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by

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Abstract

A recent literature introduces autonomous demand as the driver of long-run economic growth and as a stabilizing force that tames Harrodian instability. The argument is unconvincing. The stabilizing effect is modest for plausible parameter values and, more importantly, it is questionable whether any components of aggregate demand can be viewed as autonomous in the long run. By contrast, models that include the supply side (the labor market) and/or economic policy can address Harrodian instability and produce level and growth effects that resemble those derived in the literature on autonomous demand.

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1 Introduction

Neo-Kaleckian growth models have (i) focused almost exclusively on the goods market, (ii) extended a short-run 'Keynesian stability condition' to the long run, and (iii) derived wage-led results that depend on large induced variations in the utilization rate of capital. The models have been met by persistent criticisms from classical, Sraffian and Harrodian perspectives.[1] The Harrodian version of the critique makes two interrelated points. The utilization rate of capital should not be treated as an accommodating variable; as a first approximation the utilization rate must be equal to the desired rate along a warranted growth path. The warranted growth path, second, is likely to be locally unstable.

A recent literature picks up on these Harrodian themes, suggesting that the instability can be tamed if the growth rate of some component of aggregate demand is given exogenously.[2] The attractiveness of this autonomous-demand mechanism appears to rest in large part on a perception that it is particularly 'Keynesian'. Sraffians see autonomous demand and the associated 'supermultiplier' as a way to combine an exogenous distribution of income and a normal rate of utilization with demand-driven growth; neo-Kaleckians welcome the models because they preserve neo-Kaleckian results such as the paradox of thrift and the paradox of cost. The stabilizing effect of autonomous demand is quite weak, however, and Harrodian instability can be addressed by introducing feedback effects from the supply side (the labor market) and/or economic policy. These feedback effects have theoretical and empirical support. They are also perfectly Keynesian: Keynes ignored neither the supply side nor economic policy.

Disregarding questions about the stabilizing potential of autonomous demand, there would be a strong case for including autonomous components of demand in models of economic growth if any such components could be identified. A number of candidates have been suggested, but the literature has focused primarily on a theoretical analysis of the implications of having a component of demand that grows at a constant rate. There has been little attempt to justify the autonomous-demand assumption, and the assumption is questionable, both theoretically and empirically.

Section 2 provides a brief review of the stability question. Section 3 questions the role of autonomous demand in the long run. Section 4 discusses a short- and medium-run interpretation of the autonomous-demand argument. Section 5 considers the role of the labor markets and economic policy for the stabilization of the Harrodian dynamics. Section 6 contains a few concluding remarks.

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[1] See, among others, Committeri (1986), Kurz (1986), Auerbach and Skott (1988), Dumenil and Levy (1999), Shaikh (2009), Skott (2012). The neo-Kaleckian model was laid out in Rowthorn (1981), Dutt (1984) and Marglin-Bhaduri (1990).

[2] See among others, Serrano (1995), De-Juan (2005), Serrano and Freitas (2015a, 2015b), Allain (2015a, 2015b), Cesaratto (2015), Dutt (2015), Girardi and Pariboni (2016), Pariboni (2016) and Lavoie (2016). Other contributions, including Hein (2016), explore the implications of autonomous demand in models without Harrodian instability.

2 Stability conditions and calibration

The combination of autonomous demand with a simple Harrodian investment function typically gives rise to a two-dimensional system of differential equations. Focusing on Lavoie's (2016) model, Skott (2017a) argued that the steady-growth solution is unlikely to be stable for any plausible set of parameter values. The precise stability conditions depend on the detailed assumptions of the model, but the basic structure is similar across different versions, and the weakness of the stabilizing autonomous-demand effect is quite intuitive: a sizable proportion of aggregate demand would need to be determined independently of the trajectory of actual income in order to provide significant amounts of stabilization.

In his response Lavoie (2017, pp. 2) does not challenge the numerical calibration of the model. Instead, he argues that "checking for plausible values in such abstract models is a meaningless exercise" and that "Skott takes overly seriously the worth of the little models that we build for exposition and heuristics purposes". Quoting Franke (2017a), he goes on to suggest that proportional taxes may overcome Harrodian instability.

