

Benczes, István

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## The importance of institutions in expansionary fiscal consolidations: A critical assessment of non-Keynesian effects

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## **TIGER Working Paper Series**

**No. 88**

# **The importance of institutions in expansionary fiscal consolidations A critical assessment of non-Keynesian effects**

**István Benczes**

Warsaw, May 2006

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**Abstract**

The short-term effects of fiscal consolidation have attracted an increasing attention from both the academia and policy makers in the recent years. Authors in the literature on non-Keynesian effects usually put the emphasis on the need for the devaluation of the national currency, the accommodating reaction of the monetary authority and the favourable international economic conditions as the necessary accompanying tools of fiscal consolidation, in order to realise short-term expansionary effects. Some also add the necessity of large-scale adjustment; while others support the view that a high and increasing debt ratio or increasing government spending, by triggering an unavoidable adjustment, is the key to experiencing short-term expansionary effects. The composition of adjustment also became a crucial explanation for non-Keynesian effects. However, as the following critical assessment of the literature on expansionary fiscal consolidations will reveal, institutional conditions, such as the importance of the depth of financial intermediation and the influencing role of labour market structure, can prove to be crucial in the occurrence of the desired expansionary short-term effects.

**JEL classification:** E62, E65

**Key words:** fiscal consolidation, non-Keynesian effects, liquidity constraints, social pacts

## 1. Introduction<sup>1</sup>

The launching of the single currency in Europe put fiscal policy in the highlight of academic research and policy analysis. While earlier fiscal policy was considered to be an exclusively national authority, the EMU-project changed this approach dramatically, emphasising the possibly controversial effects of national, autonomous fiscal policies on the stability of a monetary zone. In fact, after the delegation of monetary policy and exchange rate policy to a supranational level in 11 (and later 12) countries, only fiscal policy has remained as an ultimate tool in the hands of politicians in influencing aggregate demand.

The steadily increasing interest regarding the efficiency of discretionary fiscal policy, however, could not provide clear-cut statements concerning its long-term and short-term effects – in fact, it propagated the doubts. On the one hand, the traditional Keynesian view claims a positive correlation between government spending and private demand. With the assumption of excess capacity and price/wage stickiness, the multiplier effect – through the channel of aggregate demand – helps the economy to cushion the severe social consequences of any economic downturn. On the other hand, the neoclassical view postulates just the opposite relationship between public spending and private consumption due to the wealth effect. And in fact, in its radical form (the Barro-Ricardian equivalence) it claims unequivocally that fiscal policy is irrelevant in influencing aggregate demand since any increase in government expenditure – financed by either debt or tax increase – will be fully offset by increased private savings.

Nevertheless, it might be claimed that a consensus has formed, namely that the strict form of the Ricardian view (albeit theoretically appealing) does not correspond to reality. While the long-term ineffectiveness of discretionary fiscal measures may be true, Keynesian effects determine the output of fiscal policy in the short term. However, this apparent consensus was undermined by the experience of some countries in the last two decades, giving rise to another stream of arguments, the concept of non-Keynesian effects of fiscal policy. In the eighties, a large number of industrialised countries embarked on wide-scale reform programmes – targeting a reduction in debt to GDP ratio and reducing the level of deficit financing. It came as a surprise that fiscal adjustment was not accompanied with the much-echoed side effect of economic slowdown, but instead (some) countries experienced a relatively quick recovery in economic activity, an immediate acceleration in economic

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<sup>1</sup> I would like to thank Wendy Carlin, László Csaba and Judit Neményi for their very helpful comments and suggestions. Needless to say, the usual disclaimers apply.

growth. In their seminal paper, Giavazzi and Pagano (1990) were the very first to point out such unexpected outcomes, sometimes referring to the phenomenon as the perverse effects of fiscal policy. Later on, several papers have been published arguing that major fiscal consolidations proved to be expansionary in relatively large numbers in the last two decades. Giudice et al (2003) and Afonso (2000) for instance claimed that non-Keynesian effects are not that peculiar and rare indeed in the EU for instance.

If indeed no trade off exists between the long term benefits and the short term costs of fiscal adjustment, a fiscal consolidation can be made effectively costless in principle for not just the private agents but also for the politicians. With positive growth effects, it would be easy to sell the idea of fiscal adjustment to voters without the government being threatened by citizens to be voted out from power at next election. However, certain questions arise.

1. If non-Keynesian effects are so attractive, why are governments still reluctant to embark on the cutting of expenditures, to go ahead with the reform of their general budget?
2. Or to put it more constructively: if the expansionary effects of fiscal contraction exist, why do only a few countries and only in certain times experience these effects, while others not at all?

Authors in the literature on non-Keynesian effects usually (and mostly unanimously) put the emphasis on the need for the devaluation of the national currency, the accommodating reaction of the monetary authority by reducing interest rates and the favourable international economic conditions as the necessary accompanying tools of fiscal consolidations in order to realise the perverse effects of fiscal consolidation (Perotti 1996, Hagen et al., 2001). Some also add the necessity of large-scale adjustment, that is, size must matter (Giavazzi and Pagano, 1996); while others support the view that a high and increasing debt ratio (Blanchard, 1990, Sutherland 1997 and Perotti 1999) or increasing government spending (Bertola and Drazen 1993), by triggering an unavoidable adjustment, is the key to experiencing the short-term expansionary effects of fiscal stabilisation. Alesina and Ardagna (1998) and Alesina et al. (2002), on the other hand, place the emphasis on supply-side factors. In their opinion, it is the composition of adjustment what matters in providing non-Keynesian effects.

