Journal of Global Economics
ISSN: 2375-4389

Scandizzo and Tria, J Glob Econ 2018, 6:4
DOI: 10.4172/2375-4389.1000310

Review Article Open Access

Italy and a Needed Public Investment Boost: The Demand and the Supply Side

Pasquale Lucio Scandizzo* **and Giovanni Tria**

The University of Rome, Tor Vergata Abel, Rome, Italy

***Corresponding author:** Pasquale Lucio Scandizzo, The University of Rome, Tor Vergata, Rome, Italy, Tel: +0039062040234; E-mail: scandizzo@uniroma2.it

Received Date: Jun 12, 2018; **Accepted Date:** Oct 11, 2018; **Published Date:** Oct 19, 2018

Abstract

The controversial nature of public investment as a countercyclical demand stimulus has contributed to obscure the issue of its long term fall, with many governments feeling justified in making deeper cuts for public investment expenditure during both phases of the economic cycle, and many others favoring public-private partnerships and other forms of blended financing. In addition to the overall fall, an asset substitution process has progressively reduced the truly social part of public investment, which in developing and developed countries alike may be well below the mark of 1-2% of GDP. This negative trend is made more dramatic by the fact that virtually the only public investment with a reach beyond the single countries is of public- private nature and thus explicitly excludes multilateral assets of pure public good nature, such as intercountry infrastructure and multilateral social welfare programs. The situation is especially dramatic for Italy, where the fall of public investment has contributed to the decline of key components of the country human and social capital endowment. This article explores some of the most important dimensions of this phenomenon, concentrating on the supply rather than the demand side effects, and proposes a solution based on a conditioned expansion of European public investment, concentrated in highly productive assets such as education and infrastructure.

Keywords: Public investment; Demand stimulus; Supply; Multilateral financing; Education; Infrastructure

Introduction

A major and yet neglected phenomenon lurks behind the story of globalization and the fears of secular stagnation: the growing gap between the need to capitalize a new development phase of the world economy and the fall of public investment. Figures on public investment falls vary across developed and developing countries, with the former showing shares below 4% of GDP and the latter below 7%. Taking into account of efficiency, these shares are comparable in their reduced effectiveness on economic growth and in their historically low levels. The reasons for this fall are complex and depend in part of the severity of the last worldwide recession, even though the decreasing trend appears at least 20 year old and persistent over time despite some recent signs of easing mostly in emerging economies. As a part of an underlying structural change, decreasing public investment appears to be related to the manifest lack of capacity of global economic governance in the face of the growing importance of physical and social infrastructure as a crucial set of trans boundary and multi-country capital assets.

The controversial nature of public investment as a countercyclical demand stimulus has contributed to obscure the issue of its long term fall, with many governments feeling justified in making deeper cuts for public investment expenditure during both phases of the economic cycle, and many others favoring public-private partnerships and other forms of blended financing. While these attempts may have some merits in themselves, they have been instrumental in turning away public funds from much needed investment in basic infrastructure and social welfare, both of which are not attractive for private financing. As a consequence, in addition to the overall fall, an asset substitution process has been going on that has progressively reduced the truly social part of public investment, which in developing and developed countries alike may be well below the mark of 1-2% of GDP. This negative trend is made more dramatic by the fact that virtually the only public investment with a reach beyond the single countries is of public-private nature and thus explicitly excludes multilateral assets of pure public good nature, such as intercountry infrastructure and multilateral social welfare programs.

Last, but not least, public investment has been negatively affected by the widening and deepening of uncertainty on the many fronts of climate change, prospects for economic growth, and security from wars, terrorism and crime . Deteriorating conditions for these factors have reverberated more than proportionally on public rather than private investment because the former lacks an internationally supporting network, while the latter is more solidly backed by the growing market dominance of multinational corporations. The fall in public investment, however, has a negative impact on private investment as well, because of its enabling function, which is instrumental in creating capabilities, and empowering private agents by providing them with a critical input of human and social capital.

The Decline of Investment and Growth

In almost all the advanced countries real investments slowed down after the 2008 and yet remain lower than previous period. In particular, investments in euro area failed to recovery after the crisis and their level is yet lower. The decline has been larger in stressed economies but the phenomenon is more general. The continued decline of capital accumulation is a factor which not only feeds the lack of aggregate demand but also undermines long-term growth.

