Chapter Two

Growth and stagnation in mature and dual economies

The corrections made in this section will be reviewed and approved by master copier.

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Introduction

Some economies grow rapidly, others stagnate. The variation can be explained partly by differences in the initial levels of income and in the potential for technological catch-up. Not all poor countries grow rapidly, however. Senegal saw declining per capita income between 1960 and 1994 and did not return to its 1960 level until 2014. Individual countries also go through periods of ~~fast~~rapid and slow growth. In Brazil, an average growth rate of GDP per capita above 6% between 1968 and 1980 was followed by 20 years of stagnating per capita incomes.

Economic stagnation can occur for a variety of reasons. This paper addresses explanations that see an important role for aggregate demand and its interactions with the supply side. The emphasis on interactions between the demand and supply sides is in contrast to explanations that focus exclusively on either the supply side or the demand side. Most of the endogenous-growth literature falls into the first category. The second category is represented by some of the post-Keynesian literature. Prominent neo-Kaleckian contributions suggest that neither capital nor labor represents a constraint on long-run growth, contending that economic growth is determined by the growth rate of aggregate demand.

The post-Keynesian insistence on the importance of aggregate demand is well-founded. But the supply side is important too, and the conduct of aggregate demand policy must take into account the supply side constraints. The constraints vary across economies and, as a first approximation, a distinction must be made between “mature” and “dual” economies.

Labor is the binding supply side constraint on long-run growth in mature economies. An economy need not have “full employment” in order to be mature.[1] Labor becomes a relevant constraint on the medium- and long-run growth rate if attempts to raise the growth rate significantly through aggressive aggregate demand policies would generate labor shortages and inflation within a relatively short period. By this criterion the Japanese, German and US economies are labor constrained: official unemployment rates may be misleading but even taking into account discouraged workers, Chinese-style annual growth rates of 10 percent could not be maintained for more than a couple of years. In principle, immigration could alleviate impending labor shortages, but this route is blocked by political constraints.

Dual economies are different. Official rates of unemployment can be low in these economies. According to the ILO, the Indian unemployment rate is below 4%, but large amounts of hidden unemployment and underemployment make the figure almost meaningless. India may experience shortages of some types of skilled workers but underemployment, learning by doing, and the potential for technological catch-up imply that growth rates of 10 percent a year could be maintained for many years without a general labor shortage.

The modern sector in dual economies is constrained by a combination of low stocks of private fixed capital, inadequate public infrastructure, and shortages of human capital. The precise form of the capital constraint differs across countries, and the details are crucial in the formulation of concrete development policies. For the purposes of this paper, however, the point is simply that current resources must be invested in order to expand the modern sector.

The supply side interacts with the demand side. Mature economies, I shall argue, may suffer from a structural aggregate demand problem (“secular stagnation”). If this happens, sustained fiscal stimulus—fiscal deficits and/or a high public

debt ratio—will be needed to maintain full-employment growth. Dual economies, by contrast, face a structural transformation problem, and a sensible fiscal policy will typically avoid sustained deficits and high debt: high saving rates represent an opportunity to increase investment and the growth rate of the modern sector. It is not sufficient, however, to provide the space for investment. The private sector must have an incentive to invest, and macroeconomic stabilization policies that ensure sufficient demand for the modern sector will be needed; in open economies this requirement includes ensuring the international competitiveness of the domestic modern sector. Dual and mature economies both require short-run stabilization policies. The differences concern the role of aggregate demand policies in the long run.

Section Mature economies, functional finance, and secular stagnation considers the aggregate demand problem in mature economies. Section Dual economies and structural transformation discusses the structural transformation problem in dual economies. To illustrate the argument, Section Two cases: Japan and Brazil offers a brief discussion of growth and stagnation in Japan and Brazil.[Instruction: If th sections aren't numbered, this paragraph should be deleted or rephrased as follows:
" The next section considers the aggregate demand problem in mature economies. This is followed by a section on structural transformation problems in dual economies. To illustrate the argument, the last section offers a brief discussion of growth and stagnation in Japan and Brazil.]

Mature economies, functional finance, and secular stagnation

The nature of the long-run demand issue in mature economies can be illustrated by a few, simple equations. The first equation is the equilibrium condition for the goods market in a closed economy,

$$\frac{Y}{K} = \frac{C}{K} + \frac{I}{K} + \frac{G}{K} \tag{2.1}$$

[Instruction: Do not indent]As a convenient normalization, the familiar $Y = C + I + G$ equation has been divided through by the capital stock.