However, as the following critical assessment of the literature on non-Keynesian effects will reveal, institutional conditions, such as the importance of the depth of financial intermediation (close-to-perfect credit markets) and the influencing role of labour market structure, can prove to be crucial in the occurrence of the desired expansionary short-term effects in times of fiscal adjustment. Following the short introduction, section two provides a

critical evaluation of the demand-side approaches of non-Keynesian effects and by deconstructing the theory it points out the importance of the lack of liquidity constraint and the depth of financial intermediation. Section three turns to an alternative explanation of expansionary effects, focusing on the supply-side of adjustment; the importance of the composition of adjustment and the structure of the labour market will also be elaborated on. Section four concludes, by summarising the lessons to be learnt.

## **2. The expectational view of fiscal policy<sup>2</sup>**

The term “non-Keynesian effects” refers by definition to a situation where the fiscal multiplier turns out to be negative. This surprising outcome, i.e. the acceleration of economic growth in times of fiscal contraction, is triggered by the changing behaviour of rational, forward-looking private agents who expect their tax liabilities to decline in the future. Certainly the induced change in behaviour requires explanation.

### **2.1. Conceptualising expansionary effects of fiscal consolidation**

Feldstein (1982) pointed out that the credibility of fiscal adjustment can be crucial in changing privates’ behaviour by signalling the government’s willingness to give up the previously exerted lax policy and to turn to sound macro finances. Credible fiscal adjustment therefore may have a positive effect on aggregate demand as opposed to the conventional view. Nevertheless, credibility effect is strongly related to change on risk premia and indeed the ultimate triggering factor for increased consumption is lowered interest rates. In a country with a high level of indebtedness, the risk premia reflect a substantial currency and country risk, causing interest rates to stabilise at relatively high levels. Any increase in the interest rates would depreciate financial *assets* in nominal terms and consumers possessing these financial assets will suffer a loss and consume less in the future. Accordingly, a credible fiscal tightening will reduce interest rates in the economy and will induce privates to spend more on consumption due to the positive *wealth effect*. It is hardly surprising that large adjustments are more likely to end up with a drop in risk premia as opposed to small-sized consolidations, since political commitment seems to be more explicit in the former case.

Blanchard (1990), however, tried to explain the puzzle provided by Giavazzi and Pagano (1990) differently and turned to the initial conditions such as the debt-to-GDP ratio in order to conceptualise non-Keynesian effects properly. According to Blanchard and the

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<sup>2</sup> The demand-side explanations of non-Keynesian effects were labelled as the “expectational view” of fiscal policy by Bertola and Drazen (1993).

authors working on the expectational view of fiscal policy, it is the initial conditions which can induce individuals to change their expectations on future tax liabilities. In the case of a too high level of debt or excessive and accelerating public spending (as it was hypothesised by Bertola and Drazen in 1993), the state of public finances will deteriorate to such a degree that sooner or later a regime change will take place. In such a situation every action which saves the economy from a final catastrophe may have indeed a positive growth effect.

In order to illustrate how non-Keynesian effects can occur in theory, Blanchard's (1990) simple model will be presented here. Blanchard focused exclusively on the taxation side and raised the question whether a tax increase, given government spending, might generate expansion in private consumption. He assumed that both taxation and government debt have a critical value which automatically enforces the government to take actions. In a deterministic model, at any point in time, given the current tax and debt level smaller than the critical values and its dynamics, anyone can calculate the exact date of debt reaching the critical level. Marginal costs of taxation increase with the tax rate and the longer the government waits with the stabilisation, the higher the tax increase has to be.

Blanchard then argued that there are two channels by which government consolidation through taxes can affect expectations. First, the traditional one: an intertemporal redistribution of taxes from tomorrow to today which in turn reduces current generations' consumption. This effect is the stronger as long as consumers behave in a non-Ricardian manner. However, there is a second channel, too: "by taking measure today, the government eliminates the need for larger, maybe much more disruptive adjustments in the future and this may in turn increase consumption." (p. 111.) That is, if consolidation takes place before the critical value of the debt level has been reached, the economy can be saved from a catastrophe which is good news to everyone (moreover, uncertainty decreases and precautionary savings can be lowered, too). The tax increase today, aiming at consolidating the fiscal stance, transforms expectations towards a less distortionary taxation tomorrow. In turn, individuals will expect their permanent income to increase and thereby they will consume more and save less in the present.<sup>3</sup>

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<sup>3</sup> Nevertheless, the expectation view is rather heterogeneous. Some conceptualise the rational, forward-looking consumers' behaviour in a basically Keynesian set up with finitely lived consumers, assuming that government consumption is not a pure waste, etc (see Sutherland 1997 for instance). In some other instances, a neo classical model provides the basic setup with infinitely lived households and assuming that government consumption is a pure waste (Bertola and Drazen 1993).