The data show not only the impact of the fall in gross fixed investment on aggregate demand but also that net investments have

gradually been eroded. In other words, the net capital stock has stalled, with serious consequences on production capacity and the growth rate of potential output.

Of particular relevance is the decrease over the last few years of the net capital stock in the manufacturing and the construction sectors.

Therefore, it is not just a short term problem of output gap, and thus of acting on investment as a component of aggregate demand. Exactly what the optimum investment rate is in an advanced economy with a declining population like Italy is no easy call[1] [1-4]. However it is clear that there can be no increase in employment and labour productivity, and thus in income, with little or no growth in capital stock, bearing in mind that according to the standard reference model of economic growth, in the steady-state equilibrium path a higher level of income per capita is associated with a higher level of capital stock per capital[2]. Under these conditions the outlook is likely to be one of a continuous decline towards lower wages and lower productivity, against the background of an evolution favouring investments in labour-saving systems and devices in sectors that use new technologies, above all in the service sector; a trend which could only be counter-balanced by the creation of new products and services [4]. But this can only happen where there is a demand for new products and services. Furthermore, the creation of new jobs associated with new technologies, some of them characterised by a lower capital/labour ratio, springs from the type of structural transformation of economies that require extensive investment in infrastructure and networks, research and education. The inevitable conclusion is that stagnation in investment and in productivity are two sides of the same coin.

Many factors can be identified for this slow recovery of investments. The first factor is the large output losses and the weak subsequent recovery. Beside this factor we can list the real cost of capital (before the change of ECB monetary policy), financial fragmentation, limited access to funding and high corporate leverage and policy uncertainty. All these factors can explain, with different weights in different countries, part of the weak performance of investments. Nevertheless, if we try to explain the low level of business investments looking at the dynamics of output according to the accelerator model, we can find an underinvestment in many countries compared to the expected level. It is also difficult to explain the low reaction of private investors to the decline of the cost of capital following the ECB expansionary monetary policy in the last years.

In terms of policies, the idea that private investments adjust to the dynamics of output is an explanation based on a demand-led view of the economy. According this view, business investments increase if investors expect a stable growth of demand and output. However, there is no reason why this expectation should prevail, without an expectation of strong increase of productive investments driven by innovation, productivity gains and expected higher returns on capital that allow more employment and incomes. Actually, the "accelerator model" implies an exogenous driver such as public expenditure and a fiscal stimulus to re-launch growth. Moreover, a way out from slow growth rate based on this view risks to create counteracting problems in countries with narrow fiscal space and high debt because of the potential growing uncertainty due to potential financial instability and, as a consequence, possible policy changes.

An additional structural factor can be proposed as part of the explanation of the productive investments low dynamics as the growing uncertainty that increases the risk embodied in investment activities. This uncertainty factor is related to the Schumpeterian concept of creative destruction. A recent debate challenged the well-established idea that the contribution on GDP of the creative component of innovations, productivity and employment, is much bigger of the effect of the destructive component, at least in the long run. This idea has been confirmed by the history of the economic growth. Nevertheless, we know that when and where the destruction occurs and when and where the creation occurs is relevant in the short and medium term. In other words, we have to consider the negative externalities due to the distribution of the destructive effects of innovations across productive sectors, firms, citizens and countries.

This is not at all a new problem and a growing number of scholars are considering the hypothesis that the negative effect of the destructive component of innovation is growing, or the social and economic costs of innovations in products and processes are increasing and as a result the impact of new technologies on GDP growth is decreasing. This can happen if the new products and services developed by the new technologies are strict substitutes of the old ones, thereby causing their more rapid obsolescence. It is difficult to obtain empirical evidence for this conjecture that focuses on the negative externalities of innovations on established firms and employment. Here we want to highlight a possible different and less explored effect: how the current globalization of the economy can increase the risk implicit in any innovation investment because of the increased speed of technological change. This in turn implies increased speed of its diffusion around the world and, as a consequence, of technological obsolescence of previous innovations and investments. That is to say that if the firms that invest in innovation and new technologies risk to never be able to reach the breakeven in time for a business return, the destructive component of the Schumpeterian competition in this new context can have a growing negative impact also on the investments decision of potential innovator and investors. This implies that private

[1] Every economist educated in the neoclassical theory of growth knows the answer suggested by Edmund Phelps (1961) that is the "golden rule" of capital accumulation.