The ratio of government consumption to the capital stock is taken to be exogenous,

$$\frac{G}{K} = \gamma \tag{2.2}$$

The appropriate size of government is contentious. How much should we spend on prisons, public education, or public health care, for instance? These are important questions, but the answers should not be decided based on the exigencies of demand management, and debates on the appropriate size of the public sector are largely irrelevant for present purposes. The need for aggregate demand policy in the long run can be addressed independently of the precise level of the government consumption ratio.

The third equation represents straightforward accounting. In order to maintain full-employment growth and a constant output-capital ratio, the ratio of gross investment to the capital stock must be equal to the sum of the growth rate of the labor supply in efficiency units (n) and the rate of depreciation (δ) :

$$\frac{I}{K} = n + \delta \tag{2.3}$$

[Instruction: Do not indent]Using Roy Harrod's terminology, *I* shall refer to n as the natural rate of growth.

By definition, the output capital ratio is constant in steady growth, but its steady-growth value may be endogenous. With capital and labor as the only inputs, the cost of finance, and the wage rate determine the choice of technique.

Under perfect competition, the zero profit condition pins down the real wage for any given cost of finance, while under imperfect competition the real wage is determined by the markup and the cost of finance. Thus, if we take the degree of competition as given, the output-capital ratio (σ) can be written as

$$\sigma = \frac{Y}{K} = f(r) \tag{2.4}$$

where the real interest rate r is used as a proxy for the cost of finance.

Combining Eqs. (2.1)–(2.4), the condition for steady growth with full employment can be written as

$$f(r) - \frac{C}{K} = \gamma + n + \delta \tag{2.5}$$

The variables on the right-hand side of Eq. (2.5) are exogenous, and any adjustment has to come through the output-capital ratio (the real rate of interest) or the consumption-capital ratio. The question is, will these adjustments happen automatically or is there a need for active policy?

Models that have Ramsey optimization at their core suggest that there will be no need for policy. Full employment growth is maintained through a combination of endogenous adjustments in the saving rate and changes in the capital intensity. Moreover, the capital intensity will be socially optimal if the representative agent's utility function is used as the welfare criterion. The Ramsey case is extreme and highly special, however. Other models, including neoclassical overlapping generations models, traditional Keynesian models and stock-flow consistent models with a more developed financial sector give different answers. Strikingly, moreover, the answers are qualitatively similar across these different models.

Disregarding the extreme Ramsey case, the rate of interest could be chosen to influence the choice of technique and the output capital ratio σ. This route is the one taken by the Solow model and retained as an important element in the DSGE models that dominate contemporary macroeconomic theory. The Cambridge capital controversy cast doubt on the existence of a well-defined and known set of production techniques and showed that, if such a set exists, reswitching and capital reversing cannot be ruled out; a rise in the interest rate may lead to an increase in the capital intensity.[2] High levels of capital intensity, moreover, may be unambiguously suboptimal: if the intensity exceeds the level associated with the golden rule, per capita consumption could be raised at every moment by allowing a reduction in the capital output ratio.

Lerner (1943) outlined a better approach. Policy makers, he argued, should adjust fiscal and monetary instruments so as to achieve both full employment and a desirable share of investment in output.[3] In a growth context, the second target translates into a “desirable output capital ratio”: we have $I/Y = (I/K)(K/Y) = (n+\delta)(K/Y)$, and choosing the investment-output ratio corresponds to choosing an output capital ratio σ^*. Thus, Lerner's investment argument in combination with Eq. (2.4) implies that

$$r = f^{-1}(\sigma^*)$$

This requirement pins down the steady-growth value of the real interest rate, and policy makers must turn to fiscal policy to adjust aggregate demand and maintain full employment.[4]

I have taken government consumption as exogenous (Eq. 2.2), but taxes and transfers can be used to influence consumption and maintain aggregate demand at a level that ensures full employment growth. Private saving rates that are excessive in relation to the natural growth rate can be countered by a reduction in taxes and an increase in the government deficit; analogously, private saving rates that are too low call for contractionary policies.

