chapter and book, the emphasis is on the especially valuable role that development banks can play to fund investment in the beginning of new sectors or the deepening of existing sectors, where private investment on its own would not invest, as it is too uncertainty averse. In those cases, development banks can provide the vision- and part of the resources, either through loans or equity-to do those things that at present are not done at all (Keynes,1926,Mazzucato, op cit). This requires development banks to have the expertise and the strategic vision to fund new sectors and new technologies. The fact that development banks can provide long term loans, as well as require lower returns further facilitates this. This is the most challenging, but also probably the most valuable role for development banks. For example, the EIB, and EU Structural Funds, provided funding for the inter-connection of national infrastructure within Europe on a massive scale, to support the creation of the European Common Market and to reduce economic divergence between poorer and richer regions (see Griffith-Jones,). More recently, the EIB is engaged in helping fund the creation of a “smart” intra-European electricity grid, to facilitate transmission of renewable energy.

However, development banks are also needed to fund sectors or activities where important externalities exist, which imply that social returns are higher than market returns; this is typically the case with environmental externalities. It is interesting that public development banks, and notably the EIB, evaluate projects both on a purely commercial basis, and also in an environmental way, incorporating a “shadow” (higher than market) price for carbon. This may require the provision of targeted and time- limited subsidies, for certain projects to go ahead; in the case of the EU, this can be and is provided from European Commission resources. Finally, the counter-cyclical role is crucial to help sustain investment, innovation, job creation and growth in the long periods when private lending falls or, worse dries up. Uncertainty of funding, accompanied by lower demand, can be a major discouragement for private investment, prolonging stagnation or low growth unnecessarily. Development banks can step in to help with both.

More broadly, there is a different case in favour of development banks, in the sense of the benefits of diversification. Having a more diversified financial structure than one just focussed mainly in private (often large) banks may have several advantages. Firstly, it may encourage competition between different types of financial institutions, which could lead to them being more efficient, for example in the spreads they charge. Secondly, a more diversified financial system, especially if not having inter-connected risks, could lead to less systemic risk and therefore contribute to financial stability. Thirdly, if different varieties of financial institutions have different strengths², having a more diverse system could make it more likely that the financial sector functions needed to help achieve inclusive and dynamic growth are achieved, than if the structure of the financial sector are determined spontaneously, or dominated by one type of financial institutions, private or public..

² To include some stylized facts, development banks are good at counter-cyclical lending and at providing long-term finance for private investment in infrastructure, as well as supporting investment and innovation in new sectors; private banks are good at providing international trade credit as well as financing the needs of large companies;.

Indeed, given that financial sectors (particularly liberalized, very lightly regulated ones) can be very problematic for growth, the need to pursue pragmatic policies in financial sector development, and not be driven by pure free market ideologies or conditioned too much by the interest of agents in the financial sector is especially important. It is key not to adopt an “either/or” attitude, but look at the best ways of building synergies amongst institutions of different type (e.g. private and public) as well as encourage best practice within them; for the more dynamic sectors, initially the catalytic role of development banks may be crucial. Public development banks co-finance, and increasingly lend, via private banks. Furthermore, much of their lending is done to private firms. The ability to combine private and public creatively, ideally working constructively together, is an essential feature of a financial system if it is to serve the needs of inclusive and environmentally sustainable growth. In this sense, though by no means perfect, the way the German financial sector has developed and operated, for example to successfully help fund renewable energy via public and private banks (as well as cooperative banks) and private investors acting together, provides a very good example.

Whilst it is valuable for public and private sector banks to collaborate and build on mutual positive synergies, it is important that the vices of one sector (e.g. the excessive financial risk taking of private investment banks and hedge funds) are not transmitted to the public development banks. Whilst public development banks can and should assume “economic risks” related to uncertainty of going into new sectors, new technologies, new markets, etc, they should not assume “purely financial risks”, by copying or buying from, the private financial sector instruments that may offer short term high financial returns but imply potentially high risks. A preference for simple and transparent instruments, like “plain vanilla loans” or simple equity contributions seems justified for development banks, especially in the light of the North Atlantic financial crisis.