By the way, we are tempted to observe that, in this framework, the inequality $r > g$, which epitomized Piketty's celebrated theory of inequality, is absolutely familiar. The condition that rate of return on capital (corresponding in equilibrium to the marginal product of capital) exceeds the rate of growth naturally arises as a steady-state condition when the saving rate is too low to bring the capital stock over the level of the Phelps' Golden Rule. In this framework, at most, the problem was $r < g$, because in this case the economy was accumulating too much capital. This dynamic inefficiency is considered by Abel A., Mankiw G., Summers L. and Zeckhauser R. (1989). A balanced growth path is dynamically inefficient if the rate of return is lesser than the rate of growth. If the return on capital is its marginal product, it can be measured by the capital income/capital stock value ratio, which in US is far greater than the growth rate. See Gregory Mankiw (2014).

[2] Obviously, in the steady-state equilibrium a higher capital stock per capita and hence a higher income per capita implies a higher saving rate, ant this does not automatically guarantee a higher consumption per capita. The golden rule of the previous note states the condition that must be satisfied in order the equilibrium capital stock matches the maximum level of consumption.

investors will be less willing to catch all opportunities offered by new technologies and deliver new services and products even if potential demand exists, because competitive global markets are riskier per se. The role of public investment

The continued decline of capital accumulation is a factor, which not only feeds the lack of aggregate demand but also undermines long-term growth. A stimulus to private investment, through various forms of tax incentives, and a renewal of public investment is a possible response to these deficiencies because public investments are part of aggregate demand, as part of the total investment, but also affect the potential output, through their possible effect on the productivity of private capital, and thus on aggregate supply.

Recent and less recent studies show the positive effect of public investment on growth [5-12]. This positive effect depends on the extent to which public investments crowd in or crowd out private investments. The crowding in will prevail if public capital stock is complementary to private capital and public investments increase the private return of private capital. Empirical analysis s that this positive effect is particularly strong in the case of public investments in infrastructure and education because they increase the human and physical capital stock of an aggregate production function with positive effect on long-run growth. In this case the crowding in effect implies that total investments increase more than the increase of public investment. In contrast, the crowding out can be higher and prevail when private and public capital are substitute, public investments do not increase return on private capital and are less efficient than private capital, and when the size of government is particularly large.

However, is important to observe for the Italian case that "If past investment was inefficient, then the existing capital stock can be inadequate and hence the additional public investment can deliver large marginal returns. Policies that raise public investment efficiency deliver particular large growth gains as high quality public goods replace low quality public goods" [13].

Empirical evidence also shows that, although the marginal returns to public investment decrease when the public capital stocks increases, they are significantly positive in most countries [13]. For example, the optimal stock of public capital can be estimated at about 75 to 110% of GDP, and that the current level of capital stock as percentage of GDP (IMF data for year 2015) is about 55% in Italy, 46% in UK, 48% in Germany, 57% in Spain, 64% in USA and 72% in France [13].

Although the estimate of level of optimal stock of public capital is questionable, it appears that current level of public capital is suboptimal in most of the advanced countries (with Japan as a possible exception). Thus, a large program of public investments seems a desirable and necessary policy instrument to re-launch growth as a driver for private investment to the extent that productive public investment can increase return to private capital. This conclusion draws greater strength from the recent trends that point in the opposite direction. To wit, the general government fixed investment decreased by about 28 percent in Euro area (19 countries) between 2009 and 2016 (from 3,6 to 2,6 percent of GDP), with large differences across countries. In Italy the decrease was almost 40 percent (from 3,4 to 2,1 percent of GDP) and in France about 20 per cent (from 4,3 to 3,4 of GDP). The Role of Public Investment on the Supply Side.

The supply side of public investment spending is evoked in several documents from the international institutions, but seldom recognized in national politics, and its confusion with fiscal adjustment causes its neglect in many developed as well as developing countries. In principle, the supply side characteristics depend on the fact that public investment shifts the production frontier and thus is not subject to the curse of the Laffer curve, whereby any increase in fiscal withdrawals reduce government revenues at the margin and beyond a certain level even absolutely. On the other hand, any reduction in public investment fails to support economic growth and, if substituted with current expenditure, may create the need for further fiscal adjustments. Fiscal space dynamics and financial needs intersect with the demand side in the so called "fiscal space". This is an increasing global problem reflecting the gap between the large resources needed to support the public expenditure programs and the reduced capacity of national governments to rise them.

