

On floating exchange rates, currency depreciation and effective demand*

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1. Introduction

The choice of exchange-rate regime has lately emerged as a key element of policy strategies to control for inflation and cope with adverse external shocks. Fixed-but-adjustable regimes, which were fairly popular during the Bretton Woods era, are now out of fashion, whereas hard-pegs and flexible exchange rate systems are predicated on the claim that the economy is best served by one of these 'two corners' or extreme exchange-rate options (Eichengreen 1994 and 1998, Fischer 2001).

Interestingly, the monetarist standpoint making the case for flexibility from a supply-side perspective is also shared by some economists who stress the 'shock-absorbing' property of flexible rates from a demand-side point of view, and thus from a Keynesian perspective (for instance, Bougrine and Seccareccia 2004).

The purpose of this paper is to take issue with the notion that flexible exchange rate regimes stabilise effective demand and employment. We fully agree with the view that the exchange rate can and should be used as an instrument of macroeconomic policy (Bresser-

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* The authors are grateful to Anthony P. Thirlwall and to two anonymous referees for most helpful comments on a previous version of this paper. The usual disclaimer applies. Julio López acknowledges also the financial support received from UNAM-PAPIIT-IN301606.

Pereira 2004). But we argue that currency flexibility and currency depreciation have side effects on output and employment that should be taken into account. We shall firstly discuss the issue in general terms. Then we focus on exchange rate flexibility in developing economies. The latter are more liable to experience negative external shocks than developed economies and best illustrate their effects on effective demand and employment.

The choice of an exchange rate regime greatly matters for the Keynesian problem of effective demand (Davidson 2003, Edwards and Levy Yeyati 2003, Bougrine and Seccareccia 2004). We contend that the hypothesis of a currency depreciation, being able to stabilise effective demand, is analogous to the claim that (downward) flexibility of nominal (and real) wages can ensure full employment.¹ Furthermore, we also argue that flexible exchange rate regimes do not remove the external constraint imposed on long-run growth by balance of payments equilibrium, as postulated by the so-called Thirlwall's Law (1979), that states that the maximum sustainable long-run growth rate the economy can attain is constrained by the required equilibrium of the balance of payments, i.e., long-run growth is determined by the ratio between the income elasticity of exports and that of imports.

The rest of the paper is structured as follows. Section 2 summarizes the case for flexible exchange rates and discusses why downward flexibility of wages and freely floating exchange rates are analogous to one another. Sections 3 and 4 analyze Keynes's and Kalecki's criticisms on the effects of flexibility of wages and exchange rates on effective demand. Section 5 outlines a number of additional problems ensuing from flexible exchange rates; section 6 refers to empirical findings. Section 7 concludes with brief economic theory and economic policy inferences.

2. Currency depreciation and downward flexibility of real wages

To avoid misunderstandings, we first propose some basic definitions. We define here floating rates as those rates which change according to

¹ In mainstream economics, wage and price flexibility and freely floating exchange rates are essentially conceived of as competing mechanisms for achieving full employment and optimal allocation of factors of production.

the state of supply and demand in the foreign exchange market, while managed exchange rates are those set by the economic authorities and may vary in accordance with their objectives. Managed exchange rates, of course, may require some kind of control over capital movements (Thirlwall 2003, p. 90; Seccareccia 2003-2004). We also define the nominal exchange rate as the units of domestic currency per one unit of an external currency (say the US dollar), and the real exchange rate as the ratio of the nominal exchange rate times the index of foreign prices, divided by the index of domestic prices. Accordingly, in our definition the real exchange rate and the level of competitiveness move in the same direction: the real exchange rate falls when domestic currency appreciates; and a rise in the real exchange rate also means that the domestic currency depreciates in real terms.

The optimality of fixed exchange rates has long been rejected under the presumption that if the economy faces primarily real shocks, then exchange rate flexibility performs better as a shock-absorber (Mundell 1961). More recently, it has been argued that fixed exchange rates contribute to a long-term low inflation environment "only at the severe cost of destabilizing national income and output" (Bougrine and Seccareccia 2004, p. 658). By this rationale, pegged exchange rate systems should suffer from a deflationary bias as opposed to floating exchange rate regimes.

Such conclusion usually arises from the analysis of a purely real disturbance originating in the international goods market. The argument goes as follows. Let us suppose that exports contract due to an adverse external shock. If the exchange rate simultaneously depreciates, increased competitiveness would allow the country to improve the trade balance, provided the Marshall-Lerner condition is fulfilled. If exports and imports respond adequately to currency depreciation, output and employment may not contract (in fact they may expand) and the domestic economy will be somewhat insulated from the external shock. Hence the conclusion, that when an open system faces an adverse aggregate demand shock, flexible exchange rates can stabilize output.