Another important consideration is the scale of development bank lending, in proportion to total lending. There seems to be an important case for a significant scale so they can fulfil their functions well, especially in terms of funding key investments to make a meaningful impact on innovation and structural change and for playing a strong counter-cyclical role when this is necessary, as was clearly the case in the period during and after the North Atlantic crisis, and for financing public goods, like investment in renewable energy. It is interesting to note that KfW, the German public development bank is the second largest commercial bank in Germany, and represents 12.7% of total bank credit in the German economy. If the role of regional and other development banks is added, the share of public banks in Germany represents about a quarter of total bank credit. This is particularly relevant because the German economy is perhaps the most dynamic one in Europe, with a large ability to innovate and compete internationally, including in advanced industrial goods. The role that KfW has played in helping such innovation, growth and employment generation is a very understudied but important subject. In the case of Brazil, BNDES represents an even higher proportion of total credit, 21%; it represents a particularly high proportion of long-term finance and therefore has become a major instrument for innovation and industrial policy (see Ferraz et al, forthcoming).

A final desirable feature of effective development banks is that they should have a close dialogue with the private sector, to develop a joint vision and expertise for funding good projects in strategic sectors, but development banks should not be captured by narrow private or political interests, both because it would misuse resources and would distract the development bank from its important roles. Good governance of development banks is therefore essential.

III Proposal for expansion of EIB and National Development Bank lending

This section develops a specific proposal for how an expansion of lending by the large European Union development bank, (one of the largest in the world), the European Investment Bank, accompanied by other complementary measures can lead to a major boost in investment in the EU, which would both encourage innovation and structural transformation essential for long term growth and competitiveness, (implying positive long term supply effects), as well as contribute to stimulate aggregate demand for a balanced and more rapid growth, as well as higher employment. This increased lending by the European Investment Bank (EIB) would be focussed especially but not only in the countries suffering most from the crisis.

One crucial advantage of this proposal is that with fairly limited public resources, a very large impact on investment, growth and employment can be achieved due to benefits of leverage. A second major advantage is that, as an existing successful European institution-the EIB- can be used so the measures can be quickly and effectively implemented.

A Proposal for investment jobs and growth in the EU

There is growing consensus that it will prove impossible to restore growth on a sustained basis in the EU without stimulating investment. Restoring sustained and sustainable growth, based on expanded investment is also the best way to achieve a widespread resolution of the sovereign debt crisis. To do this is not only good arithmetic, as we illustrate below, but also good economics, and builds on clear lessons of history.

The timing for a major boost in investment is very good at present. The acute phase of the financial part of the Eurozone sovereign debt crisis seems fortunately over, as spreads-even in crisis hit countries- have declined sharply. Financial markets are much calmer, which is of course very positive. This gives some more space for a less austere fiscal policy, especially for defending existing public investment levels, and –especially- for facilitating private investment in the EU. This is crucial because growth in much of the Eurozone is anaemic; again this is better than in previous years, but clearly insufficient; other countries in Europe, like the UK, have seen their growth performance improved from previous poor performance, but have still not recovered their GDP per capita levels of before the crisis. The main challenges for policy-makers are restoring investment and employment in most of Europe, as levels of both are so much below their pre-crisis levels; higher investment, especially if in the framework of a vision for future development in Europe, will lay a solid basis for a future dynamic and equitable European economy. Increased employment is crucial, especially in the countries most affected by the crisis, from a social, economic and political perspective.

There is the need for an additional growth and investment -promoting financing strategy which: produces rapid and significant effects; enhances productive capacity, encouraging present and future sustainable growth by financing economically sustainable projects and activities, in the context of a vision of innovation and structural transformation towards a greener economy; support the growth of both existing and new competitive enterprises, especially those that are innovative.

Many of these enterprises are suffering severe lack of access to private credit, especially in countries like Spain and Greece, where lending has been stagnating during the crisis or, worse still, declining.

There is the need for proposals that are not only desirable but also feasible. A sound initiative, which has real chances of success, therefore needs to be: feasible to implement quickly, have sufficient size to make a meaningful contribution; be cost effective in terms of large impact with relatively limited additional public resources; the measures we propose provide significant leverage; lead to investment, that will contribute to a more dynamic and equitable future European economy. the additional finance should not only provide resources, eg for financing working capital for generating greater employment today, but –above all– investment in innovation and increased productivity, including in new sectors, strategic for future growth, which will generate jobs in the future

The historical experience of the Marshall Plan after World War II can serve as a valuable reference concerning the proper size of such a program. The plan for Europe consisted of a total of \$13-14 billion in currency of that period. That represented yearly additional investment of about 0.5% of European GDP, over about 5 years, about 2.5% of GDP. A similar order of magnitude would be relevant today. It is interesting to stress that Marshall Plan resources were used, amongst other purposes, in Germany to fund the initial capital of the KfW, the very successful German development bank; in this sense, again, the Marshall Plan gives a nice precedent for today.