As it has been illustrated in Blanchard's simple deterministic model as well, a unique feature of the expectational view is the introduction of the so-called "non-linear demand effect" of fiscal policy. According to this concept, nature has two faces: good (or normal) times and bad (or unusual) times. The reason for distinguishing between the two regimes is straightforward: expectations on the future tax burden must be different under different scenarios. Accordingly, non-linearity in demand means that while consumers follow a certain pattern in their behaviour in most of the time (Keynesian for instance), there may arise certain conditions due to which consumers adopt a different behaviour (Ricardian in our example). Such a switch can occur if the fiscal position of a country deteriorates into an unsustainable one. The unsustainable stance of fiscal policy in turn will trigger a change in individuals' perceptions on their permanent income. While in good times consumers behave as if they were Keynesians, a high level and/ or accelerating debt or high and increasing public spending (the bad times) will induce individuals to turn their behaviour into a Ricardian one. Practically, what this means is that while in good times an increase in government spending would induce Keynesian consumers to increase consumption (positive multiplier), in bad times a further increase in government consumption will reduce (the suddenly Ricardian) consumers' appetite (negative multiplier). It is in fact this switch or non-linearity in reactions which induces non-Keynesian effects to emerge, triggered by the observed change in the state of the economy.

For sure, the two basic approaches of the expectational view of fiscal policy outlined above, namely credibility effect (emphasising size) and the non-linearity of demand (focusing on initial conditions) cannot be claimed to be mutually exclusive. An unsustainable stance of fiscal policy (especially in its most extreme form of an approaching fiscal crisis) will force the government to embark on fiscal tightening sooner or later. A crucial question concerning the emergence of non-Keynesian effects is whether the government's plan to reduce fiscal imbalances will come across as credible. Privates' expectations will change only if the uncertainty in relation to the fiscal policy of the government can be eliminated and individuals do believe that the actions taken by the government will be ultimately successful and lasting.<sup>4</sup> Credible government action therefore makes it possible for individuals to expect a less distortionary taxation in the future, and in turn they will modify their expectations on permanent income in a positive direction and will start increasing consumption in the

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<sup>4</sup> Temporary actions will leave individuals' expectations unchanged.



present.<sup>5</sup> It is exactly this increase in private consumption which can compensate for the reduced government consumption in case of a fiscal adjustment. If the increase in private spending can indeed offset the direct negative effects of decreased government spending on aggregate demand, then fiscal contraction can be expansionary. On the contrary, if the consolidation plan of the government is not serious enough and suffers from a lack of credibility, the action taken by the cabinet will not have an effect on privates' intertemporal budget constraint and leaves therefore the permanent income of individuals unchanged. In this latter case, textbook Keynesian effects will occur and adjustment itself may prove to be unsuccessful in the sense that deficit reduction can prove to be temporary only, and will not have the much-needed, long-lasting effects. Debt accumulation cannot be stopped and the government will soon have to embark on a new consolidation effort in order to turn back the unsustainable trends of public finances.

While the demand-side theoretisation of non-Keynesian effects seem to be rather appealing, their empirical relevance is still debated.<sup>6</sup> Perotti (1999), in his empirical test, came up with the idea that the switch in expectations occurs only in times of high and increasing debt ratios, which was also confirmed by Bhattacharya (1999). What is more, on a smaller sample (including Italy and Canada 40 years of data on), Pozzi (2001) found support for this view, too. Second, in Giavazzi and Pagano (1990 and 1996), the switch of expectation was conditioned on the initiation of *large* adjustment which proved to be persistent (i.e. the debt to GDP ratio was lowered significantly). Giavazzi and Pagano together with Jappelli (1998) repeated the test for OECD countries and confirmed their previous results: fiscal impulses must be large and protracted to give rise to expansionary effects in times of fiscal consolidation. However, they also added that debt was not a good predictor at all of non-Keynesian effects. Their finding was supported later on by McDermott and Wescott (1996) using an OECD panel, and Afonso (2000), who compiled the test by data from the EU.

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<sup>5</sup> In case of a serious and credible macroeconomic stabilisation attempt with the clear aim of reducing public liabilities, the intertemporal budget constraint of individuals will be tightened to a lesser degree, inducing privates to spend more in the present since they have to save less for the future.

<sup>6</sup> Technically, the empirical estimation of non-Keynesian effects means that by testing a consumption or a saving reaction function, scholars try to grasp the switch in the *sign* of the response of private consumers due to a changed action (profile) of fiscal policy. The task is therefore to construct a consumption function which allows fiscal variables to explain the changes in private consumption. The function comprises both differences and lagged values of variables, often called the distributed lag model, a convenient and simple form of econometric modelling. An appealing feature of the specification is that it makes the researcher able to nest both the conventional Keynesian view of consumption, and its neoclassical approach. The estimation technique comprises the usual OLS estimation and the two-stage least squares estimation method (instruments are generally the lagged values of the variables). Höppner (2000:5) expresses the advantage of such a model succinctly: "This specification ... has proved [to be] sufficiently flexible to capture the time-series aspects of the data as well as the main determinants from the theory".

Van Aarle and Garretsen (2003) repeated Giavazzi and Pagano's (1996) exercise by applying different definitions for the term "exceptional". Surprisingly, the authors disproved the import of regime changes, denouncing the relevance of the expectation view in explaining non-Keynesian effects. Miller and Russek (2003) found only a limited evidence for the relevance of trigger points. Schclarek (2004) rejected harshly the expectational view by claiming that government spending shocks have Keynesian effects exclusively – no regime change can be expected to occur therefore. He also found that tax shocks have no effect whatsoever on private consumption.