Moreover, supporters of flexible exchange rate systems add that the latter have the additional advantage of allowing policy-makers to apply effective Keynesian stabilization policies. Thus, flexibility of exchange rates allegedly allows governments to pursue autonomous contra-cyclical monetary and fiscal policies in an open global economy.

It can be easily seen that, when prices are set according to a mark-up rule, a reduction of nominal wages in an open system is largely equivalent to currency depreciation.² Indeed, if the *nominal* exchange rate is given, the fall of domestic prices caused by the wage fall would produce a *rise* in the *real* exchange rate. Or, to put it differently, currency depreciation will bring about a rise in the real exchange rate and in competitiveness only if the real wage declines.

Now, if a fall in money wages and the consequent *real* depreciation of the currency were indeed capable of bringing about an expansion of both employment and output, capitalist economies would be endowed with a very powerful built-in full employment mechanism. In fact, let us consider the consequences of a rise in unemployment from the orthodox perspective. This would sooner or later bring about a reduction in nominal wages. Prices would follow suit if the mark-up is constant (but see below). Given the nominal exchange rate, the decline in prices would result in a rise in the real exchange rate and enhanced competitiveness. The latter would improve the trade balance and stimulate effective demand, thus mitigating unemployment and ultimately leading to the disappearance of involuntary unemployment.³

It is no wonder, then, that practical orthodox economists, who rebuke Keynes's message that capitalist economies tend to be unstable, have changed their discourse. They nowadays put much more emphasis on the repercussion of flexible wages upon international competitiveness. Academic orthodox economists, however, still pay lip service to either the so-called 'Keynes' effect or the 'Pigou' effect (which were so dear to orthodox economists of Keynes's time) as the mechanisms that would allegedly ensure full employment.⁴

² Except that currency depreciation raises domestic import prices, whilst wage reduction leaves them unchanged (more on this below).

³ Nonetheless, it is worth noting that the net effect of a diminution of nominal wages on aggregate demand depends on its impact on domestic consumption, because if the latter contracts it might offset the positive effect of increased exports. Therefore, it all hinges upon which of the two multiplier effects dominates. We formalize the ideas later on.

⁴ It must be recalled that Keynes himself was much more sceptic than contemporary orthodox economists about the positive impact of a lower interest rate ensuing from lower wages and prices on investment and effective demand (i.e. what is now labelled the 'Keynes effect'). As we also know, the 'Pigou effect' was discussed and thoroughly demolished by Kalecki (1944). It appears, however, that the association between the real wage and the real exchange rate, and the impact of flexible wages on international competitiveness and on aggregate demand, have not been sufficiently discussed.

Keynes considered that the consequences of flexible wages were of paramount importance to the corpus of his own theory and to that of his opponents. For this reason, he devoted all of chapter 19 of *The General Theory* to reject it. Likewise, Kalecki (1939, p. 38) remarked rather early in the debate that, with a given nominal exchange rate, “a reduction of wages in an open system is very much the same as that of currency depreciation”, and he also dismissed the possibility of flexible exchange rates being able to ensure full employment. It seems interesting to start off our discussion with an exposition of the arguments of the founding fathers of the principle of effective demand.

3. Keynes on flexible wages and flexible exchange rates

Let us first of all recall Keynes’s references to the consequences of a wage fall in an open economy, and of flexible exchange rates. After that we shall try to summarize his overall vision.

As we know, Keynes’s overall view was that the wage fall ensuing from unemployment would not ensure a proper working of the monetary mechanism such as to bring the economy back to full employment, as the ‘classics’ assumed. He discussed the issue mostly for a closed economy, but he also took up the case of an open economy. His most explicit statement in *The General Theory* can be found in the following lines:

“If we are dealing with an unclosed system, and the reduction of money-wages is a *reduction relative to money-wages abroad* [...] it is evident that the change will be favourable to investment, since it will tend to increase the balance of trade” (Keynes 1936, p. 262, emphasis in the original).

However, he also speculated that “it is likely to worsen the terms of trade. Thus there will be a reduction in real incomes” (*ibid.*, p. 263). He then concludes the whole discussion of the impact of flexible wages on employment in *The General Theory* with the next well-known statement:

“There is, therefore, no ground for the belief that a flexible wage policy is capable of maintaining a state of continuous full employ-

ment [...]. The economic system cannot be made self-adjusting along these lines" (*ibid.*, p. 267).