This is a peculiar response. The literature has analyzed the stabilizing effects of autonomous demand and claimed, in Lavoie's words, that "the Harrodian principle of dynamic instability gets tamed by the presence of autonomous consumer expenditures" (Lavoie 2016, p. 172). If stabilization is achieved through other mechanisms, including fiscal policy, why claim that autonomous demand does the stabilization?

The broader admonition against 'checking for plausible values' and taking models 'overly seriously' is misguided, too. The autonomous-demand literature relies on the simple models to support its stability claim, and this claim is intrinsically quantitative. Whether or not stability is being achieved depends on the relative magnitudes of different effects. A stability claim cannot be made without judgments – implicit or explicit – about numerical magnitudes and 'plausible values'. If the models are too abstract to allow meaningful quantitative calibration, the stability claims in the autonomous-demand literature become meaningless.

Models represent thought experiments that isolate particular factors and effects. The formalization can provide clarity and facilitate a quantitative analysis, but clearly one has to be cautious in real-world applications. A model that has been designed to explore a particular mechanism cannot predict or fully explain real-world outcomes that are influenced by many other mechanisms. This cautionary note does not make the consideration of numerical magnitudes irrelevant for the analysis of the particular mechanism highlighted by the model. When analyzing fiscal policy – which is only one determinant of macroeconomic outcomes – we want estimates of the likely magnitude of fiscal multipliers, and empirical evidence on consumption behavior will inform these estimates. Analogously, if we want to analyze the stabilizing effects of autonomous demand, we need numerical estimates of, inter alia, the share of autonomous demand in

total income.[3]

3 The exogeneity assumption and 'the long run'

The literature has considered several potential sources of autonomous demand, including exports, private consumption, residential investment and government consumption. I shall discuss each of these in turn.

3.1 Exports

Dutt (2015) and Girardi and Pariboni (2016) are among the studies that include exports as a source of autonomous demand. The rationale may seem obvious and unquestionable: foreign income is an important determinant of exports, and exports make up a significant proportion of aggregate demand in small open economies. There is a problem, however. A single country could be stabilized by exports, but the argument does not carry over to the world economy. For the economic system as a whole there are no exports. An appeal to exports as the source of autonomous demand makes the analysis intrinsically partial, and any attempt to extend the conclusions to the system as a whole would involve a fallacy of composition. Country i may be stabilized by and have its growth rate determined by the rest of world, but this leaves open the determination of the growth rate in the rest of the world.

Disregarding the partial nature of the analysis, one may question the exogeneity of exports. Foreign income is an important determinant of exports, and if the home country is small, foreign income and its growth rate can be taken as exogenous. But foreign income is not the only determinant of exports: the competitiveness of the domestic export sector also matters, and the real exchange rate can be affected by a range of domestic factors, including interest rates and the level and growth rate of domestic demand.

3.2 Private consumption

Private consumption is at the center of the analysis in Serrano and Freitas (2015a, 2015b), Cesaratto (2015), Pariboni (2016) and Lavoie (2016).

Capitalists – or more generally, the rich – can draw on their wealth and need not be income constrained. Indeed, it may seem reasonable to assume that the rich leave some components of their consumption untouched in bad times. But that is not sufficient to make these components autonomous in the sense of the literature. Luxury consumption is notoriously cyclical, and if one component of capitalist consumption (luxury yachts and dinners at five star restaurants) adjusts strongly, total capitalist consumption can be income-determined, even if

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[3]A piecemeal examination of different mechanisms, one at a time, has other limitations. Mechanisms interact, and these interactions can produce unexpected results. As a simple example: two stabilizing mechanisms may destabilize a system if the two mechanisms are applied in combination (Ryoo and Skott 2017, Franke 2017b). The same problem, needless to say, afflicts any partial analysis, whether it is stated verbally or mathematically.

other components grow at a relatively constant rate. In fact, it may be difficult to think of any consumption component of the rich that is truly autonomous. Food consumption would be an obvious candidate, but although the rich will never go to bed hungry, the demand for Chateau Lafite or Beluga Caviar may depend heavily on the state of the economy.