## **2.2 Intertemporal decisions – the modern theory of consumption**

While the expectational view of fiscal policy may still lack irrefutable empirical support, it has proved to be strong in theory and attracted an increased interest in the academia. However, the expectational view, assuming a shift in consumers' behaviour, builds its theoretical setup on several conditions which may or may not be met in reality. Next therefore, a deconstruction of the expectation view will follow, by exploring that one of the assumptions, the lack of liquidity constraint, can strongly invalidate the practical usage of the theory. If so, it may lose its significance in providing policy recommendations to accommodate the occurrence of non-Keynesian effects. But on the other hand, it also reveals how important financial deepening is in the weakening of the credit constraint and in increasing the chance for people to act as predicted by the models of expectation view.

As we argued above, demand side explanations of non-Keynesian effects base their conceptualisation of the expansionary effects on the combination of the rational expectations theory and the permanent income hypothesis. Their main claim is that rational, forward-looking consumers are able to react to policy changes (spending cut for instance) via the modification of their expectations of wealth and permanent income. It is, in fact, the change in permanent income that triggers a boost in economic activity when government embarks on fiscal adjustment.

If the objective of this paper is to gain a better understanding of the working of perverse fiscal effects and more importantly to gather together those conditions that are inevitable to experience non-Keynesian effects, it seems to be a good starting point to discuss in some length the development of the consumption theory, focusing mostly on the life-cycle and permanent income hypothesis and the rational expectations breakthrough in modelling consumption behaviour. By introducing Robert Hall's famous stochastic permanent income

model, it becomes possible to establish a ground for linking together modern consumption theory and non-Keynesian effects. Moreover, the criticism of the model possibly helps us (1) to uncover some of the shortcomings of the non-Keynesian theory; and (2) to understand why it is rather difficult to find empirical support of the occurrence of non-linear effects of fiscal policy in a great majority of countries.

The intertemporal choice model of Irving Fischer can be interpreted as a criticism towards the Keynesian consumption function which determines current consumption as a simple function of current disposable income (or some other lags of it). Fischer instead explained current consumption by current and future income, that is, he adopted a forward-looking calculus of consumption behaviour. By introducing the concept of the intertemporal budget constraint of individuals, he was able to establish a link between consumption and the expected total (lifetime) resources, or in other words, wealth. It is not an exaggeration to say that by arguing that consumption decision was based on lifetime earnings, Fischer established modern consumption theory.

It was Fischer's new approach to consumption behaviour that induced Modigliani and later on Friedman to develop their own concepts to address some of the puzzles which remained unexplained by Keynesian consumption functions, such as the difference between long-term and short-term consumption functions. Modigliani's life-cycle hypothesis helped enormously to understand why people are inclined to smooth their consumption over time, a phenomenon that contradicts traditional arguments. Modigliani's main interest was to show how people are able to guarantee a relatively stable (or constant) standard of living even in the presence of fluctuations in income throughout their lives by operating with saving and dissaving.<sup>7</sup>

On the other hand, while Friedman found similar results (concerning especially the inclination to consumption smoothing and the relative stability of consumption in contrast with income), he adopted a rather different approach by assuming that income is a production of an uncertain, random process, where transitory changes may occur. (Modigliani instead stated that income follows some regularity, that is, wealth increases definitely throughout the working years, while it decreases after that.) Friedman (1957) disaggregated income into two main elements: permanent and transitory. A change in permanent income has a (close to) one-to-one effect on private consumption, while a change in the transitory part may have only a

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<sup>7</sup> See especially Modigliani and Brumberg (1954).

rather small impact, since it should be spread over the whole lifespan (that is, marginal propensity to consumption must be different in the two cases, being close to zero in the latter one). The permanent income hypothesis states accordingly that there exists a steady rate of consumption throughout the lifetime of an individual – taking into account his current wealth status and the future flow of income. Nevertheless, Friedman’s radical change came with the statement that private consumption is not simply a deterministic function of future (permanent) income but it is the *expectations* of agents about their future wealth status that determines consumption. Expectations therefore became a strong building block in the understanding of consumption behaviour.

The further development and formalisation of Modigliani’s and especially Friedman’s theory came with the appearance of new classical macroeconomics which combined the life-cycle/permanent income hypothesis with rational expectations. Hall (1978) showed that if forward-looking consumers held rational expectations and the permanent income hypothesis was valid, private consumption would follow a random walk, which means that the change in consumption cannot be predicted by testing for lags in income or any other variables. The best guess for any future value of consumption is its current value. In line with the rational expectations theory, only unexpected or surprise changes can have an effect on consumption, any change which has been predicted cannot have an influence on consumption. Decision on consumption is then based on all the available information concerning permanent income.

Accordingly, in the stochastic permanent income hypothesis model, any change in consumption is a reflection of a surprise change in the expected lifetime income (due to technological change or policy change for instance). It comes as no surprise that Hall’s random walk model of consumption behaviour has a logical policy implication: only those policies can have an effect on private consumption, which have not been predicted, that is, government can influence aggregate demand successfully only if the policy comes as a (credible) surprise and it is able to alter the expectations of individuals’ wealth (permanent income). This implication proved to be highly important in the expectation view of non-Keynesian effects.