Keynes also discussed the consequences of a flexible exchange rate:

"In light of these [aggregate demand] considerations I am now of the opinion that the maintenance of a stable general level of money-wages is, on a balance of considerations, the most advisable policy for a closed system; whilst *the same conclusion will hold good for an open system, provided the equilibrium with the rest of the world can be secured by means of fluctuating exchanges*" (*ibid.*, p. 270, emphasis added).

As the last lines of the quote make clear, in *The General Theory* Keynes accepted that downward flexible exchange rates could play a useful role. But this argument was far from unqualified, and was made especially dependent on the functioning of the world economy. Moreover, his discussion was not about the sufficiency of freely floating rates to confront external shocks, but rather their adequacy to allow for full employment policies under normal conditions of the world economy. Anyway, he was led to give further consideration to this issue when he developed the British proposal for the post Second World War international financial organization.⁵ In 1944, at an advanced stage of his reflection, he summarized his opinion as follows:

"[T]here are two objections to movements in the rate of exchange [...]. The first relates to the effect on the terms of trade [...] in certain conditions of the elasticities involved, a depreciation in the rate of exchange may actually worsen the balance of payments, and it is easy to imagine cases where, even if equilibrium is restored, it is at the cost of a serious and unnecessary reduction in the standard of life [...]. In the second place, in the modern world, where wages are closely linked with the cost of living, the efficacy of exchange depreciation may be considerably reduced" (Keynes 1980, p. 288).

He went on to add

"the preference in favour of movements in the rate of exchange seems to me to be based on a vestigial belief in the way in which

⁵ See Skidelsky (2001) and Vines (2003) for details. It is also worth mentioning that Keynes supported the Bretton Woods agreement, undoubtedly a regime openly at variance with a freely floating system.

things work under *laissez-faire* [...]. The trouble is that prices are not a satisfactory index, either to social utilities or to real social costs" (*ibid.*, p. 288).

In other words, Keynes warned first and foremost that what really matters is not the nominal, but the real exchange rate, and that currency depreciation may not ultimately bring about a rise in the latter when nominal wages are indexed according to prices and when what we call nowadays the pass-through coefficient is high.⁶ Thus, as remarked long ago by one of his followers, the inflationary pressure involved would impose recursive depreciations in order to effectively achieve, and maintain, a high *real* exchange rate.⁷

Furthermore, Keynes suggested that the Marshall-Lerner condition cannot be relied on because it might not be satisfied, so that a higher real exchange rate may in fact not improve the trade balance.

Finally, Keynes put forward the notion that when export prices fall, the terms of trade of the country deteriorate.⁸ The latter can provoke a decline in income. He did not elaborate the point, but his reasoning may be understood as follows. When a country's terms of trade deteriorate, it is transferring more exports per unit of imports it receives. When foreign trade weights heavily in total demand, then even if total output were constant, national income and welfare may be reduced due to the worsening of the terms of trade brought about by currency depreciation. By the way, the Argentine economist Raul Prebisch, the founder of ECLAC (Economic Commission of Latin Amer-

⁶ A pass-through coefficient measures the effect of exchange rate variations on prices. Its relevant determinants include per capita incomes, transport costs, economy size, tariffs, wage levels, core inflation and long-run exchange rate variability. Incidentally, we note that the downward trend in pass-through coefficients seen in the world economy since the 1990s is associated to changes in the monetary environments.

⁷ Kaldor (1965, pp. 49-50) states that "the correct amount of devaluation [...] presupposes strongly deflationary internal policies while the process of structural adjustment is going on, as well as a succession of downward adjustments in the exchange rate, and not a single, once-for-all adjustment". "The reason [being that the acquisition of a larger market share and] the adaptation of the internal production structure in favour of 'international goods [takes time] and the exchange rate that may be necessary to attain the 'target' would represent an 'excessive adjustment' [...]. The economy could not respond to the change in relative prices, which would consequently be largely nullified by inflation".

⁸ Namely, the relative price of our export falls in terms of imports.

ica and the Caribbean) and of the Latin American Structural School of economics, developed Keynes's insight some years later.⁹

4. Kalecki on flexible wages, exchange rates and effective demand

Michal Kalecki was even more reluctant than Keynes to acknowledge the role of flexible wages and flexible exchange rates as automatic stabilizers of capitalist economies. Unlike Keynes, he did not accept the theory of diminishing marginal returns or the idea that real wages are determined ultimately by the productivity of labour corresponding to a given level of output (its corollary under perfect competition). Consequently, he recognized that not only money wages, but also real wages could actually fall with unemployment. He remarked upon the similitude between a reduction of wages in an open economy and the currency depreciation already mentioned, adding that

“The two cases differ only in that in the former the wages decline and the prices of imported raw materials remain unchanged, while in the latter the wages remain unaltered (in terms of domestic currency), and the prices of imported raw materials increase in inverse proportion to the currency depreciation” (Kalecki 1939, p. 38).