Continuous adjustments of tax rates to satisfy the full-employment condition generate dynamic trajectories for government debt and private wealth. The change in government debt is given by $\dot{B} = rB + G - T$, and the rate of change of the debt-capital ratio, accordingly, can be written

$$\dot{b} = b\left(\hat{B} - \hat{K}\right) = \frac{\dot{B}}{K} - nb = \frac{rB + G - T}{K} - nb = (r - n)\, b + \left(\gamma - \frac{T}{K}\right) \tag{2.6}$$

where B, r, T, b denote the public debt, the interest rate, taxes and the debt ratio B/K; dots and hats are used to indicate rates of change and growth rates, respectively; that is, $\dot{x} = dx/dt$ and $\hat{x} = \dot{x}/x$. For any given specifications of the consumption function and the structure of taxation, the required ratio of taxes to capital is determined by the full-employment condition and the current value of the debt ratio b. Substituting this solution for T/K into Eq. (2.6) produces a one-dimensional differential equation to determine the dynamics of the debt ratio b.

The precise implications for public debt depend on the specification of consumption behavior and the structure of taxation. The qualitative properties are quite robust, however.[5]

A fiscal policy based on functional finance produces strong stabilizing effects on the debt-income ratio. An increase in public debt raises private wealth and stimulates consumption, and policy makers need to raise taxes in order to prevent overheating and inflation. This stabilizing effect is combined with the automatic erosion of the debt ratio B/K as the capital stock increases. The stabilizing forces could in principle be offset by the positive feedback effect from higher debt to increased interest payments. For plausible ~~parameter values~~specifications of the consumption function, however, the debt ratio converges to a steady growth value, $b \to b^*$.

The analysis stands in contrast to policy experiments in which the ratio of the primary deficit to income is kept constant and in which the stability conditions are more stringent. Policy experiments with constant primary deficits make little sense. Why would a government want to pursue policies of this kind? The economic analysis of monetary policy typically looks for “optimal” policies (or policy rules), given some welfare function and a model of how the economy operates. The functional-finance approach introduces Keynesian elements that are absent in contemporary DSGE-based analysis of monetary policy, but the search for appropriate policies is in a similar spirit: fiscal policy is adjusted to meet welfare targets, in this case maintaining full-employment growth.

Having established convergence, one may examine the determinants of the steady-growth debt ratio. An increase in the growth rate n, first, reduces the long-run value of the debt ratio b^*. This result, which is robust across models, has clear implications for the interpretation of negative correlations between debt ratios and the rate of growth. The influential study by Reinhart and Rogoff (2010) contained elementary spreadsheet errors, but a (milder) negative correlation remains after correction of these errors. Correlation, however, is not causation, and the above analysis shows that we should expect a causal effect from low growth to high debt: the natural growth rate was taken as exogenous, and the high debt unambiguously represents an effect, not a cause of low growth.[6] Expansionary fiscal policies are required precisely because the slow growth of full-employment output reduces the investment and aggregate demand.

The long-run debt ratio, second, depends on the structure of taxation. Taxing low-income households with a high marginal consumption rate produces a high debt ratio; taxing high income households with a low marginal consumption rate produces a low debt ratio. Tax reforms in many OECD countries have shifted the relative tax burden from the corporate sector and the rich toward low- and middle-income households. These shifts will tend to increase the long-run debt ratio if full employment is to be maintained.

Increases in inequality, third, tend to raise the private saving rate. To maintain full employment, the increase in equality must be countered by expansionary fiscal policy, and the long-run debt ratio will rise.

Paradoxically, fourth, high levels of government consumption produce low debt ratios in the long run. Austerity policies which aim to reduce public debt by cutting government consumption can have—and have had—devastating short- and medium-run economic and social consequences. The analysis shows that the policies will also fail on their own terms in economies with a structural demand problem: a return to full employment will require an increase in the debt ratio if the share of government consumption in income has been reduced.

Fiscal policy does not always follow a pure functional finance prescription—European austerity policy after the financial crisis is an obvious example. But real-world policies often amount to a kind of "impure functional finance." It is no coincidence that Japanese public debt rose rapidly from the early 1990s or that the US implemented a fiscal stimulus package in 2009. The analysis of functional finance therefore has real-world relevance. It is of descriptive interest because of automatic fiscal stabilizers and because policy makers facing high unemployment will be pulled toward expansionary discretionary policies. It is of prescriptive interest because it shows that fears of "debt unsustainability" are unfounded, but that the long-run debt implications depend, inter alia, on the structure of taxation and the size of the public sector.