### **2.3 Non-Keynesian effects and the criticism of Hall’s stochastic model – the importance of liquidity constraints**

The theoretical findings and the empirical implications of the stochastic model of the permanent income hypothesis were radical and extreme: no lagged values of consumption and

income can be used in future forecasts and more importantly only changes in expectations on future income can explain current consumption. However, reality contradicts the pure theory of consumption behaviour based on the random walk assumption. According to empirical research, in certain cases consumers do base their consumption-decisions on the lagged values of disposable income or simply disregard the news related to the future prospects of income/wealth which should in principle affect permanent income and consumption. If this is the case, however, the chance for realising non-Keynesian effects may be undermined dramatically. The higher is the share of the population who determine consumption by considering current income only, the less ideal is the situation for the occurrence of expansionary effects of fiscal consolidation.

Campbell and Mankiw (1990) constructed a model which combines Hall's random walk consumption theory and the traditional consumption function by assuming a world populated with heterogeneous households. In the stochastic PIH model, the change in consumption equals the innovation term ( $\varepsilon_{t+1}$ ), while in the traditional model the change in consumption can be traced back to proportional changes in the disposable income as a rule-of-thumb. Assuming that a certain part of the population ( $\lambda$ ) follows the traditional consumption function (the Keynesian consumers) and the remaining part ( $1-\lambda$ ) behaves as it has been predicted by Hall's model (labelled sometimes the Ricardian consumers), the aggregate change in consumption equals:

$$\begin{aligned}\Delta C &= \lambda \Delta C_{\text{TRAD}} + (1-\lambda) \Delta C_{\text{PIH}} \\ &= \lambda \text{MPC} \Delta Y^d + (1-\lambda) \varepsilon_{t+1}\end{aligned}$$

If Hall's random walk model is correct,  $\Delta C$  should equal the innovation term with the expected value of zero, that is,  $\lambda$  has to be zero, too ( $H_0 : \lambda = 0$  and  $H_1 : \lambda > 0$ ). However, the authors found a statistically significant value for the part of the Keynesian population (almost half of the consumption behaviour was explained by current income).<sup>8</sup>

The obvious question arises: why do people behave then as if they were Keynesians in both normal and bad times? One explanation is liquidity or borrowing constraint. In the PIH

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<sup>8</sup> One of the most serious criticism against the method of Campbell and Mankiw is the small number of observations and the consequently questionable robustness of the test. Shea (1995), however, based his test on micro data (a panel of unionised labour) and confirmed the presence of liquidity constraint, that is, he also found a strong positive relation between predictable income changes and changes in consumption. The importance of his approach is easy to follow: wage contracts make future changes in income highly predictable. According to the permanent income hypothesis, such an expected change in the future cannot have any effect when they come into effect (since these are taken into account at the moment the agreement is signed); Shea, however, found just the opposite: 1 per cent raise in the wage was followed by 0.89 per cent increase in consumption.

models, households can borrow without limits in order to achieve consumption-smoothing over time. However, in real world economy, this is hardly the truth. What we find is a dramatic variance in the degree of accessibility to credit markets not just across countries but also over time. As a matter of fact, while people are indeed alike in the sense that they behave rationally, they do face *different constraints*.

In the presence of liquidity constraint, individuals will base their consumption decisions on current income alone, irrespective of the possibility of the increase in future permanent income. Accordingly, Mankiw (2000:460) states that with the liquidity constraint “Keynes’s original consumption function starts to look more attractive”. However, what might be appealing from a purely academic viewpoint such as Mankiw’s, it can be devastating for those who advocate the emergence of non-Keynesian effects on the basis of lacking liquidity constraint. Liquidity constraint certainly means that individuals are *not able* to or are *not allowed* to borrow as much as they want – even if they do expect a flow of high income in the future.

Necessarily, the following (interrelated) question(s) arise(s): why does liquidity constraint exist, how can it be measured and can it be overcome? Regarding the first question, according to many, one of the main reasons for the prevalence of liquidity constraint is the underdevelopment of financial markets and/or the imperfect working of credit markets – see especially the seminal work of Jappelli and Pagano (1989). Putting together all of these pieces of the puzzle, it is reasonable to claim that the prevailing huge variance in the degree of financial depth, the accessibility to credit markets, can be a determining factor for the emergence of non-Keynesian effects. The different degrees of the development of financial intermediation systems may partly explain why specific countries experience the expansionary effects while others only to a lesser extent or not at all.

#### **2.4 Measuring liquidity constraint in developed economies**

Before turning to the assessment of some empirical findings in the literature, it is worth raising once again the question why liquidity constraints, or more precisely the number of consumers suffering from credit denial, could be important from a *policy* point of view. Liquidity constraints, indeed, can have serious implications for policy decisions, especially regarding the issue of targeting. The ultimate effect of any fiscal decision is largely sensitive to what portion of the population suffers from credit constraint. In the presence of liquidity constrained individuals, a tax cut for instance would not be followed by more consumer

saving in order to finance the future burden of tax increase, as it is predicted by the neoclassical Barro-Ricardian equivalence. Instead, the cut would increase aggregate demand (and current consumption) – an implication that contradicts with PIH. Accordingly, the existence of credit constraints undermines policy-neutrality: even temporary changes in fiscal spending/revenues can have a positive multiplier effect. These cuts would work more effectively if government policies were able to target those individuals who are relatively young, earn relatively less and do not have an established credit history, do not possess houses or other assets, that is, the low-savers. Large families are usually also among the targeted groups since they are expected to be more credit-constrained. Importantly, in the presence of the non-neutrality of fiscal policy, the government would confidentially embark on a Keynesian anti-cyclical macroeconomic stabilisation with the hope of experiencing a *positive* multiplier. Consequently, there is no hope for achieving non-Keynesian effects.