Based on this analysis, he concludes:

“[E]ven in such a case [in an open system, J.L. and I.P.] the reduction of wages does not necessarily lead to an increase in employment, and the prospects of raising the aggregate real income of the working class are even dimmer. In particular, under the system of high and rising tariffs it is very likely that a reduction of wages will

⁹ Prebisch (1951, p. 78) argued: “It might be feasible to enter into a lengthy theoretical analysis which would show that, if [in the period between the two wars, J.L. and I.P.] British wages had declined as a result of unemployment, the resultant lowering in the cost of production would have permitted the establishment of new industries and guaranteed those already in existence, without any need for the deliberate reduction in the import coefficient [achieved thanks to protective tariffs and other restrictive measures, J.L. and I.P.] [...]. But even had the reduction of wages increased employment – which is very doubtful – it would have also meant a corresponding reduction in the price of all British exports for the sake of stimulating some of them, a measure implying considerable loss to the country's real income”.

have an adverse effect on employment also in an open economy” (*ibid.*, p. 38).

Kalecki’s analysis is concise, but we can elaborate on it and rigorously examine the effects of currency depreciation with the help of his theory.

Let us consider the following equations, where P stands for profits, I for private investment, C^k for capitalist consumption, X for *net* exports (exports minus imports). ω is the relative share of wages in the value added (or output), so that (under simplifying assumptions) $1-\omega$ is the share of profits in output; k is the ‘degree of monopoly’, or the ratio of aggregate proceeds to aggregate prime costs (which is also equal to the ratio of average prices to average prime costs); j is the ratio of aggregate cost of materials to the wage bill. Subsequently, p is the price charged by a firm (and also the average price of domestic goods, to simplify), u is the unit prime cost, p' is the weighted average price in the industry (and also the average price index, again to simplify) and m and n are parameters. Moreover, z is the real exchange rate, p^* is the price index of our trade partners, and E is the nominal exchange rate (units of domestic currency per unit of the foreign currency). Then, p^* is the average international price index, and α the relative share of domestic goods in total demand. Finally w and \bar{w} are the nominal and real wage, respectively. We present the following:

$$P = I + C^k + X \quad (1)$$

$$\omega = \frac{1}{1 + (k-1)(j+1)}, \quad k > 1 \quad (2)$$

$$Y = \frac{P}{1-\omega} = \frac{I + C^k + X}{1-\omega} \quad (3)$$

$$p = mu + np' \quad (4)$$

$$k = \frac{P}{u} = m + n \left(\frac{p'}{p} \right) \quad (4a)$$

$$z = E \left(\frac{P^*}{P} \right) \quad (5)$$

$$p' = (p)^\alpha (E p^*)^{1-\alpha} \quad (6)$$

$$\bar{w} = \frac{w}{p'} \quad (7)$$

Equation 1 is the well-known Kalecki equation for *total profits* in an open economy (where we abstract from workers' savings and from the budget deficit for the sake of simplification).¹⁰ Equation 2 shows that (for a given composition of output) the relative share of wages in the value added is determined by the degree of monopoly and by the ratio of the materials bill to the wage bill. Equation 3 encapsulates Kalecki's theory of effective demand. It makes total output depending on total profits and the share of profits in output.¹¹ Equations 4 and 4a depict the pricing policy of firms (extended to an open economy in a very simplified way), which set prices taking into consideration their prime cost and the weighted average price of all firms. Then, equation 5 defines the real exchange rate. Finally, equations 6 and 7 are added to Kalecki's model to simply define the average price and the real wage, respectively. Equations 4 through 7 make it clear why the real exchange rate and the real wage are inversely related.

Let us consider now the effects of a currency depreciation that leads to a rise in the real exchange rate. In the short run, when capitalists' expenditure is given, the effect of depreciation on profits will depend on the elasticity of export and imports with respect to the real exchange rate. Still, it is well known that the response of exports (and import substitution) to the change in relative prices may be slow, and

¹⁰ In Kalecki's extended profit equation the budget deficit increases profits and workers' savings reduce profits.

¹¹ The output equation could be reformulated in conventional Keynesian fashion as

$$Y = \frac{C_0 + I + X}{s(\omega)} \quad (3')$$

where C_0 is the stable part of consumption, and s is the saving propensity, respectively. We assume in equation 3' that s depends on the distribution of income, since we accept that workers have a higher propensity to consume than capitalists.

that on a short-term basis depreciation of the currency may result in a disruption of the trade balance and a fall of profit.