There are complications and caveats. Economies, first, that do not issue debt in their own currency cannot control the interest rate on public debt and may be forced to default, a possibility that severely limits their policy space. Even if debt is being issued in a sovereign currency, second, the conduct of fiscal policy in open economies must consider the balance of payments and the real exchange rate as well as unemployment and inflation. High debt levels, finally, can have negative side effects with respect to the effectiveness of monetary policy and the intragenerational distribution of income. The complications must be considered carefully in concrete applications. But they invalidate neither the possibility of structural aggregate demand problems in a mature economy nor the general principle of functional finance. Fiscal deficits and public debt should be judged on their implications for economic outcomes that we care about; intrinsically, they are neither good nor bad.

Dual economies and structural transformation

It is the low natural rate of growth that puts a damper on investment and generates a structural aggregate demand problem in mature economies. This problem does not arise in dual economies: ~~fast~~rapid accumulation in the modern sector is desirable—the ~~faster~~higher the accumulation rate the better—and high accumulation rates are associated with high shares of investment in income.

The one-sector analysis of functional finance in mature economies~~in Section~~ Mature economies, functional finance, and secular stagnation ~~–~~can be used to analyze a dual economy if it is assumed that the modern sector can draw on an infinitely elastic labor supply from an informal, low-productivity sector but that otherwise each of the two sectors is entirely self-contained.[7] With these assumptions, the equilibrium condition (5) still holds for the modern sector. Unlike the mature economy, however, the modern sector in a dual economy is not constrained by the growth rate of the labor force in efficiency units, and Eq. (2.5) describes a tradeoff between accumulation and current consumption. If g denotes the accumulation rate, the equation can be rewritten

$$g + \frac{C}{K} = \sigma - \gamma - \delta$$

High current accumulation comes at the expense of low current consumption but improves future incomes and employment in the modern sector, and one can debate how to balance these concerns. In a dual economy, however, there are no structural aggregate demand problems: the expansion of current consumption is not the only way to maintain high demand. On the contrary, contractionary policies may be desirable as a way to squeeze consumption and create space for high accumulation. This association of ~~fast~~rapid growth with fiscal surpluses and low public debt comes with a caveat. Public investment in infrastructure, education, and health is crucial for successful development, complementing~~,~~ and crowding in private investment.[8] To the extent that ~~fast~~rapid growth of the modern sector is associated with a large share of government investment in total investment, the implications for government deficits become ambiguous.

Demand policy has short-run dimensions, and stabilization policies can be vital for successful development. Shocks to modern sector demand are amplified by both multiplier and accelerator effects, and Harrodian instability is likely in the absence of stabilizing intervention.[9] Upward instability and overheating of the modern sector will be curbed eventually by capacity ceilings, but can cause serious damage in the form of inflation and/or balance of payments crises if the instability remains unchecked until these limits kick in. Downward instability meets no similar capacity floors, and stabilization policy may be necessary to prevent crises and long-term stagnation. Macroeconomic volatility, more generally, deters long-term private investment, and aggregate demand policy in a dual economy should aim to secure a

stable macroeconomic environment with appropriate levels and growth rates of demand for the output of the modern sector. Recessions should be countered by expansionary measures but, equally important, overheating of the economy should be avoided.

Monetary policy in the form of inflation targeting has been the favored instrument of stabilization. This policy approach, however, poses significant dangers. To the extent that the use of interest rates to control inflation is successful, it may owe its success in large part to its effects on the real exchange rate. Exchange rate appreciation may bring down inflation, but overvalued exchange rates can do great damage: they hurt the international competitiveness of the modern (and overwhelmingly tradable) sector, put downward pressure on profitability and accumulation, and thereby sacrifice sectoral transformation and long-run growth. Large fluctuations in real exchange rates, more generally, impede the expansion of a modern sector, especially if the fluctuations turn into intermittent currency and balance of payments crises.[10]

Returning to the principle of functional finance, Lerner's original analysis considered the policy problems in mature economies with a well-defined position of full employment, and in these economies his two targets make sense. Many additional policy targets could be added, but aggregate demand policy arguably should focus primarily on employment and the balance between consumption and investment. Other policy instruments will be called upon for interventions that aim to address environmental problems, for instance, or reduce economic inequality.

Lerner's targets need to be modified in a dual economy. Observing large amounts of hidden un- and underemployment, it may be tempting to recommend an expansion of aggregate demand. But underemployment in a dual economy is not primarily the result of insufficient aggregate demand. If capital represents a binding constraint, the expansion of aggregate demand and current consumption can generate a toxic blend of inflation and economic stagnation. Fiscal policies should not be guided by a full-employment target but by a target for the balance between capital accumulation and current consumption (Skott, 2021).