Assessing the share of population who suffer from liquidity constraint is not an easy task, however. The general technique for measuring liquidity constraint is to use some suitable proxies, thereby indirectly grasping the share of constrained households. In empirical works, the measures of the depth of financial intermediation play the role of proxy the most often. The hypothesis is straightforward: the deeper is financial intermediation (the higher is the credit to household measured in GDP), the less is the chance for experiencing liquidity constraint. Based on our previous analysis of PIH models and the expectation view of fiscal policy, this assumed relation on financial intermediation and credit constraint can be further considered by claiming that the deepening of financial intermediation can support the more effective working of PIH models, which is a basic building block of the expectation view.

Jappelli (1990) for instance used a data set of individuals who were applying for credit but failed (the so-called called “rejected customers”), to assess the share of people suffering from credit constraint. His data set also documented the share of those consumers who were simply afraid of applying for credit and therefore simply abstained (the “discouraged borrowers”). The author found that according to a 1983 survey of American households, approximately 19 per cent of the population was rejected or discouraged, that is, they definitely suffered from a liquidity constraint. The explanations for being rejected or discouraged from borrowing formed a wide spectrum; reasons included the following: lack of

established credit history (applicants were too young for instance), insufficient credit record or bankruptcy, low level of income or assets, etc.<sup>9</sup>

In another paper, Jappelli and Pagano (1994) found dramatic differences in the degree of access to credit markets in a cross-country analysis of OECD countries. The authors assessed the degree of liquidity constraint by measuring (i) the volume of consumer credit available to households (as a ratio to the net national product); and (ii) the own down-payment in case of purchasing a house. Albeit it is hard to come up with unquestionable statements, intuitively, in case of a low level of consumer credit or high value for down payment, the chance for a dampening of consumption will increase. In Jappelli and Pagano's (1994) regression analysis, a 1 per cent increase in consumer credit reduced savings by 0.3 per cent, while a 1 per cent decrease in down payment forced savings to be reduced by 0.2 per cent (results are statistically significant). To extend their findings to the topic of non-Keynesian effects, it can be argued that a higher accessibility to consumer credit or a lower down-payment in case of purchasing a house – that is a deeper financial intermediation – may cause people to react more intensively to changes in permanent income and thereby increase the probability of non-Keynesian effects to arise.

Nevertheless, it is worth keeping in mind that there is a clear difference between (i) what the theory and the deductive analysis suggests concerning non-Keynesian effects; and (ii) what empirical studies conducted on non-Keynesian effects and liquidity constraint imply.

(i) By the deconstruction of the expectation view of fiscal policy on the one hand and consumption theory on the other hand, it has become possible to reach a number of significant conclusions. The most important theoretical inference has been the following: liquidity constraint in fact compels individuals to behave as it is predicted by the Keynesian consumption function, that is the presence of liquidity constraints may lower the chance for a shift in agents' behaviour from the Keynesian to the Ricardian. More to the point: the prevalence of liquidity constraint does not support the appearance of non-Keynesian effects. Importantly, this is an inference that has been drawn *deductively* by having deconstructed modern consumption theory and the expectation view of fiscal policy.

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<sup>9</sup> Using a different method – similar to that of Campbell and Mankiw (1990) –, Jappelli and Pagano (1989) also found the same ratio for the US. The authors used a sample of OECD countries in their estimation and placed the countries into three categories accordingly. Sweden and the US belonged to the first group, with the lowest excess sensitivity to current income. The UK and Japan were found to have a 30-40 per cent ratio of constrained individuals. This figure was above 50 per cent in Italy, Greece and Spain.



Taking these considerations into account, what we can claim here is that since the deepening of financial intermediation might be able to lift liquidity constraint, it also may increase indirectly the likelihood of experiencing non-Keynesian effects in times of fiscal consolidation. Policy conclusions such as the need for deepening financial intermediation, especially the increase of accessibility of households to credit markets, may prove to be valid on a normative ground.

(ii) Turning to the empirical side of the problem, it would be a failure, however, to claim that countries with a relatively complex and deep financial intermediation will always conduct a successful fiscal consolidation where success means accelerated economic growth in the short term. It would also be misleading to argue that an *underdeveloped* financial system necessarily prevents a country from experiencing accelerated growth following a fiscal adjustment. Ireland in the eighties with its relatively underdeveloped financial intermediation system is a good example for underpinning this. While with its relatively underdeveloped financial system in the late eighties Ireland was able to experience non-Keynesian effects, no such experiment was made either in the nineties or in the new millennium – times when the depth of financial intermediation increased dramatically in the country. However, elaborating on the eighties, Giavazzi and Pagano (1990) made an interesting observation regarding the Irish case. According to the authors, among several other factors, liquidity constraint might have contributed significantly to the failure of the first Irish stabilisation attempt in 1982-83: the cuts in public spending and especially the raise in taxes triggered an immediate decrease of disposable household income (causing a drastic fall in private consumption as well). The second Irish consolidation attempt between 1987 and 1989 was undertaken after the initiation of a wide-scale liberalisation programme in credit markets. Liberalisation increased substantially households' ability to borrow in the anticipation of higher future wealth. The Irish example may suggest therefore that it is not the level of financial depth what matters but its dynamism.