Of course this is not the end of the story, for besides total profits, the relative share of wages in output is likely to fall with currency depreciation as well. This would magnify any original drop of demand and output (see equations 2, 4 and 4a or equation 3'). Indeed, currency depreciation first brings about a rise in the ratio of the materials bill to the wage bill (j), and secondly introduces an increase in the price of competitive imports, which would probably stimulate a rise in the mark-up and in the degree of monopoly (k).¹² If this happens, then income will be re-distributed against the social class with the higher propensity to consume and, consequently, aggregate demand is bound to fall.

On the basis of Kalecki's approach, we come to the conclusion that output may contract as a result of currency depreciation, because depreciation tends to reduce the share of wages in value added. Moreover, this fall may take place even when the Marshall-Lerner condition is fulfilled. In terms of equation 3, we are arguing that the numerator *may* fall if the Marshall-Lerner condition is not fulfilled, causing X to drop. The denominator *will surely* rise because ω is likely to fall.¹³

5. Further problems of exchange rate flexibility

We have proposed that flexible exchange rates may fail to fully insulate a country from the negative effects arising out of adverse external shocks, recalling some reasons advanced by Keynes and Kalecki. But there are some other limitations to exchange rate flexibility, especially important

¹² Firms catering to the domestic market may actually respond differently to currency depreciation than firms catering to the export market. In both cases the 'degree of monopoly' may rise, but more so in firms catering to the export market. This is because their price in foreign currency will fall only slightly, if at all, in spite of the fall in their costs in foreign currency. Moreover, the fact that the traded and the non-traded sectors normally exhibit divergent degrees of imperfect competition may make it difficult for floating exchange rates to buffer the negative impact of adverse external shocks on wages and effective demand.

¹³ In terms of equation 3' we suggest that the rise in s may more than offset any rise in X .

for developing economies, a setting not analysed by the founders of the principle of effective demand but which deserve close scrutiny.

Firstly, price elasticity of exports and imports depends on the elasticity of both supply and demand. Now, this presents a problem for domestic producers. The trouble arises if supply capacities are limited either physically, because productive resources are specific and cannot be easily moved from one sector to another or, more in general, if complementary resources (i.e. credit) are not forthcoming. If supply bottlenecks prevent domestic producers from taking advantage of the (potential) improvement in competitiveness brought about by exchange depreciation, export and import substitution will be lower than they might have been, and net exports will thus rise less than otherwise. In other words output and employment will be prevented from expanding by supply limitations in some sectors where demand is ample, while production in other sectors will be demand-constrained due to the drop of domestic demand. But demand fall in the latter sectors will prevail, dragging with it output and employment.

Secondly, private investment may be negatively affected in the short run if the price of the exchange rises. This may in fact come about as a result of several factors. One is lowered expectations caused by exchange depreciation. Another is the increase in the ratio of indebtedness for firms indebted in foreign currency. The impact of exchange depreciation on the indebtedness ratio may be very important, particularly in developing economies.

Our last point brings into the picture the financial markets. Financial shocks have been a major cause behind the collapse of fixed exchange rate regimes in several developing and middle-income countries in recent decades. Hence, when assessing the relative merits of alternative exchange rate regimes, one must not overlook the role of financial markets.

What are the likely effects of a financial disturbance on effective demand and unemployment for an economy under a flexible exchange rate regime with liberalised current and capital accounts? This is a very difficult subject, whose exhaustive development would require another work. Therefore, in what follows we shall make only some brief remarks on the issue.

Let us first of all recall that under financial liberalisation free capital mobility implies that exchange market dynamics replicates asset markets dynamics. Therefore, under this setting, asset market volatili-

ty and 'irrational exuberance' will affect exchange rates and interest rates, which will have an impact on aggregate demand and employment. An asset market-dominated exchange rate environment impairs the effectiveness of exchange flexibility as a shock-absorber because unrestricted capital flows will bring with it volatility to asset prices and interest rates. Indeed, capital inflows give birth to asset-induced booms, unstable interest rates and speculative agents' behaviour, whereas sudden stops of foreign savings flows trigger sharp declines in asset prices and hikes in interest rates, thus "distorting the allocation of resources" (cf. Palley 2003, p. 66) and paving the way for banking and corporate crises.