The proposal

There are two promising paths to use limited public resources to achieve important multiplier effects. The first is to increase paid-in capital of the EIB. The second is to achieve leverage with the EU budget.

In early 2012, we proposed a doubling of the paid-in capital of the EIB (Griffith-Jones, Kollatz, Andersen and Hansen, 2012). In their summit of June 2012, in a visionary step, EU leaders adopted precisely such a measure, which implied increasing the paid-in capital of the EIB by € 10 billion. Only a very small proportion of total capital, (5% of over € 230 billion of EIB subscribed capital) had to be paid-in. Therefore when this paid-in capital was doubled, it required only a total of €10 billion from all EU member states. This was only 1% of the EU budget for the period 2014-2020, and 0.01% of total annual EU GDP, that is a very small amount; it is also very small if compared to the vast amounts spent by European member states to rescue private banks!

Rating agencies accept a leverage of eight, between additional paid-in capital and additional lending for the EIB to maintain its AAA status. Therefore, the increase of paid-in equity of around €10 billion will allow the EIB to expand its lending by up to €80 billion, which is an impressive multiplier. Because typically the EIB co-finances 50% of projects, with private sector or others (including national development banks) contributing the other 50%, this will result in additional investment of €160 billion, which implies a massive multiplier, as based on € 10 billion of increased EIB capital. Even if a more conservative leverage of six is used for EIB lending, total additional lending (both EIB and others) can increase by € 120 billion in total in the coming years. The additional finance should not only provide resources for generating greater employment today, but –above all– investment in innovation and increased productivity, including in new sectors, strategic for future growth, which will generate jobs in the future.

The measure of doubling EIB paid-in capital has been successful, and has led to the EIB increasing, since 2013 significantly its level of lending. Therefore, because the measure was successful and because credit from private banks is still severely constrained, especially but not only, in the most crisis affected countries, **we would like to suggest a further increase of another € 10 billion of the paid-in capital of the EIB.** This would allow another increase of up to € 80 billion of EIB lending, and a total increase of € 160 billion of total lending for the next years. Even if a more conservative leverage of six is used for EIB lending, total additional lending (both EIB and others) can increase by € 120 billion in total in the coming years. Such additional lending could be focussed especially on investment linked to innovation and structural transformation, particularly in new sectors or applied to new countries; an example would be economic land- mark projects, such as a cable connection from the most suitable European locations for solar energy production in Crete to the mainland, an investment which is economically viable but finds no financiers. Employment creation, especially for the young, would also be an important priority implying direct and indirect labour intensity of investment could be a criterion for choosing projects.

The second route to achieve leverage is with the EU budget. Large projects can be co-financed by the EIB alongside with private capital from pension funds and insurance companies that currently do not fund large investment projects, due to too high risks. Before the financial crisis, these risks were absorbed by large mono-line insurers (such as AIG), with the help of which the financing of such projects were transformed into triple-A bonds. After the crisis, this insurance is no longer available. A very small amount (as proportion of the EU budget), equal to €5 billion a year can be allocated as a risk buffer, for example in the next four years (Such resources would come from the existing EU budget, and could imply some small restructuring of the budget). This €5 billion a year would allow the EIB to lend an additional €10 billion annually both for financing infrastructure projects (project bonds) as well as projects to promote innovation. The project bonds would imply that 25% of the project would be advanced by a private investor, the EIB would finance the next 25%; with a mezzanine tranche; the remainder would be invested by pension funds and insurance companies; regarding the mezzanine tranche, the EU contribution would finance half the risk assumed by the EIB. Thus, €5 billion from the EU budget- leading to financing by the EIB of €10 billion- would lead to project finance of €40 billion annually. Baby steps have been taken along such lines, but there is an urgent need to scale them up to reach the levels outlined above (see also Griffith-Jones, Kollatz, Andersen and Hansen, op cit)

If both these avenues are fully pursued at sufficient scale, a target of increasing lending and investment across the EU by approximately an additional €320 billion in the period 2014-2020, with an attempt to front load this in the next few years, which it could be assumed would come from the further additional paid-in capital of increased € 10 billion, that could generate € 160 billion of new lending, and € 5 billion during four years for risk capital from the EU budget, that would generate financing of € 40 billion for four years. This means in the coming years additional lending and investment could increase by up to €60 billion a year, implying an increase of about 0.5% of GDP annually in the next few years. In the next part we measure the impact of this package of measures on EU growth, employment and investment, as well as on debt to GDP ratios, and fiscal deficits to GDP.