### **3. The composition of adjustment and the structure of the labour market**

Although the theoretical literature on the non-Keynesian effects focused almost exclusively on the consumption channel in the nineties, there were a few exceptions such as Alesina, Perotti and Tavares (1998), who have pointed out that even without a too detailed and deep scrutiny, it is tempting to realise that increase in *investment* contributed largely (in fact, disproportionately so) to the growth of GDP in times of expansionary fiscal consolidations. Alesina and Ardagna (1998) came up with supportive statistical evidence by

having documented several cases of successful adjustment, providing a strongly different rationalisation for the quick recovery in economic performance than that of the expectation view of fiscal policy.

### **3.1. A linear approach to the rationalisation of expansionary fiscal consolidations**

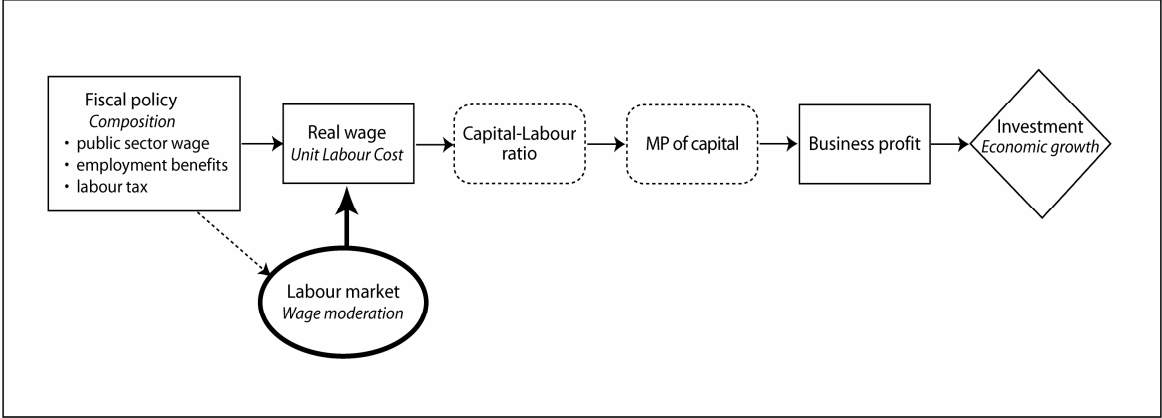
This new approach proved to be highly sceptical of the expectation view of fiscal consolidation (discussed in the previous section). It has been argued that although in principle wealth effects and consumption might be a channel in the realisation of non-Keynesian effects, it is hard to support the demand-side view by statistical evidence. In fact, authors belonging to this camp repeatedly found that the growth rate of consumption is not significantly different in the case of expansionary or contractionary consolidations – while investment differs enormously. Authors critical to the relevance of the consumption channel add also that the economic expansion realised after (or even during) fiscal consolidation via the consumption channel will necessarily prove to be short-lived. Contrary to such a short-lived effect, investment may be accumulated in the longer term as well, providing a solid ground for expansionary fiscal consolidations.

Supply-side approaches are basically empirics-oriented and – as opposed to demand-side explanations – do not attempt to provide theoretical rationalisations. Researchers following this view are convinced that “there may be nothing special in the behaviour of investment at the time of expansionary fiscal adjustments... The estimated effects of spending and taxes on investment imply that the different composition of the stabilisation package can account for the observed difference in investment growth rates” (Alesina et al. 2002:576). That is, the emergence of expansionary effects of fiscal consolidation simply follows the textbook rule of economics: lower costs, induced by spending cuts in wages and other welfare items, makes investment more profitable and desirable. The authors continue by claiming that “[w]e do not find significant ‘non-linearities’ or structural breaks in the reaction of investment around large fiscal consolidations. This result suggests that we may not need ‘special theories’ to explain episodes of large fiscal adjustments” (ibid. 576).

Modelling the mechanism of the emergence of expansionary effects of fiscal contraction within the supply side framework means that the ultimate unit of decision-making will be the rational, forward-looking firm (as opposed to the consumer in the demand-side approaches) which tries to maximise the expected present value of future cash flow (just like the permanent income of consumers in demand-side theory) and decides on the current level of

investment accordingly. Profit and investment depends on the marginal product of capital that is in turn determined by the ratio of capital and labour. Any increase in real wage will increase the capital-labour ratio and decrease therefore the marginal product of capital, lowering profit and investment.

**Figure 3: The supply-side rationalisation of non-Keynesian effects.**



Source: own construction.

The change in real wages, triggered by fiscal adjustment depends, however, on two conditions: (1) the composition of adjustment and (2) the structure of labour market.

The paper of Alesina, Ardagna, Perotti and Schiantarelli (2002) on OECD countries demonstrates that different types of fiscal measures affect private investment significantly differently. The composition of adjustment highly determines what outcome can be expected from a macroeconomic viewpoint. Fiscal contraction may have the effect of growth acceleration if it triggers government wages, and to a lesser extent, but still significantly, the transfers to the population. The competitiveness and the profit prospects of the private sector improve when the government cuts back on these politically sensitive items. Alesina and Ardagna (1998), following Alesina and Perotti (1995), repeatedly emphasised the need for cuts in public employment, in transfer programmes and in compensation of government employees.<sup>10</sup> According to their findings, labour market becomes more efficient if these three items are tackled, making the costs of labour relatively lower – which in turn may boost economic activity.