Moreover, the asset-market character of a flexible exchange rate regime under capital account liberalisation imparts *uncertainty* to the economy. As firms hedge against exchange rate uncertainty, their costs of international trade increase and they tend to diversify their source of production geographically. Hedge-driven globalisation of production reduces labour's bargaining power and, thereby, income is redistributed against wages.¹⁴ The very fact that developing countries' interest rates, both nominal and real, do not converge with the US rates at all prove that both default risk and exchange rate risk remain much higher in the former countries than in the latter, despite their having migrated from fixed to floating exchange rate regimes.

Let us now suppose that a disturbance stems from the main international financial markets in the form of a drastic increment in international interest rates, and let us consider the case of a developing economy. If the share of the current account deficit to GDP is high, the shock would probably trigger a sharp capital reversal episode and increased instability in domestic currency. This would also impose undesired consequences both monetary and real, even if a fast depreciation of the currency were indeed capable of enhancing exports.

In order to check the capital outflow drift, the monetary authorities would have to increase the domestic interest rate and restrict the money supply. This would reduce aggregate demand through credit rationing and higher interest rate. As the interest rate goes up putting an end to the capital flight, the exchange rate will eventually return to its

¹⁴ Palley (2003, p. 66) argues that "volatile flexible exchange rates may, thereby, have contributed to the adverse income distribution outcomes associated with globalization". If this is correct, then flexibility has also contributed to the slow economic growth pattern and high unemployment rates in the world economy.

previous level, perhaps after an overshooting period. However, insofar as the economy cannot be insulated from the adverse effects of an interest rate shock, a financial disturbance may be a source of domestic interest rate volatility, overshooting and exchange rate misalignment.

Since the pass-through effects from exchange rate fluctuations to inflation remains higher in underdeveloped countries than in industrialized economies,¹⁵ central banks are forced to introduce inflation targets (IT) as a “constrained discretion” (Svensson 1999) in support of flexible exchange rate regimes. Nevertheless, achievements of IT usually involve real costs in terms of output and employment losses (higher in less developed economies than in most developed ones). All this, of course, represents a major constraint on the suspected ‘insulating properties’ and ‘independent’ countercyclical monetary policy advantages of flexibility of rates.

At the root of the whole process just depicted there is the fact that, contrary to developed nations, financial liberalisation does not imply free access to international capital markets for developing countries. Thus, international financial turbulence, dramatically amplified in the last decades, is responsible for at least part of the misalignments of the exchange rates with respect to their equilibrium level.¹⁶ As we know, flexible regimes did not eliminate misalignments associated with the crisis of the Bretton Woods system. In fact, misalignments have been almost as great under flexibility as they were under the fixed system.

Two further peculiarities of developing countries represent additional difficulties to the theoretical shock-absorbing properties of currency devaluation, namely liability dollarisation and structural currency mismatch between assets and liabilities. Whereas the former makes freely floating rates unsustainable, the latter triggers corporate bankruptcies and rising default risks. These peculiarities may cause flexibili-

¹⁵ Pass-through effects in underdeveloped countries are higher because, compared to industrialized economies, they have lower per capita incomes, higher transport costs, higher inflation environments, smaller economy sizes, wider long-run exchange rate variability and lower wage rates – it is widely known that higher wages exert a negative effect on pass-through coefficients, i.e., the influence of distribution costs on pricing to market rises as a country’s income increases, as hypothesized by the Balassa-Samuelson-Baumol effect. Higher pass-through effects can explain the phenomenon of “fear of floating” as a (mainly) underdeveloped economy phenomenon (cf. Calvo and Reinhart 2002).

¹⁶ We define here exchange rate equilibrium as that rate which is consistent with both full employment growth and current account equilibrium (Thirlwall 2003).

ty of exchange rates to perform poorly at shock-absorbing adverse external events; they also help to explain the two-fold phenomena of "fear of floating" (Calvo and Reinhart 2002) and "floating with a large life jacket" (Calvo and Mishkin 2003) presently observed in many developing economies. In the absence of adequate financial regulation and under flexible exchange rate regimes, currency devaluation risks causing balance sheet crises if the economy is plagued with liability dollarisation and currency mismatch between assets and liabilities.

Now, what if a bank-run occurs under a flexible regime *cum* liability dollarisation? In such a case the so-called Thornton-Bagehot principle of lender of last resort can only be executed at the double cost of large currency depreciation and financial fragility, which will of course destabilise the financial system.

6. Empirical analysis

It should be noted that when we contend that currency depreciation may be detrimental to effective demand, we are not advancing a general inference valid in all times and conditions. Obviously, the final outcome depends on the structural parameters and circumstances of any economy. Therefore, it is important to look at actual facts. Given the scope of our paper, we cannot examine in detail the empirical literature on the subject. Nevertheless, we shall briefly refer to a few selected studies that tend to support our scepticism regarding the benefits that countries may achieve under a flexible exchange rate system.

