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Abstract

In this chapter, we focus on theories and models of growth that have their origin in Keynesian economics. Their common features are that firstly, growth is largely export-driven; secondly, increasing returns yield path dependencies and possible divergence; thirdly, full resource utilization is not guaranteed; fourthly, economic expansion may face a balance of payments constraint, even at the regional level; and fifthly, institutions matter. We first briefly contrast demand-driven growth theories with neoclassical and other perspectives in taxonomy of growth theories. We then show how growth in exports yields regional income growth via a multiplier that is positively associated with the propensity to consume locally produced output and the propensity to invest but

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negatively related to regional tax rates and the extent to which government transfers are countercyclical. We show that Verdoorn's law – economic expansion generates productivity growth – leads to both sustained export growth and steady-state income growth, with the latter in balance of payments equilibrium equaling the rate of growth of exports divided by the income elasticity of the demand for imports. Next, theories are reviewed that suggest that policies that encourage regional growth in wages and public expenditure can be growth enhancing. Finally, we argue that the effectiveness of such demand-driven growth policies depends on institutional settings.

14.1 Introduction

The models of economic growth that were discussed extensively in the previous chapters of this section of the major reference work can be broadly labeled as supply-side-oriented general equilibrium explanations of regional economic development. Given resources of labor and capital, preferences, and technology, the allocation and accumulation of regional resources is in supply-side growth models determined by market forces that generate a general equilibrium in which prices, wages, and profits are simultaneously determined with employment, the allocation of capital, and production in all sectors, including new capital goods. The demand side of the economy is in these models fully determined by this general equilibrium with, for example, consumption determined by factor incomes, prices, and the propensity to consume. Productivity improvements are in such general equilibrium models generated by implicit or explicit innovation sectors and by human capital investments that enhance the stock of knowledge. Such models may be either stylized or calibrated by regional data in the form of spatial computable general equilibrium (SCGE) models (Donaghy 2008). Dynamic versions of such models can describe how the production of capital goods and population growth in each period contribute to an expansion of the regional production factors that, jointly with technologically driven changes in factor productivity, determine growth. These models can provide a complete and detailed bottom-up quantitative description of the growth path of the regional economy.

However, regional economies often exhibit features that are inconsistent with the smooth adjustments and economic expansion that such general equilibrium models imply. Firstly, many goods in the regional economy have prices determined outside the region, modified by transportation costs. Secondly, local incomes may depend greatly on external demand for local production and on government transfers. Thirdly, barriers to the mobility of labor may lead to considerable differences in regional unemployment rates and wages. Fourthly, the available capital may be underutilized, or alternatively, finance for new investment may be constrained by unfavorable local expectations. Finally, the diffusion of technological change may also vary between regions and depend on local investment and entrepreneurial activity. It is these features of regional economies that have led to the development of regional models in which demand for goods and services produced by the region

becomes the main driver of regional economic activity. Textbook examples are the economic base model and the regional Keynesian multiplier model. When investment in the local economy is determined by the income generated by local production, or expectations of future income, and technological change is embodied in such new investment and also depends on the scale of local production, regional growth becomes then primarily dependent on the evolution of regional demand or dependent on an exogenous demand shock that triggers an endogenous growth process. Demand-led growth models are a key focus of this chapter. Following a discussion of demand-led growth models and the implications of a regional balance of payments constraint, we also briefly discuss related Keynesian theories of growth and theories that emphasize the role of institutions.

This chapter is organized as follows. The next section briefly outlines the taxonomy of theoretical perspectives on long-run growth, while [Sect. 14.3](#) highlights the central role that regional exports and other forms of regional exogenous demand, such as local government expenditure and infrastructural investment, play in determining regional economic activity. [Section 14.4](#) discusses a model of export-driven growth via productivity improvements that are assumed to result from regional expansion. We also show how limited export opportunities may generate a balance of payments constraint on economic expansion. [Section 14.5](#) presents theories that suggest how high wages and government consumption may trigger productivity improvements that can generate regional growth. [Section 14.6](#) considers the role of institutions. [Section 14.7](#) concludes.

14.2 Taxonomy of Theoretical Perspectives on Long-Run Growth

It is important to note that the various theoretical perspectives available on long-run growth are not necessarily contradicting but may offer different but often complementing perspectives on a complex reality. This is illustrated in [Fig. 14.1](#) which charts different economic schools of thought in terms of some of the key paradigms that may be emphasized in the study of economic growth. The first paradigm is that of a permanent tendency of the economy to move toward a stable equilibrium, driven by market forces. An alternative paradigm is that of path dependency, evolutionary change, and complex dynamics. A third paradigm emphasizes the need for coordination and intervention in dynamic processes in order to reach desirable goals. These three paradigms may be juxtapositioned with two additional guiding principles that are both dichotomies: a distinction between static and dynamic perspectives and a distinction between the policy goals of economic efficiency on the one hand and an equitable distribution of wealth and income on the other.