B Impact of the proposals on GDP, investment and employment

Using the Cambridge Alphametrics Model (CAM), we examine two alternative scenarios for Europe for the period to 2020. The first scenario – *business as usual* – assumes that austerity policies in Europe are maintained in an attempt to reduce debt-to-GDP ratios to 60 percent. In other words, governments will continue cut their expenditures to reduce government debt. No additional measures are taken to boost EIB lending. We contrast this scenario with an investment-led recovery for Europe. In this scenario investment (both government and private) is considered as the key strategy to increase employment and economic growth.

The global, non-equilibrium CAM model allows us to generate long-term policy oriented projections. The model uses a set of accounting identities to link the balance sheets of each geographical bloc via a structure of national and international cash flows and it makes projections from historical series dating back to 1970.³ We present results for the Eurozone and the UK. The Eurozone is divided into two areas: North Eurozone, which includes Germany, France, Belgium, The Netherlands, and Luxembourg and the South Eurozone, which includes Greece, Italy, Spain, and Portugal.

Our investment-led scenario assumes that private investment is significantly increased in order to boost both employment and GDP growth. This is basically financed by EIB capital increase and risk capital from resources available from the EU budget. Further, we assume that government expenditure is maintained to pre-crisis levels and a modest increase in government revenue as a share of GDP (21 percent in all the blocs and in the UK⁴) takes place in order to offset the deficit effects of maintaining expenditure at pre-crisis levels.

Table 1 shows the target government expenditure for the two scenarios. For the South Eurozone we assume that government expenditure in the investment led-scenario reaches 22 percent by 2020, to defend existing levels of investment, whereas in the business as usual scenario expenditure, and investment, is slashed to 19 percent by 2020. In the North Eurozone government expenditure remains stable at approximately 23 percent to 2020 for both scenarios. Finally, for the United Kingdom, under the investment-led scenario government spending reaches 22 percent by 2020.

Table 1. Government expenditure as percentage of GDP

		2007 (Actual)	2012 (Actual)	2014	2015	2016	2017	2018	2019	2020
South Eurozone	Business as usual	22.4	25.4	22.1	21.2	20.5	20.1	19.8	19.5	19.4
South Eurozone	Investment-led			23.3	23.2	23.1	23.0	22.9	22.8	22.7
North Eurozone	Business as usual	22.7	24.6	23.8	23.6	23.4	23.3	23.2	23.1	23.0
North Eurozone	Investment-led			23.9	23.7	23.6	23.4	23.3	23.1	23.0
United	Business as	23.2	26.0	23.4	22.7	22.2	21.8	21.6	21.4	21.3

³ for a detailed review of the CAM model see Cozzi and Michell (2014).

⁴ This is close to the 2007 pre-crisis values of government revenue as percentage of GDP.

Kingdom	usual									
United Kingdom	Investment-led			24.0	23.6	23.3	22.9	22.6	22.4	22.1

In order to counteract the long-term decline in private investment across Europe in our investment-led scenario we assume the package of measures described above will lead to a significant growth in private investment for the period 2014-2020. Table 2 summarises the estimates for private investment for the business as usual and investment-led scenarios. Under the business as usual scenario private investment remains subdued as a result of low GDP growth rates and continued austerity policies which can have a negative impact on crowding-in effects of private investment, and especially as a result of credit rationing in Southern Europe.