It is logically possible, of course, that causation runs from capitalist consumption to aggregate income and that exogenous fluctuations in capitalists consumption drive the business cycle. But the literature has provided no argument to support this hypothesis, and the volatility and procyclicality of luxury consumption suggest that capitalist consumption is influenced by income.[4]

Basic consumption – the consumption of necessities – is another possible source of autonomous demand. The quantitative significance of basic consumption depends on the definition of necessities. Defined narrowly as the physiological minimum to ensure survival, the share of basic consumption in income is very small in advanced economies. Basic consumption, moreover, ceases to be autonomous if the sum of basic and discretionary consumption is determined by income. Using a broader social and historical definition of basic consumption, the argument faces another problem: community standards of basic consumption may be autonomous in the short run, but they evolve over time in response to trends in average incomes and consumption. Basic consumption, in other words, is not autonomous from a medium and long run perspective.[5]

Strong empirical evidence could alleviate these concerns, and a study by Wen (2007) has been highlighted by Lavoie (2016) in support of autonomous consumption. Wen finds that consumption growth Granger causes investment growth, and that the causal relation is unidirectional; investment growth does not Granger cause consumption growth.

The relevance of the Wen study and of Granger causality, more generally, for the issues at hand is unclear. Consider the following variation of the Hicks-Samuelson multiplier-accelerator model:

$$
\begin{aligned}
I_t &= \beta_1 Y_{t-1} - \beta_2 Y_{t-2} \\
C_t &= \alpha Y_t \\
Y_t &= C_t + I_t
\end{aligned}
$$

Straightforward manipulations imply that the change in investment can be written

$$
\Delta I_t = I_t - I_{t-1} = \frac{\beta_1}{\alpha} \Delta C_{t-1} - \frac{\beta_2}{\alpha} \Delta C_{t-2}
$$

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[4] In the great recession, according to the Daneshkhu and Simonian (2009),

> "luxury goods were the worst hit retail category in the last two months of 2008. Sales fell more than 34 per cent between November 1 and December 24, compared to the same period in 2007."

[5] The social determination of basic consumption is noted by Trezzini (2015) and Girardi and Pariboni (2016) . Because of this social determination Trezzini (2015, p. 192) refers to 'structural demand' rather than autonomous demand and explicitly links the movements in structural demand to past incomes.

The change in consumption is

$$\Delta C_t = \alpha \Delta Y_t = \alpha(\Delta C_t + \Delta I_t)$$

or

$$\Delta C_t = \frac{\alpha}{1-\alpha}\Delta I_t = \frac{\beta_1}{1-\alpha}\Delta C_{t-1} - \frac{\beta_2}{1-\alpha}\Delta C_{t-2}$$

Granger causality tests along the lines of Wen would show unidirectional causation from changes in consumption to changes in investment. There is no autonomous demand, however; investment is the only predetermined demand component in any short period; the dynamics are driven by investment; and essentially the multiplier-accelerator mechanism represents a simplified version of the Harrodian argument.[6]

The example is not being offered because it represents a good model of actual income dynamics (it does not). But it provides a simple demonstration that income-determined consumption can be compatible with the absence of any Granger causation from investment growth to consumption growth as well as with Granger causality from consumption growth to investment growth.[7] In fact, Granger causality from consumption to investment is exactly what the basic Harrodian argument predicts. In a capitalist economy firms invest because they believe that investment will generate future profits. Beliefs about the additional profits from new investment, in turn, will be informed by past levels and changes in demand. If consumption follows output closely, the result is Granger causality from consumption to investment.[8]

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[6] Following Serrano (1995), Serrano and Freitas' (2015) short-run investment function is given by

$$I = hY$$

The proportional, contemporaneous relation between I and Y is unusual, and I know of no compelling reason – empirical or theoretical – for the exclusion of predetermined investment in the short run. Since they exclude lagged income effects on consumption, their model requires some source of autonomous demand in order to produce a positive short-run level of output.

There is no such requirement in the dynamic multiplier-accelerator model. The short-run equilibrium for output is given by

$$Y_t = \frac{\beta_1}{1-\alpha}Y_{t-1} - \frac{\beta_2}{1-\alpha}Y_{t-2}$$

The stationary solution to this difference equation has $Y_t = 0$, but the stationary solution need not be stable. If, say, $\beta_1/(1-\alpha) = 2$, $\beta_2/(1-\alpha) = 0.9975$, $Y_0 = 1$ and $Y_1 = 1.15$, the solution can be written

$$Y_t = 2(1.05)^t - 0.95^t$$

Thus, Y_t is positive for all $t \geq 0$ and asymptotically the growth rate converges to 0.05.