These features are particularly serious for countries with a high public debt, where public expenditure is difficult to sustain for two concomitant reasons. On the one hand, its flexibility is constrained by internal and external constraints, including various national rules and, in the European case, supranational ones. On the other hand, the performance of financial markets is an unknown that undermines the credibility of a consistent temporal path and hence the same credibility of the policies adopted. The resources available for modulation of public spending are therefore continually jeopardized by the decline in pro-cyclical revenue and the availability of support from financial markets. It is in this scenario where public expenditure is increasingly unreliable as a sustainable economic policy instrument, which is the source of the fiscal space crisis. Though the concept is complex and easy to lend itself by different interpretations, the idea of fiscal space emerged to prove that public expenditure policy can be deployed in a sustainable manner only if the public budget is sufficiently robust with respect to the exogenous shocks to allow the policy maker the necessary discretion.

According to several IMF authoritative studies (see in particular Heller, 2005), the conditions to create fiscal space are endogenous to the governments' economic policy and can be subsumed in the following main points.

Consistency with a government's policy objectives, which presumably include the achievement of rapid economic growth and progress toward the achievement of the MDGs, and taking account of the potential feedback effects of different spending programs on the growth rate;

Macroeconomic and fiscal sustainability: that the overall expenditure program is consistent both with a stable and growth-promoting macroeconomic policy framework and with a sustainable financial position for the government over the medium to long-term.

Budget sustainability over the medium term so as to facilitate a smooth and well-sequenced expenditure path, particularly for social sector programs, taking account of the operations and maintenance (O&M) implications of new investments;

Comprehensiveness in terms of inclusion of all elements of a government's fiscal programme, including not only immediate revenue and expenditures but also potential fiscal commitments and guarantees.

Strengthened domestic revenue performance that promotes eventual graduation from aid dependency.

Although there are serious doubts on the fact that contradictions between expansive and restrictive policies can be overcome by forms of redistribution of spending and revenue, reconsideration of fiscal space is slowly leading to the enhancement of public investment policies and

their ability to generate " Islands of sustainability "through a closer link between immediate and future spending. As potential "Islands of Sustainability", investment projects have the dual attractiveness of promising to generate their own resources and therefore their fiscal space, at least in the medium term, and in addition to creating positive externalities in the budget and between Public budgets. These externalities depend on various factors: the explicit or implicit guarantees that projects can create through their realization, synergies with private investment, lower pressures from financial markets for apparently autonomous undertakings, which can may also involve private stakeholders. These considerations tend also to evoke the old idea that capital expenditure should be treated differently from current expenditure in the deficit accounting. The reallocation of spending and therefore the same idea of spending review receive a first and quite simple application in the idea that current spending should be reduced, while capital spending should be expanded, subject to stringent, programmed quality control, funded independently with a close link between immediate spending and expected results.

On the supply side, investment can thus be seen as an activity that is firmly based on the twofold contribution to the economy: the expansion of productive capacity and the enhancement of productivity, which are both factors that widen the fiscal space by increasing potential output and long term growth. However, this does not diminish the role of investment on the demand side, since increasing potential output per se may even widen the gap between actual and potential demand, during a recession, or a slow recovery [14-16]. Public investment, therefore, appears to have a dual role, since the supply side, which is prevalent in terms of the effects on long term growth capacity, is naturally complemented by the demand side stimulus offered by the corresponding autonomous demand increase.

These considerations are validated by the recent experience of European countries, especially as regards the capability of capital expenditure to create fiscal space. Figure 1 shows how European countries are distributed in absolute and relative terms with regard to debt, while Figure 2 shows performance during the crisis from the point of view of economic growth and unemployment and Figure 3 presents a simulation exercise to predict a range of possible effects of a sustained increase in public investment. Both the experience and the possible effects seem to be varied. For some countries - Poland is the most striking case, unemployment is declining considerably despite the recession. However, econometric studies seem to show an important effect: not only does the larger fiscal space give the opportunity to stimulate growth with expansive policies, but these are distinctly more effective when they are based on investment spending, or more precisely when the country Is characterized by high investments and these are not affected by the recession and/or tax consolidation. For example, a careful study of the European performance of recent years comes to the following conclusions:

- Countries that have managed to maintain a relatively high level of investment have gone through the crisis with a lower fall in the GDP growth rate.
- Both the variation in public spending and revenue is in significant positive correlation with the change in the GDP growth rate.