Table 2. Private investment as % of GDP

		2007 (actual)	2012 (actual)	2014	2015	2016	2017	2018	2019	2020
South Eurozone	Business as usual	21.7	14.5	12.4	12.1	12.1	12.1	12.2	12.3	12.5
South Eurozone	Investment-led			14.0	14.4	14.9	15.5	16.0	16.4	16.7
North Eurozone	Business as usual	17.7	16.4	15.1	15.0	15.2	15.3	15.5	15.6	15.8
North Eurozone	Investment-led			15.9	16.2	16.3	16.4	16.5	16.6	16.7
United Kingdom	Business as usual	15.9	11.0	10.6	10.7	10.9	11.1	11.3	11.5	11.8
United Kingdom	Investment-led			11.2	11.4	11.8	12.2	12.7	13.1	13.5

By 2020, under the investment-led scenario, private investment increases across all the blocs and in the United Kingdom. These increases in investment are achieved through enhanced lending from the EIB and national development banks, (which again have the power of leverage for public resources, but at a national level) as well as combined resources from the EU budget and EIB for project bonds for infrastructure and for financing innovation. In nominal terms, for the period 2014-2017, the additional investment for the Eurozone (North and South) compared to the business as usual scenario is approximately € 285 billion and €40 billion for the United Kingdom.

We are interested in assessing if the investment-led scenario can generate a recovery in Europe which raises not only economic growth, but first and foremost, employment. Unemployment levels, especially among the young, are unbearably high in Europe in the aftermath of the global financial economic crisis and recession. Thus, getting people back to work is desirable not just socially and politically, but also economically.

Table 3 compares and contrasts the total number of jobs created in the Eurozone and in the United Kingdom under the two scenarios. The investment-led scenario achieves important gains in terms

of total employment. By 2020 in the South Eurozone an investment-led strategy would lead to almost 3 million additional jobs compared to the business as usual scenario. Significant employment gains are achieved in the North Eurozone and in the UK where the additional jobs by 2020 reach 1.1 and 0.8 million. This means that according to our simulations, **an additional almost 5 million jobs are created** in the 2014-2020 period, as compared with the business as usual scenario.⁵

Table 3. Total employment (millions of persons)

		2000	2008	2012	2014	2016	2018	2020
South Eurozone	Historical	47.7	55.8	52.8				
	Business as usual				51.4	51.3	51.3	51.4
	investment-led				52.1	53.0	53.7	54.3
	difference				0.7	1.6	2.4	2.9
North Eurozone	Historical	79.1	85.6	86.3				
	Business as usual				86.1	86.8	87.3	87.4
	investment-led				86.7	87.8	88.3	88.5
	difference				0.6	1.0	1.1	1.1
United Kingdom	Historical	27.3	29.2	28.9				
	Business as usual				28.6	28.7	28.7	28.6
	investment-led				28.8	29.1	29.3	29.4
	difference				0.2	0.5	0.6	0.8

Table 4 summarises the projected average GDP growth for the business as usual and the austerity scenarios. In the Eurozone, an increase in private investment would not only lead to the creation of additional jobs but also higher growth rates. In the South Eurozone GDP growth for the period 2014-2020 would stand at approximately 3 percent. In the North Eurozone and in the United Kingdom average growth rate reach around 2 percent. This is in sharp contrast with the business as usual scenario where GDP growth will be low – particularly in the South Eurozone – as a result of the negative impact of continued austerity policies and no additional measures to boost private investment via EIB lending and .EU budget resources.

Table 4. Projected average GDP growth (%)