[7] The dangers of conflating timing with causality have been stressed by Kaldor (1970) and Tobin (1970), among others. Commenting on Friedman, Kaldor (1970, p. 6) noted that

> Every schoolboy knows that cash in the hands of the public regularly shoots up at Christmas ... .Nobody would suggest (not even Professor Friedman, I believe) that the increase in note circulation in December is the cause of the Christmas buying spree.

[8] Girardi and Pariboni (2016) also examine Granger causality. They find long-run effects of (their definition of) autonomous demand on output but also note evidence "that causality

3.3 Residential investment

Residential investment is financed largely by credit (mortgages) and as such may seem a promising source of autonomous demand (Fiebiger 2014, Girardi and Pariboni 2016, Lavoie 2016). Residential investment has another potential advantage: if the growth rate of population determines residential investment, a convergence of the growth rate of the economy to the growth rate of residential investment may also equalize the warranted and natural growth rates, using Harrod's terminology.[9]

Unfortunately, the notion that residential investment is autonomous and grows at the natural rate does not meet simple behavioral and empirical tests. Residential investment is extremely volatile and bears no resemblance to the simple models in which autonomous demand grows at a constant rate. As with luxury consumption, one could claim that the volatile path of residential investment is indeed autonomous and that residential investment drives both the cycle and long-run growth. But the claim would be farfetched: do households determine their demand for housing independently of their incomes? Are households' ability to obtain mortgages independent of their incomes? Have interest rates no effect on residential investment and if they do, are movements in interest rates then also to be seen as independent of movements in aggregate income?

The trend in residential investment could be determined by population growth, even if the short-term volatility fails to be autonomous. The average long-run growth rate of residential consumption, however, is roughly the same as that of GDP, not that of employment or population. This pattern is not surprising. McMansions sprout when economies are booming and interest rates low; young people stay with their parents longer than otherwise when conditions are bad; per capita square footage and amenities increase with per capita income. Demography plays a role in housing demand. But it is a great leap from this observation to a claim that population growth *determines* the growth in housing demand.[10] There is an additional leap in claiming that a change in household spending on housing leaves no effects on household spending on other consumption (that is, that spending on housing is autonomous in the sense of the model).

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runs not only from Z to Y, as expected, but also from Y to Z" (p. 13). Another finding shows that changes in the growth rate affect the share of investment in income. This result is what a simple Harrodian argument would predict: if the utilization rate fluctuates around a constant desired value, an increase in the growth rate must raise the investment-output ratio.

[9] The natural growth rate – the growth rate of the labor supply in efficiency units – need not be an exogenously given constant. It may, for instance, depend on the emplyment rate, as in Flaschel and Skott (2006).

The equalization of warranted and natural growth rates would produce a constant employment rate in the long run. It would not, however, ensure that the employment rate takes a plausible value, or even that it stays below one.

[10] The problem is similar to that which invalidates the use of basic consumption: if the basic need for housing is socially determined, then the medium and long run growth in residential investment cannot be taken as independent of the growth rate of incomes.

3.4 Government consumption

Government consumption is highlighted by Allain (2015a) and Hein (2016) and also included by Dutt (2015), Girardi and Pariboni (2016). As a source of autonomous demand it may seem immune to the problems associated with private consumption and residential investment. Unlike agents in the private sector, the government can tax and print money; absent supply side constraints, government spending could be completely autonomous. Government consumption, moreover, makes up a significant proportion of aggregate demand in most advanced economies.

The fact that government spending *could* be autonomous does not imply that it is useful to approach government spending (and fiscal policy, more generally) in this way. Governments may have the ability to set fiscal policy independently of movements in other components of aggregate demand, but is there any evidence that this is how governments actually operate? And disregarding the descriptive accuracy with respect to actual behavior, are there good reasons to recommend autonomous spending policies of this kind?

There is no doubt that government consumption – and fiscal and monetary policy, more broadly – can be stabilizing. In fact, capitalist economies may not be viable without this stabilizing influence from a non-capitalist sector; I shall return to this issue in section 5. But a stabilizing government does not imply the long-run exogeneity of government consumption. Policy makers have not increased government consumption at a constant, exogenously given growth rate. The growth rate of government consumption varies. Some of the variations may be deemed autonomous from a short and medium run perspective; examples include changes in defense spending associated with military conflicts or changes in public education following a change of government. Other variations, however, are closely related to advances in income and technology; an example could be increases in health spending as new treatments become available. Some changes in government consumption, finally, represent discretionary stabilization policy; stimulus packages like the American Recovery and Reinvestment Act of 2009 exemplify this category. Tax revenues also exhibit variations, both as a result of automatic stabilizers and because of discretionary policy.