However, fiscal adjustment can trigger a change in real wages only if the labour market and the wage bargaining structure facilitate such a change. In real world economy, labour

<sup>10</sup> Alesina and Ardagna (1998:516) claim in their conclusion that “the composition of the adjustment appears as the strongest predictor of the growth effect: all of the non-expansionary adjustments were tax based and all of the expansionary ones were expenditure based.”

markets are often rigid, in the sense that the change in taxes cannot significantly alter individual labour supply. Labour markets in some instances are very far from being competitive and the role of trade unions can be especially strong in wage negotiations. In a unionised economy, the burden of tax increase may fall on the employer, causing a serious deterioration in competitiveness and profitability. The burden of labour taxes such as personal income tax or social security contributions cannot be placed entirely on employees because with the help of trade unions and the institutionalised system of wage bargaining workers are able to shift the costs of tax increase to the firms. In a unionised economy, employees will demand higher pre-tax wages in response to a rise in labour taxes. In fact, in a unionised system of labour, the aggregate effect of tax increase on labour supply can be high enough to depart significantly from the neoclassical world of competitive economy.

Whether employees are able to transmit the burden of tax increase to the employer (and to what extent are workers able to shift the burden to the firms) is a question of the structure of the labour market. Trade unions with a different degree of centralisation (and coverage) internalise the consequences of tax increase differently. In a simplistic approach, if trade unions are large and encompassing, the demand for a wage increase will remain moderate. However, if unions are strong enough to pressurise the government to raise wages but are weak in the sense that they are unable to cover a high portion of employees, the ability for internalising the loss of competitiveness is weak, too. Trade unions therefore will not moderate their demand for wage increase, thereby damaging the competitiveness of the country painfully. This conviction was first conceptualised by Calmfors and Driffill (1988) and it was taken as granted by many later on.

However, Europe in the late eighties and nineties experienced a continuous deterioration in the degree of centralisation of the labour markets, thereby becoming more and more deregulated. Interestingly, this happened quite often within a more centralised structure of collective bargaining. According to the OECD (2004:130), when comparing the seventies and the nineties, no OECD country attempted to initiate a greater degree of centralisation in collective contracts negotiations, while some countries did move towards greater decentralisation. Nevertheless, this move was supplemented sometimes by a strengthened coordination that could take place in the forms of social pacts, pattern bargaining, peak-level coordination or stronger government involvement in tripartite negotiations.

Soskice (1990) and Hancké and Soskice (2003) argued that albeit centralisation might not have been improved in the last few decades, coordination has strengthened. The structural

changes in the world economy have strongly motivated EU countries to make further adjustments in the labour market and the wage bargaining system. The ultimate aim was to create a system of collective bargaining which could ensure the maintenance of competitiveness. In most cases, the means to this end was found in the formally or informally centralised *social pacts*. In general, social pacts reflected the recognition that both employers and employees could mutually benefit from an agreement which pushed labour markets in the direction of more flexibility but kept wage negotiations in a highly coordinated framework, which enabled the partners to strike an agreement on wage accords. Practically, the revival of social pacts meant that decisions on wages were transferred into the hands of a few centrally appointed experts – although not necessarily in a formal and binding way.

As opposed to the early years of corporatism, the resurgence of social partnership was not accompanied by the revival of trade unions. Wage moderation did not come along with providing extra benefit for employees (in the form of welfare programmes for instance) - as it was the practice in the sixties and seventies. Social pacts simply did not mean the strengthening of trade unionism in Europe. Accordingly, the new social partnership, however, did not aim at eliminating lower level negotiations at the expense of strengthened top-level agreements. Social pacts instead provided a solid framework with specific rules and procedures with the clear aim of attaining economy-wide goals – a process often referred to as concertation in the industrial relations literature. Such an organised decentralisation (a term invented by Traxler, 1995) appeared in countries like Ireland and Italy, and was revived in the Netherlands, Finland, Greece and Portugal. Interestingly enough, Giudice et al. (2003) identified almost exactly the same countries where expansionary fiscal consolidation had been observed at some time.

#### **4. What have we learnt – if anything?**

In this paper an attempt has been made to critically assess the explanations of the astonishing performance of some adjustment cases in EU countries in the eighties and nineties, as it has been first documented by Giavazzi and Pagano (1990). The explanations maintain that the acceleration of economic growth in the year of fiscal contraction is basically triggered by the changing behaviour of rational, forward-looking private agents, via changing their consumption or investment behaviour.

Accordingly, the paper tried to identify those *circumstances* and *conditions* which can prove to be indispensable in altering individuals' (consumers' and entrepreneurs') expectations so as to experience non-Keynesian effects and also elaborated on the main

mechanisms through which these expansionary effects can be expected to emerge in the short term. By reviewing the most important concepts, the three possible factors that can trigger a change in individuals' decisions have been identified as follows: (1) the size of adjustment; (2) the level and acceleration of the debt ratio and/or government spending; and (3) the composition of adjustment.

However, our critical assessment also showed that both demand-side and supply-side conceptualisations of non-Keynesian effects are highly sensitive to institutional factors, such as the depth of financial intermediation and the structure of the labour market. As a corollary, policy-makers should be cautious while adopting fiscal measures to consolidate the general government budget, because the result of adjustment will not necessarily be non-Keynesian even if the three criteria or some of those mentioned above are presented. The expansionary effects of any fiscal consolidation are indeed conditioned on some crucial institutional factors. In the presence of liquidity constraints or inflexible labour markets, the ultimate macroeconomic results of an adjustment in the short term can prove to be doubtful.

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