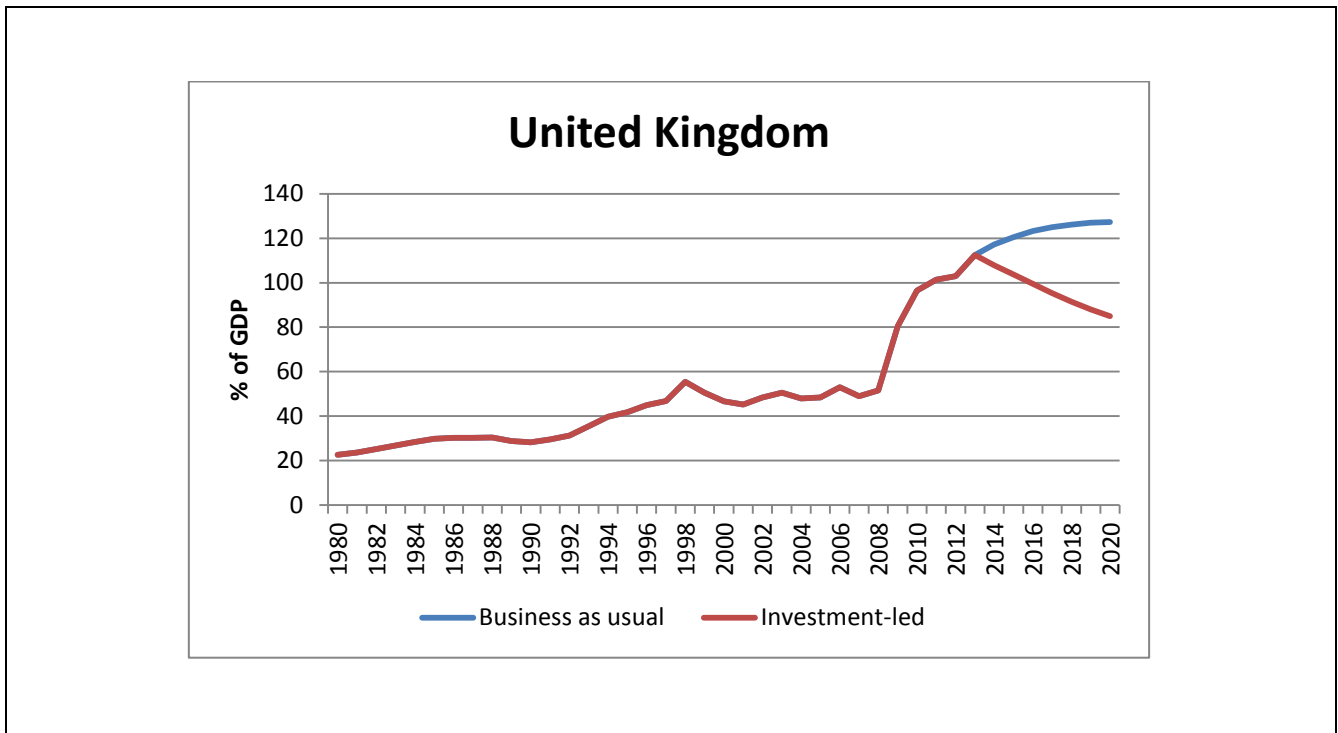
		2000-2008	2009-2013	2014-2020
South Eurozone	Historical	2.3	-2.6	
	Business as			0.2

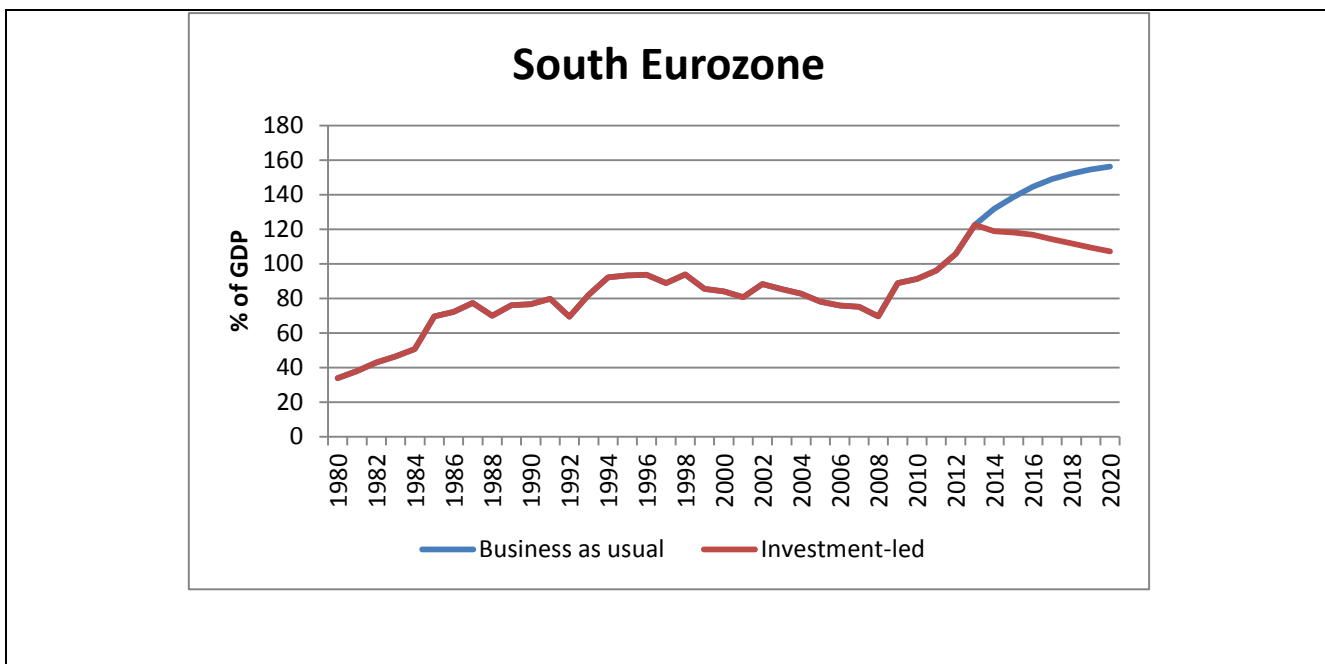
⁵ This is the maximum potential jobs created. Other models show somewhat lower impact on jobs, partly because they do not include the indirect effects of higher European growth on the rest of the world and the impact of this higher rest of the world growth on Europe.