Overall, the exogeneity assumption does not match actual government behavior. Prescriptively, it would also be hard to justify policies that set government consumption and other fiscal parameters without any feedback from the performance of the economy. The appropriate size of the public sector is contentious, but it is hard to see how the desirability of any given amount of government consumption can be discussed without reference to aggregate income. The assumption of an exogenously given growth rate therefore seems misguided. Fiscal policy, moreover, may be needed for Keynesian reasons. It may make sense for believers in the stability and optimality of market outcomes to follow Friedman and advocate simple policy rules of this kind. But matters are different if markets are prone to instability and lead to poor outcomes. Under these conditions there is a need for well-designed policy intervention. Lerner's (1943) notion of functional finance embodies this view: fiscal and monetary pol-

icy should be adjusted so as to maintain full employment and a desirable level of investment.[11] This approach is very different from simply assuming exogenous trajectories for government consumption and other fiscal parameters.

4 Medium-run interpretations

Several contributors have suggested that the exogeneity of the growth rate of autonomous demand should be viewed as a medium-run phenomenon. Lavoie (2016) concedes that "in the long run there is no truly exogenous variable" (p. 194) and suggests that "neo-Kaleckian authors never had a long-run steady state in mind" (p. 175). Pariboni (2016, p. 222) is more specific, arguing that autonomous demand and the supermultiplier may "help explaining specific periods, episodes or modes of accumulation (and the seeds of forthcoming crises) within them as, for instance, the consumer debt-led growth of the 'Great Moderation' era that preceded the 'Great Recession'".

A short- and medium-run interpretation of the autonomous-demand argument raises several questions. If short- and medium-run shocks to autonomous demand are to exert a stabilizing effect on an economy that suffers from Harrodian instability then somehow the timing and magnitude of the shocks must match the needs of the economy; a positive shock to autonomous demand, for instance, is destabilizing in an overheating economy that experiences upward instability. It is not clear why the pattern of shocks would tend to be stabilizing if the shocks are exogenous. The question is not whether exogenous demand shocks can hit the economy and have induced effects on investment. Of course they can. The question is whether housing bubbles, military buildups or other autonomous movements in demand can be expected to stabilize a Harrodian economy.

Could it not be argued that long-run analysis becomes irrelevant in a world of fundamental uncertainty, that a medium-run analysis of the effects of exogenous movements in autonomous demand is all we need, and that the literature has provided this kind of medium run analysis?[12] This argument may seem appealing, but it is unsustainable as a defense of the autonomous demand literature: the literature on autonomous growth has itself been cast in terms that are intrinsically long run.

Assuming that autonomous demand grows at a constant rate, the literature has examined the existence and local stability properties of a steady growth path in which all components of demand – autonomous as well as induced – grow at this constant rate. Intuitively, a medium-run interpretation of this approach would suggest that the effects of a financial bubble (or other temporary shocks) can be analyzed by focusing on the steady-growth implications that

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[11]Ryoo and Skott (2013, 2017) analyze functional finance in a stock-flow consistent corporate economy; see Skott (2016) for a broader discussion of fiscal policy and public debt in relation to 'secular stagnation'.

[12]Dutt (1997), Hein (2014) and Lavoie (2016), among others, appear to be making an argument along these lines.

would follow if the financial bubble were to last forever. The bubble will not last forever, and these steady-growth implications are of little interest unless the convergence to steady growth is fast. The convergence, however, cannot be fast. Fast adjustments to steady growth would require that accumulation respond quickly to changes in aggregate demand, and fast adjustment in accumulation is destabilizing in a Harrodian setting.[13] The model cannot produce both fast adjustment and stability.