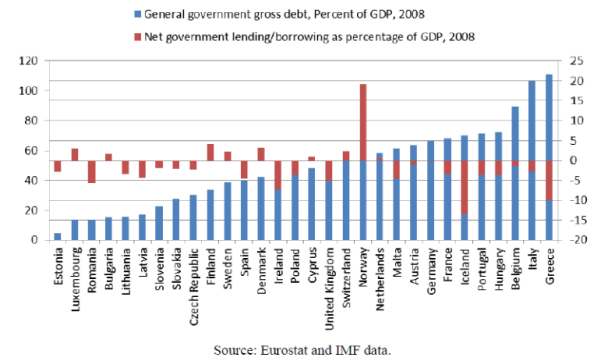

Figure 1: Debt and fiscal space in Europe.

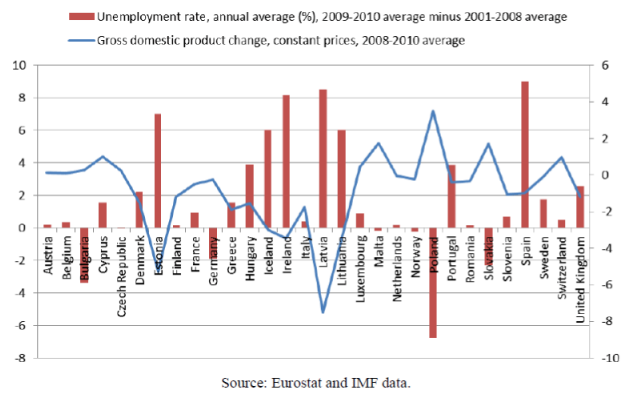

Figure 2: The response to crisis in Europe.

These results suggest that in the stressful conditions of financial markets, such as those of the big recession, which in many ways still remain, the traditional fiscal space tends to shrink. This trend can, however, be countered by the simultaneous expansion of spending and revenue that promises a properly qualified capital expenditure. The economic explanation of this effect is of the Ricardian type, and seems plausibly linked to expectations of temporal neutrality of the budget balance, at least as regards to the budget for productive investment. This conclusion is also interesting because it does not only apply to individual countries, but it is valid for the whole of Europe and especially for the Eurozone [17,18]. For the latter group of countries, where the European tax policy is lacking at present, the creation of a common tax area could in fact be the result of a sufficiently wide and promising investment program on the expenditure side and foreseeable returns, and, at the same time, of marketable funding. The Juncker plan goes in this direction, but for the moment it does not seem to have the critical mass to constitute a true starting point. There is, therefore, a need for a more ambitious program and, at the same time, of an effective cession of sovereignty over the management of some key economic policy themes that require large investment commitments [19,20].

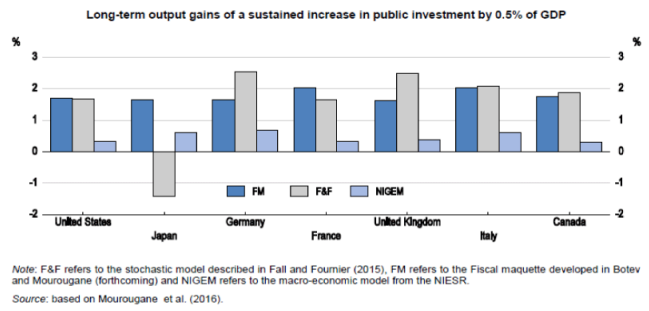

Figure 3: Predicted gains from public investment.

Conclusions

The key factor in any "accommodating" budget policy is public investment, currently well below par in almost all advanced countries, certainly in Europe, in Italy as in Germany. In other words, to increase the yield of private capital stock leading to a crowding in phenomenon. It is unlikely that this will happen under the Junker Plan at a European level, but each member state should try to envisage their public investment in the light of the European, or even global, market, trying to attract significant private funding on a global level by guaranteeing long-term returns. In these terms and for these purposes even a temporary increase in the deficit intended to jump-start these programmes should be considered acceptable.