	usual			
	investment-led			2.9
West Eurozone	Historical	1.9	0.2	
	Business as usual			1.7
	investment-led			2.2
United Kingdom	Historical	2.7	-0.7	
	Business as usual			0.9
	investment-led			1.9

The investment-led scenario also lead to more favourable results in terms of debt-to-GDP ratios compared to the business as usual scenario. Whilst debt levels for both scenarios are projected to remain above the 60 percent debt-to-GDP ratio prescribed by the Growth and Stability pact, the important gains achieved in terms of GDP growth in the investment-led scenario lead to lower debt levels. In the United Kingdom debt-to-GDP ratio reaches 85 percent in the investment-led scenario and 127 percent in the business as usual scenario. In the South Eurozone debt-to-GDP ratio declines to 107 percent by 2020 whereas it increases to 156 percent under the business as usual scenario.

Figure 1. Debt-to-GDP ratio, United Kingdom and South Eurozone





The investment –led scenario does not lead to a further deterioration of fiscal deficits. Instead these gradually decrease to reach the 3 percent threshold imposed by the Fiscal Compact. Table 5 shows the fiscal deficits for the investment-led scenario.

Table 5. Net Government lending as % of GDP

	2000	2008	2012	2015	2020
South Eurozone	-0.8	-4/5	-9.2	-5.2	-3.4
West Eurozone	0.1	-1.1	-5.1	-3.8	-2.7
United Kingdom	3.2	-5.4	-10.3	-5.9	-3.1

These results are less favourable than the business as usual where significant cuts in government spending, lead to lower government deficits. Under the business as usual scenario fiscal deficit in the South Eurozone reaches 0.4 percent, in the United Kingdom -1.4 percent and in the West Eurozone -3 percent. However, these gains in the business as usual scenario are achieved at the expenses of lower public investment, employment and economic growth. Thus, we conclude that an investment-led strategy accompanied by a slower pace fiscal consolidation will bring important gains in Europe both in terms of investment, innovation, employment creation and growth.

Conclusion

The purpose of this paper is to highlight the crucial role that development banks need to play for promoting economic development. We have highlighted four valuable functions that national, regional and multilateral development banks can play: a) providing counter-cyclical finance; b)

supporting a dynamic vision and strategy of growth and structural transformation c) mobilizing broader resources, and d) financing public goods.

Here, we have mainly focused on the role that development banks should have in supporting a dynamic vision and strategy of growth and structural transformation. Development banks play a crucial role in funding investment in large and innovative programmes, like green technology, especially where private investors are reluctant to invest. They can provide the vision and part of the resource. Furthermore, we argue, that such investment should form the strategic basis for generating much needed employment and growth in Europe. This should be a particularly high priority for European policymakers in the aftermath of the North Atlantic crisis and global recession, given low levels of investment and-above all-very high unemployment.

We develop a specific proposal for how an expansion of lending by the EIB – via a further increase in paid up capital -, accompanied by other complementary measures can lead to a major boost in investment, employment and GDP growth in the EU.

We model the impact of such investment-led strategy on employment and growth and contrast its outcomes to those produced by the current austerity – business as usual – scenario. The results generated by our investment-led scenario are impressive compared to the bleak prospects of business as usual scenario. In particular, an investment-led strategy leads to up to an additional 5 million jobs in the EU by 2020, higher levels of GDP growth and lowers debt-to-GDP ratios.

An investment-led strategy with an enhanced role for the EIB, as well as national development banks is economically viable and leads to much higher levels of growth and employment in Europe. The time to do it is now!

Though the focus of section III is on the European case, the case for and the role of development banks in funding investment is even more valid for developing and emerging economies

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