The broader claim about the irrelevance of long-run analysis under conditions of fundamental uncertainty must also be rejected. Needless to say, the long-run dynamics of a stylized model will never get to be played out in their pure form in any real economies. We can be sure that unexpected events will intervene; new inventions may revolutionize production, political movements may force radical shifts in the legal and institutional framework of the economy, or wars may throw an economy into turmoil. But uncertainty and the knowledge that 'something' is bound to happen do not justify a neglect of the medium- and long-term consequences of the *mechanisms that are being studied*. Fundamental uncertainty, for instance, does not imply that we should ignore the long-run effects of carbon emissions. A large meteor may destroy all life or a genius may come up with a magic solution that eliminates the ill effects of carbon emissions. But these uncertainties do not justify a focus on the short run and a neglect of the long-run consequences of emissions.

5   Labor markets and the supply side

So far, the argument has been negative: the autonomous-demand literature has not, in my view, provided a convincing theory of long-run growth and, more specifically, a way to reconcile Harrodian investment dynamics with the stylized facts. But a stripped-down Harrodian model of the goods market also fails to provide a good story for real-world economies: we do not generally observe cumulative divergence from steady growth. Advanced economies fluctuate, but the movements in the employment rate typically stay within a relatively narrow range.

The conversion of Harrodian instability into bounded fluctuations can be explained by feedback effects from the labor market and policy intervention. Consider a process of upward Harrodian divergence. Utilization rates above the desired level lead to rising accumulation rates which boost aggregate demand and raise utilization even further. This process is subject to obvious supply-side limits: there is an upper limit on the utilization rate, and prolonged periods of high growth will run into labor constraints. These supply-side constraints influence firms' investment and price/output decisions. Why invest in new capacity if it is becoming increasingly difficult to find workers to operate the new capacity? Why try to expand output if tight labor markets make it impossible to attract workers without having to raise wages above what other firms are paying? More generally, as emphasized by Marx and Kalecki, high employment

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[13] Skott (2017a) considers this issue a greater detail with respect to Lavoie's (2016) model.

can be bad for 'discipline in the factories' (Kalecki 1943) and depress firms' employment and investment decisions. In short, the supply side in a broad sense provides a ceiling on upward divergence through a variety of mechanisms.

It is harder to establish a floor under the downturn. The same factors that establish the ceiling will work in reverse. When unemployment is high, firms can pick and choose from an ample supply of well-qualified workers, and the general business climate will benefit from weak and disciplined workers. Using US data, Skott and Zipperer (2012) find negative effects of the employment rate on both the accumulation rate and the growth rate of output. Other endogenous mechanism may supplement these forces. Skott (1989, p. 242) considers the possibility that "low rates of employment cause an upsurge in small scale business" and that the employment rate may "influence the share of saving in income (low employment rates implying low shares of saving)".[14] But the built-in feedback effects may be too weak to stabilize a pure capitalist economy and insure against a complete collapse (Skott 1989, Nakatani and Skott 2007). This conclusion is not invalidated by real-world evidence: empirically, the world has never seen a pure capitalist economy. Non-capitalist sectors – traditional agriculture, for instance, or a public sector – have always coexisted with the capitalist sector. As pointed out by Cesaratto (2015), Luxemburg and Kalecki are among the writers who have emphasized the importance of these external sectors.

The public sector is the largest and most promising external sector in advanced economies, and Fazzari et al. (2013) introduce government consumption as a floor under the downturn in a Harrodian model. They take the growth rate of government consumption to be exogenous, and in this respect their argument follows an autonomous-demand approach. There is no convergence to steady growth, however. Instead, a full-employment ceiling is used to curtail upward divergence, and the model generates endogenous cycles. This cyclical property does not require the equality between the growth rate of autonomous demand and the natural growth rate. But the predicted growth pattern "seems somewhat unrealistic" (Fazzari et al., 2013, p.17) unless the growth rate of autonomous demand is assumed equal to the natural rate of growth. There would be no reason for this condition to hold if the growth of government consumption were exogenous. But policy is not set independently of the evolution of incomes and employment. It responds to movements in the employment rate as well as to movements in inflation and other variables that are affected by employment.