Importantly, the tradeoff between current consumption and the rate of growth in dual economies need not imply a reduction in the living standards of the poor. The resources for investment can come from policies that curb luxury consumption. It should be noted also that large parts of “consumption” are mis-labeled and should be considered investment. Education is an obvious example but health care, food, and housing for low-income families also contain significant elements of investment: healthier and better educated children can raise future labor productivity and profitability in the modern sector and improve the prospects for future growth. Needless to say, the political and economic power of the elites can present formidable obstacles to egalitarian policies. It is a dangerous illusion, however, to believe that egalitarian priorities and ~~fast~~rapid growth can be achieved simultaneously without having to shift resources away from Mercedes cars, designer kitchens, and Guzzi handbags.

The analysis of dual economies in this section is at odds with many post-Keynesian growth models. The absence of labor constraints in these models is justified in applications to dual economies, but neo-Kaleckian versions of the models also ignore capital constraints and assume that a permanent increase in the share of consumption in income will raise the accumulation rate. This combination of long-run increases in the accumulation rate I/K and reductions in the saving rate S/Y is made possible by an increase in the utilization rate of capital. The output capital ratio is an endogenous variable in these models, and it is assumed that the long-run accumulation rate is very insensitive to persistent changes in the utilization rate of capital. This insensitivity is hard to square with goal-oriented behavior (Skott, 2012).[11] The models assume that, blinded by uncertainty and conventions, private firms willingly keep investing at a constant rate, even if they have large amounts of excess capacity. As the flip side of this assumption, a positive shock to demand—a reduction in saving rates, for instance—generates a large demand-induced increase in the steady growth value of the utilization rate and allows long-run increases in both the accumulation rate and the share of consumption in income. These neo-Kaleckian predictions, however, are behaviorally implausible and at odds the empirical evidence: countries with low shares of saving and investment in output do not tend to have high rates of economic growth (e.g., Girardi and Pariboni, 2020).

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Two cases: Japan and Brazil

The distinction between mature and dual economies and its policy implications can be illustrated by the experiences of Japan and Brazil.

Japan experienced 25 years of miracle growth as GDP per capita grew at an average annual rate of 8.2% between 1945 and 1970. The growth rate dropped to 3.6% between 1970 and 1990, and with average per capita growth of less than 1% between 1990 and 2019, Japan has become the poster case for secular stagnation. Interest rates have hit the zero lower bound, and public debt has climbed to more than 200% of GDP.

The Japanese economy was characterized by large amounts of hidden unemployment and underemployment until the late 1960s; Japan was a dual economy. Throughout this period, the labor supply to the modern sector was highly elastic, and there was a large potential for technological catch-up. As the experience of many developing economies demonstrates, these conditions do not ensure ~~fast~~rapid growth. In the absence of state intervention—improvements in infrastructure and education along with successful industrial strategies—the Japanese economy could have followed a very different, slow-growth trajectory. But the elastic labor supply and the catch-up potential were important by permitting ~~fast~~rapid growth. High growth rates, in turn, ~~was~~were associated with high investment demand which allowed the goods market to be in equilibrium, despite high saving rates.

Labor constraints began to appear around 1970, and by 1990 Japan was a world leader in many industries. Japan had become a mature economy. The growth rates of the previous period exceeded the post-1990 natural rate of growth, and a decline in the rate of growth was inevitable. But a combination of high saving rates and slow growth produced a structural aggregate problem (Nakatani and Skott, 2007).

With high saving rates, a low natural rate of growth and a reduced accumulation potential, Japan needed other sources of aggregate demand. The financial and real estate bubbles of the 1980s alleviated the incipient demand problems for a while, but when the bubbles burst, the public, and foreign sectors would have had to pick up the slack to maintain full employment. International political constraints excluded large and sustained trade surpluses, and domestic political constraints restrained fiscal expansion. The result was limping growth with persistent underperformance, weak labor markets, and deflationary tendencies.