First of all, we may start mentioning that we have found only one study where the authors include developed countries. We shall refer afterwards to the results of that work. Studies dealing exclusively with developing countries are more easily available. A large part of the statistical analyses of the effects of exchange depreciation on output has been prompted by the debate on the so-called "contractionary devaluation" phenomenon, originally proposed in a seminal paper by Krugman and Taylor (1978). We shall mention now only a few of these studies.¹⁷ Multi countries studies were carried out by Edwards (1989), Agénor (1991) and Morley (1992) pooling time-series/cross-

¹⁷ See Kamin and Klau (1997) for a complete list of references.

country samples.¹⁸ They controlled for most variables that have influence on demand and output, namely terms of trade, government expenditure and measures of money. Generally speaking, they found a negative impact of a rise in the real exchange rate on output.

On the other hand, we may refer to the findings of VAR analysis applied to individual developing countries. Thus, for example, some studies carried out for Mexico, such as Rogers and Wang (1995), Santaella and Vela (1996), Copelman and Werner (1995), Kamin and Rogers (1997), and López, Spanos and Sánchez (2006) have found that currency depreciation tends to be followed by output decline. Rodríguez and Díaz Gazani (1995) reach similar results in a VAR for Peru, as do Hoffmaister and Vegh (1996) for Uruguay.

Finally, Kamin and Klau (1997) carried out an econometric study with panel data and an error correction model for output in order to estimate the impact of devaluation on output for twenty-seven countries (eight Latin American, six Asian and thirteen industrialised economies). This is a very important study because the authors tried to distinguish adequately between short and long-term effects. They also controlled for the full range of external shocks, taking into account different types of shocks, and they considered separately developed and developing economies. Their conclusions are worth quoting in full:

“First, regardless of the short-run effects of devaluation, there appears to be no contractionary effect in the long run [...]. On the other hand, *our results fail to confirm the conventional or textbook view that devaluations are expansionary in the long run.*

[S]econd [...], *devaluations are contractionary in the short run* [which ...] may be attributable to feedbacks from output to the real exchange rate. Our third conclusion [...] is that *a short-term contractionary effect of devaluation on growth genuinely exists* [...].

Finally, the results [...] suggest that, compared with developing countries, devaluations in *industrialised countries are about as contractionary in the short run and more contractionary in the long run.* Nevertheless, the results presented in this paper do not provide support for the view that contractionary devaluation is limited to the developing countries, while expansionary devaluation pre-

¹⁸ The number of countries included in the sample were 12 (Edwards), 23 (Agénor) and 28 (Morley).

vails in the industrialised countries (Kamin and Klau 1997, pp. 11-12; emphasis added)".¹⁹

In summary, there seems to be no empirical support to expect that a rise in the real exchange rate would be able to expand aggregate output. Accordingly, flexible exchange rates, let alone floating rates, cannot be relied on as a buffer against negative external shocks.²⁰

7. Final remarks

There are various reasons why flexible exchange rates may fail to stabilise effective demand and ensure full employment. Some of the reasons were already anticipated by Keynes and Kalecki and some are of a more recent vintage. In addition, statistical results tend to confirm this reasoning. It comes as no surprise that flexible exchange arrangements, recently adopted by most developed and developing countries in the context of economic liberalisation, have failed to insulate countries from adverse external shocks. The inception of flexible exchange rates since the early Seventies has *not* delivered a long-term solution to the so-called adjustment and stabilisation problem. The empirical evidence shows that, in the last couple of decades, current account disequilibria have increased in industrialised nations. On the other hand, developing nations – most notably Latin Americans – have been experiencing a substantial slowdown in their economic growth rates as they attempt to deflect financial instability.

¹⁹ We should mention in passing a study which does not deal directly with the effects of variations on the real exchange rate on growth, but with that of variations in income distribution on growth. Anyway, we mention this study because of the already mentioned close association between the changes in income distribution and those of the real exchange rate. Onaran and Stockhammer (2005) report their estimates of a Structural Vector Auto Regression (SVAR) model for three developed countries, the US, the UK and France. They found that in France and in the UK a shock to the profit share had basically no significant effect on unemployment. Only in the US, and only after several periods, a (positive) shock to the profit share led to decline in the unemployment rate. Moreover, the profit share had no significant effect on productivity. Thus the substitution between labour and capital which should be allegedly encouraged by modifications in the factor shares does not appear to take place.

²⁰ But even if currency depreciation turned out to be expansionary – contrary to what Keynes and Kalecki believed –, it would still not imply that cutting wages, or depreciation in the exchange, would be the best remedy to cure unemployment. This is still a moot question.