The feedback effects from the labor market to firms' employment and investment decisions and to economic policy counteract Harrodian instability, prevent cumulative divergence, and equalize the warranted and natural growth rates. The autonomous-demand literature has largely ignored these feedback effects. It seems that for some reason the effects are seen as un-Keynesian or insufficiently heterodox. Following Garegnani, Cesaratto (2015, p. 154) defines the 'Keynesian Hypothesis' as the idea that "investment is, in both the long run

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[14]See Allain (2015b) for a recent model in which the average saving rate depends on the employment rate.

and the short run, independent of the savings that would be forthcoming from the normal utilisation of productive capacity". Autonomous demand, he argues, "overcomes the formal deficiencies of previous models" (p. 178) and makes it possible to extend this hypothesis to the long run. Serrano and Freitas (2015b) suggest that the introduction of autonomous demand represents a "true heterodox alternative" because it allows for a "reconciliation of demand-led growth, exogenous distribution and a tendency to normal degree of capacity utilization" (p. 17). Lavoie (2016) repeatedly highlights the ability of the autonomous-demand approach to safeguard the main Keynesian message and concludes that "the paradox of thrift or the paradox of costs can be preserved ... by taking into account an autonomous growth component" (p. 195).

These are curious arguments. Why is it desirable to have models in which investment is independent of saving in the long run? Saving decisions influence aggregate demand, and any reasonable theory will imply that sustained changes in aggregate demand affect investment (as implied by both neo-Kaleckian and Harrodian growth models). Investment may be largely predetermined in the short run, but investment is induced – and influenced by changes in saving rates – as soon as we move beyond the short run.

Why is an exogenous distribution of income particularly Keynesian and heterodox? More importantly, why is it sensible to assume that the distribution of income is independent of income and employment? Must true heterodox alternatives exclude a Marxian emphasis on the role of the reserve army of labor and its possible effects on income distribution and accumulation? Indeed, if Keynesian theory requires an exclusive focus on the demand side of the goods market, then Keynes himself would make a poor Keynesian.

Why single out autonomous-demand models for their ability to produce level effects that fit the 'paradox of thrift' and the 'paradox of cost'? The paradox of thrift – the contractionary effect of a rise in the saving rate – can be found in models based on feedback effects from the labor market (e.g. Skott (1989, 2015) and von Arnim and Barrales (2015)). In these models an increase in the saving rate reduces the employment rate and generates a level effect of the same kind as the one that can be found in the models with autonomous demand. The paradox of cost – a positive effect of a rise in the real wage on profits – ceases to be well-defined if the real wage is itself an endogenous variable (Skott 2017b). One can examine, however, the effects of changes in parameters that influence wage and price determination. As an example, an increase in the degree of competition (a reduction, ceteris paribus, in the markup and an increase in real wages) leads to a rise in employment and profits in Skott (1989). Thus, autonomous demand is neither necessary nor sufficient to 'safeguard Keynesian conclusions'. But needless to say, the safeguarding of specific, desirable conclusions – whether Keynesian, Marxian or neoliberal – is not a good criterion for model selection. The case for including the supply side and economic policy rests on behavioral plausibility and empirical evidence.

6 Conclusion

The literature on autonomous demand accepts the Harrodian investment argument. In order to stabilize the Harrodian dynamics, however, the share of autonomous demand would need to be very high. More importantly, the literature is built on a premise that is shaky, both theoretically and empirically: it is unclear why the trajectory of a significant proportion of aggregate demand would be independent of past, current and expected future income.

There is no doubt that autonomous forces influence demand in the short and medium run. Demand shocks can take a variety of different forms, and the effects can be important. But there is no reason why a stream of short and medium run exogenous shocks should offset Harrodian instability and adjust the actual growth path towards the (time-varying) warranted path. The autonomous demand literature, moreover, has been intrinsically long run: its focus on steady growth paths in which the growth rates of all other components of demand have adjusted to the growth of autonomous demand is inconsistent with a medium-run perspective.

There are other ways to reconcile the Harrodian dynamics with the evidence. Changes in labor market conditions influence economic policy and affect firms' output and investment decisions as well as income distribution and saving. These feedback effects from the labor market can convert the Harrodian instability into persistent fluctuations. Post-Keynesian macroeconomists sometimes seem to have an aversion to any supply-side argument, including feedback effects from the labor market. This aversion can make the autonomous-demand mechanism seem attractive, but the aversion is hard to understand. The labor market and the supply side matter, and there is nothing particularly Keynesian about an exclusive focus on the demand side of the goods market.[15] Keynesians rightly criticize contemporary macroeconomics for its neglect of aggregate demand. The answer is not to adopt a reverse Say's law and assume that whatever is demanded can and will be supplied.

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