The structural demand problems have been loosened, partly as a result of the rise in debt that has been allowed to take place. The fiscal expansion may have been weaker than it should have been, had the authorities followed a pure functional finance approach, but fiscal deficits and a large debt (corresponding to an increase in private wealth) have contributed to a decline in the saving rate; the household saving rate out of net disposable income has fallen from around 20% in the mid-1970s to about 2% after 2010.[12]

This broad story of Japanese growth and stagnation draws on both demand- and supply side elements. The fundamental change on the supply side was the transition from a dual to a mature economy. This transition and the associated decline in the share of investment in output led to structural demand-side problems. Looking ahead, China (and other fast-growing developing economies) will face a similar transition at some point.

The supply side appears in most accounts of Japanese stagnation, but typically in a very different way. The OECD Economic Surveys persistently push for “bold structural reforms” of the supply side while on the fiscal side the “top fiscal priority is reducing government debt” (OECD, 2015, p. 5). The fiscal priorities reappear in OECD (2019) which emphasizes how “fiscal sustainability requires a detailed consolidation plan” A plan of this kind becomes especially important, it is argued, because the government will miss its previous target of a primary surplus by 2020. The failure to reach this target “strengthens the case for an independent fiscal institution” (p. 22). There appears to be little or no recognition that weak aggregate demand may lie behind the failure to meet the earlier target and that economic performance would have suffered had the original plans for fiscal consolidation been carried out. The potential adverse demand effects of structural reforms that reduce age-related spending or increase inequality also go unnoticed.[13]

Like Japan, Brazil has experienced periods of ~~fast~~rapid growth and periods of stagnation, most recently a deep and prolonged recession starting in 2014.

The Brazilian economy benefitted from the commodities boom which saw broad indices of commodity prices treble between 2002 and 2008 and then—following a blip immediately after the financial crisis—return to and fluctuate around the 2008 level until 2014.

The commodities boom relaxed the balance of payments constraint, and Brazilian GDP grew relatively fast at about 4% between 2003 and 2011. The growth was driven in large part by consumption which increased at an average rate of about 5%. Private consumption was boosted by an impressive reduction in inequality; the Gini coefficient fell from

about 58% in 2002% to 52% in 2014. The real minimum wage increased by more than 5% a year between 2000 and 2014, and social transfers expanded significantly, partly as a result of the indexation of many programs to the minimum wage (Summa and Serrano, 2018). Policy intervention also contributed to a relaxation of credit constraints. Household debt increased from 10% of GDP in 2003 to more than about 25% by 2012; car sales more than trebled between 2002 and 2012; GDP from construction almost doubled between 2002 and 2012; and the ratio of employment in nontradables over tradables sector rose from about 1.15 in 2002 to more than 1.6 in 2015 (Garber et al., 2018).

Inflation was kept in check by an appreciation of the Real. Inflation, which had peaked at over 17% in 2003, declined rapidly between 2003 and 2007, as the exchange rate moved from 3.8 Reais to one US dollar in 2003 to 1.6 Reais to the dollar in 2008. From 2007, however, inflation started increasing again, rising from about 3% in 2007 to about 10% in 2014. The current account had moved into surplus in 2003—partly reflecting the rise in commodity prices and the benefits of a real depreciation of the Real between 2000 and 2003—but the surplus was short-lived. The current account returned to deficit in 2007, and the deficit widened in the following years.

By 2014 Brazil was already heading toward a recession when commodity prices dropped precipitously. A deep recession followed, ascendant right-wing movements are busily working to reverse the gains in income distribution, and as of 2019 output is still below its level in 2013.

This rough outline raises several questions. The large reductions of inequality were real achievements. But the distributional change would have become more sustainable and the economy would have been in a better state when commodity prices collapsed if the windfall gains from the commodity boom had been used to expand the formal sector. The relaxation of the balance of payments constraint could have allowed ~~faster~~higher rates of accumulation as well as some increase in consumption, without running up deficits on the current account. This did not happen. The share of investment in GDP increased modestly from a trough of about 18.5% of GDP in 2002–05 to about 21% 2006–08, but residential investment made up an increasing proportion of total investment, and the overall investment share stayed below its levels in the mid-1990s and far below the levels in the 1970s. The profit share started to fall from 2004 (Martins and Rugitsky, 2018).

The sources of Brazil's stagnation are quite different from those that led to Japanese stagnation after 1990. The commodities boom gave Brazilian policy makers extra degrees of freedom, but in order to achieve ambitious and sustainable gains for the poor as well as an increase in accumulation, it would have been necessary to confront entrenched interests and cut luxury consumption. The failure to do this meant that accumulation and real progress in the structural transformation of the Brazilian economy ~~was~~were sacrificed in favor of short-term gains.