As noted before, a vast programme of infrastructural public investments could be implemented and financed in deficit without creating a problem of sustainability of public debts through a conditional overt monetary financing at European level. Conditional because temporary and subject to sound fiscal behaviours by the Eurozone member states aimed at pursuing debt reduction. This goal will be more easily achieved thanks to the increase in nominal GDP, that is the specific aim of the programme. Many technical details of the programme, and its conditional requirements, can be designed (some of them are proposed by Watt [21].

There is certainly a serious obstacle to the pursuit of this public investment programme at least in Italy. That obstacle is the progressive deterioration in the public sector's capacity to design and execute investment projects, both at a central and local government level. The eighties saw perhaps the last attempt at a public investment programme based on a cost-benefit analysis (the so-called FIO, or "Fondo Investimenti per l'Occupazione"). A lack of operational capacity that is in itself the result of a lack of investment in capacity building in the public sector. A short-sighted policy which has been pursued with remarkable constancy, and one which leaves us counting the costs today. But it is by no means an irreversible trend, and should instead be one of the pivots of reform in the public sector.

References

1. Phelps E (1961) The golden rule of accumulation: a fable for growth men. Am Econ Rev 51: 638-643.
2. Abel A, Mankiw G, Summers L, Zeckhauser R (1989) Assessing Dynamic Efficiency: Theory and Evidence. Rev Econ Stud 56: 1-19.
3. Mankiw G (2011) Principles of Macroeconomics. Cengage Learning, pp: 1-35.
4. Summers L (2013) On secular Stagnation.
5. Baldacci E, McHugh J, Petrova I (2011) Measuring fiscal vulnerability and fiscal stress: A proposed set of indicators. IMF working paper 11/94, pp: 1-21.
6. Felli E, Tria G (2001) Assessing the Public Capital Contribution to Growth. An Application to Italy. J Econ Policy SIPI Spa, 91: 83-138.
7. Sturm JE, De Haan J (1995) Is public expenditure really productive: New evidence for the USA and the Netherlands. Econ Model 12: 60-72.
8. Sturm JE, Kuper GH, De Haan J (1998) Modeling government investment and economic growth on a macro level: A review. Mark behav macroecon modeling, pp:359-406.
9. Devarajan S, Swaroop V, Zou HF (1996) The composition of public expenditure and economic growth. J Monet Econ 37: 144-313.
10. Vijverberg W, Vijverberg CP, Gamble J (1997) Public capital and private productivity. Rev Econ Stat 79: 267-278.
11. Otto G, Voss GM (1994) Public capital and private sector productivity. Econ Rec 70: 121–132.
12. Warner A (2014) Public Investment as an Engine of Growth. IMF Working paper, p: 76.
13. Fournier JM, Johansson (2016) The effect of the size and the mix of public spending on growth and inequality. Econ Dep Working Paper No. 1344, OECDE.
14. Munnell AH (1990a) Why has productivity growth declined? Productivity and public investment. N Engl Econ Rev, pp:3-22.
15. Munnell AH (1990b) How does public infrastructure affect regional economic performance?. N Engl EconRev, pp:11-32.
16. Munnell AH (1992) Policy watch: Infrastructure investment and economic growth. J Econ Perspect 6: 189-198.
17. Aschauer DA (1989) Is public expenditure productive? J Monet Econ 23: 177-200.
18. Aschauer DA (1998) How big should the public capital stock be?. The Jerome Levy Economics Institute of Bard College Public Policy No 43, pp: 1-5.
19. Gupta S, Kangur A, Papageorgiou C, Wane A (2014) Efficiency-Adjusted Public Capital and Growth. World Dev 57: 164-178.
20. Mourougane A, Botev J, Fournier JM, PainN, Rusticelli E (2016) Can increase in public investment sustainably lift economic growth?. Econ Dep Working Paper No 1351, pp:1-37.
21. Watt A (2015) Quantitative easing with bite: A proposal for conditional overt monetary financing of public investment , IMK Working Paper 148, pp:1-32.