Finally, our arguments bear special significance on one theoretical issue and one policy-related issue, relevant to any discussion on open economy macroeconomics.

The *theoretical issue* involves the post-Keynesian theory of economic growth, which has been beautifully encapsulated in the so-called Thirlwall's Law (1979). It is well known that this law postulates the notion that economic growth is unlikely to be supply-constrained. Before full utilization of resources is achieved, the balance of payments may impose an upper limit on aggregate demand, and thus on growth. This notion has been criticized with the argument that the balance of payments cannot be the *binding* constraint under a flexible exchange rate system. The rationale is as follows: whenever disequilibria take place in the balance of payments, movements in the exchange rate will bring it back to equilibrium, even as demand returns to its full employment level. Growth is therefore supply-constrained.

The response to this criticism has emphasized several aspects. First, there is the uncertainty surrounding the course that the exchange rate may follow whenever disequilibrium appears. Then there is the difficulty in bringing about a modification in the *real* (as opposed to the nominal) exchange rate when wages are indexed. Finally, there is also the inflationary bias that currency depreciation is likely to bring about. We already discussed these points, and we want to add just a further argument which also counters, at a more fundamental level, the aforementioned criticism of the post-Keynesian theory of economic growth. This additional argument is important because it dismisses the idea that growth will tend to be supply-constrained in a free market economy.

Let us consider a situation where the balance of payments is the binding constraint on long-run growth, in the sense that the growth rate of output at full utilization of resources tends to be accompanied by external disequilibrium. Further, let us suppose that this brings about a currency depreciation not followed by a nominal wage rise. Does that mean that, on account of exchange rate flexibility, the economy will now grow at the full utilization of its resources? Not at all. The reason is simply that currency depreciation may also bring about a contraction of aggregate demand, so much so that the latter would become the *binding* constraint on the level of output. Moreover, this new situation may turn out to be lasting, and not simply a transient one.

Indeed, the contraction of output and employment may be drawn out due to the detrimental effects of both profit falls and reductions in the degree of utilization of capacities on investment decisions and future investment. In other words, the short-run negative impact of currency depreciation may extend into the long run.

Lastly, *with regards to policy inferences*, our discussion does not lead to the conclusion that fixed exchange rates are to be preferred to flexible exchange rates. Nor is it conducive to the monetarist hypothesis that the exchange rate cannot be used as a policy instrument. We do acknowledge that the excessively long use of some form of fixed exchange rate regime has led several countries to experience macroeconomic distortions and 'twin crises' (exchange rate and banking crises). For instance, the role of the old gold standard as an automatic balance of payment stabiliser and, more recently, the use of rigid pegs (Mexico during 1988-1994, Brazil and Russia until 1996, Indonesia, South Korea and Thailand until 1997 and Turkey until 2000) and currency boards (Argentina until 2000) as a nominal anchor for inflation provide conclusive empirical evidence for the case in point.

The issue to be considered is two-fold: 1) the analysis of the relationship between the choice of competing exchange rate systems and their relative merits and 2) its implications for the Keynesian effective demand and employment problems. We do believe that both ought to be based on a definition of the fundamental equilibrium level of the exchange rate in terms of "the full employment exchange rate consistent with sustainable capital flows" (Thirlwall 2003, p. 98). The empirical evidence available shows that neither fixed, nor freely flexible exchange rate systems have produced output and monetary stability in this relevant Keynesian connotation. Most likely, extreme exchange rate regimes are not capable of this. Instead of policy passivity, strategies of managed exchange rates and managed capital mobility are better options (Palley 2003). The positive experience of Chile (1990-2005) and South Korea (before the early 1990s) with pragmatic exchange and capital policies, to name just a few cases, can be invoked in support of our conclusion.

We do believe that the exchange rate can and should be used to help redress the balance of payments. This is especially true because nowadays trade faces relatively few barriers, meaning the price-elasticity of demand is likely to be much higher than in the past. However, since taking advantage of improved competitiveness may require trans-

fer of resources between sectors, and since domestic demand and income distribution may be negatively affected by currency depreciation, other policy measures should be taken to better supply conditions and compensate for the adverse effects. For example, an expansionary credit policy might contribute to raising the elasticity of supply, as well as to allowing firms to withstand any rise in their indebtedness ratio and stimulating investment. Likewise, subsidies directed to the poorest strata of the population can compensate for the price hike of necessities brought about by currency depreciation. While beyond the scope of this article, we contend that a reconsideration of policy measures for withstanding adverse external shocks would present quite a different perspective if based upon the argument we have presented.

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