In short, fiscal and monetary policies should be judged on their implications for outcomes that we care about. But aggregate demand policies that work well in one economy may be disastrous in economies with a different supply side. In mature economies with structural aggregate demand problems, fiscal deficits and high public debt ratios are needed in order for consumption to fill the gap between full-employment output and the sum of investment and government consumption. The challenge in dual economies is quite different: structural transformation requires resources for the expansion of the modern sector as well as incentives for the expansion to take place.

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Footnotes

Text Footnotes

[1] The very concept of full employment is poorly defined in economies with employment hysteresis. Employment hysteresis does not, however, eliminate constraints on the long-run growth rate of employment.

[2] Thus, if the f -function in Eq. (2.4) is differentiable, we may have $f'<0$, rather than $f'>0$; a Leontief production function without any choice of technique corresponds to the special case with $f' \equiv 0$. The general expression in Eq. (2.4) is consistent with all three cases, and for present purposes there is no need to impose any restrictions of the range and functional form of $f(r)$. The analysis neither requires nor excludes a neoclassical production function with smooth, well-behaved substitution and $f'>0$.

[3] A large Keynesian literature takes positions that are similar to functional finance (even if not always directly inspired by Lerner); examples include Godley and Lavoie (2007), Arestis and Sawyer (2010), Wray (2012).

[4] In the Leontief case without a choice of technique, the interest rate has no effect on the right hand side of Eq. (2.4), and it can be set to satisfy some other objective (to affect the share of income going to rentiers, for instance). The underlying determinants of σ^* and r^* are irrelevant for the subsequent analysis of the fiscal policy requirements.

[5] Ryoo and Skott (2013) consider a stock-flow consistent Keynesian model; Skott and Ryoo (2014) analyze a standard OLG model, and Skott and Ryoo (2017) a modified "Keynesian OLG model." An earlier paper by Schlicht (2006) derived some of the results using a traditional Keynesian model.

[6] Empirical studies show that slow growth tends to precede the rise in debt (e.g., Ash et al., 2017). It is difficult, however, to establish causal links between long-run growth rates and debt ratios from purely empirical methods.

[7] A more satisfactory analysis needs to consider the interaction between the modern and informal sectors; for example, Razmi et al. (2012) and Skott (2021).

[8] Not all modern-sector activities are equally conducive to long-term economic growth, and industrial policy can also play a decisive role in promoting structural transformation.

[9] Ryoo and Skott (2017) analyze fiscal and monetary policy rules in an economy with Harrodian instability.

[10] Martins and Skott (2020) analyze the effects of inflation targeting in developing economies. The argument in this section has affinities with development theory, both new and old; for example, Ros (2013), Bresser-Pereira et al. (2015), Damill et al. (2016).

[11] The analysis in this paper has gone to the other extreme: it was assumed that the utilization rate must be at a uniquely defined desired rate in steady growth. This simplifying assumption can be relaxed, however, without affecting the qualitative results.

[12] Rising debt is only one element behind this fall. Demographic changes and an aging population have also played an important role.

[13]

Demand-side explanations of Japanese economic stagnation have focused on inadequate fiscal and monetary policies in combination with the slowdown of investment following the bubble period in the late 1980s (Krugman, 1998). As far as they go, these explanations are in line with the argument in this paper. But until recently at least, there has been a tendency to view the aggregate demand problems as largely transitory implications of the bursting of the bubble, not as reflections of a structural, long run demand issue. This may be changing with the rediscovery of secular stagnation by Summers and others.

Abstract

Mature economies can suffer from structural aggregate problems (secular stagnation): full-employment growth may be impossible in the absence of sustained fiscal stimulus. The key problems in dual economies with high levels of open or hidden unemployment, by contrast, concern the composition of demand and the need to expand the modern sector. Dual economies face structural transformation problems, and excessive aggregate demand stimulus can lead to economic stagnation.

Keywords: Fiscal policy; Functional finance; Public debt; Secular stagnation; Structural transformation

Queries and Answers

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Query: Please verify and confirm the authorship details (author name and surname, affiliation, spelling of author's name and author's order) and amend if necessary.

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Q6

Query: Missing reference: Girardi and Pariboni (2020) is not listed in the “References” section; please provide complete reference details.

Answer: Girardi, D. and Pariboni, R. (2020) "Autonomous Demand and the Investment Share". Review of Keynesian Economics, 8(3), pp. 428-453