By combining the three paradigms with the two dichotomies, we obtain a classification that may be helpful to highlight the features and perspectives of different theories of economic growth. [Figure 14.1](#) provides a single example for each school of thought regarding economic growth. At the top, neoclassical theory

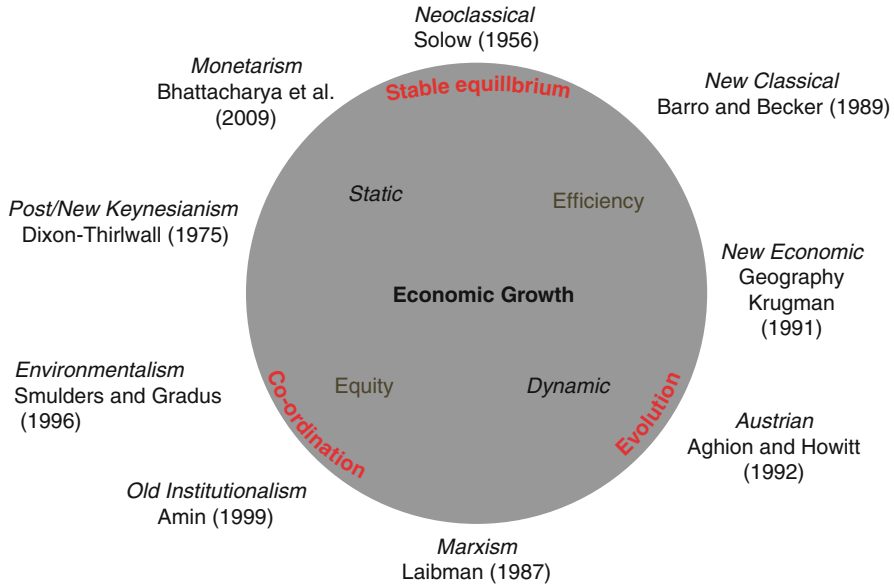


Fig. 14.1 Schools of thought on economic growth with selected examples

can be characterized by the emphasis on economies moving toward a long-run exogenously determined steady-state growth path, of which the Solow (1956) growth model is clearly the leading proponent. Toward the right, and emphasizing efficiency and micro-foundation-based rationality, even in terms of, for example, dynastic utility across generations, are new classical growth models such as Barro and Becker (1989). Moving away from stable equilibrium and toward dynamical systems modeling, one reaches core-periphery models of new economic geography, as first formulated by Krugman (1991). Next, toward even greater dynamical complexity and evolution, we reach Schumpeterian endogenous growth models of creative destruction (Aghion and Howitt 1992).

While having become largely a historical school of thought, completeness warrants inclusion of Marxist perspectives on growth, which are diagrammatically opposite those of neoclassical thinking (e.g., Laibman 1987). In the lower left quadrant of the figure in which equity and coordination are emphasized, we find institutionalism, also referred to as old institutional economics (e.g., Amin 1999) as discussed in Section 14.5, and models that are concerned with sustainability, externalities, and resource depletion (e.g., Smulders and Gradus 1996). Given the emphasis on rigidities, persisting unemployment but with nonetheless the possibility of long-run demand-driven steady-state growth, the post-Keynesian growth models are in the top left quadrant. The exemplar is the Dixon-Thirlwall model discussed in detail in this chapter. Finally, monetarist perspectives, originating from the ideas of Milton Friedman, also have been linked to long-run growth; see, for example, Bhattacharya et al. (2009).

14.3 Exogenous Demand Determined Regional Expansion

Demand-driven models of regional growth have their origin in the Keynesian theory of macroeconomic equilibrium. In this theory, equilibrium is determined by the equality of income generated by regional production and expenditure funded by this income, rather than by the available supplies of production factors. The latter are assumed abundantly available and short-run equilibrium may coincide with underutilization of the available capital, unemployment of labor, relatively rigid wages, and limited interregional migration. We develop the model largely along the lines of McCann (2001). Given the equality of regional income and expenditure,

$$Y_r = C_r + I_r + G_r + X_r - M_r \quad (14.1)$$

in which Y_r is value added or income, C_r private consumption, I_r gross fixed capital formation, G_r government consumption, X_r exports, and M_r imports, all referring to region r . Consumption expenditure is partially autonomous and partially a function of regional income:

$$C_r = AC_r + c_r Y_r (1 - \tau_r) \quad (14.2)$$

with c_r the marginal propensity to consume out of disposable income and AC_r representing autonomous consumption that is unrelated to regional income which, for example, could be consumption funded by national pensions. The parameter τ_r represents the regional average tax rate. Investment has similarly an autonomous component AI_r (e.g., reflecting expectations and replacement investment) and a component that is linked to regional disposable income:

$$I_r = AI_r + i_r Y_r (1 - \tau_r) \quad (14.3)$$

in which i_r is the marginal propensity to invest in new capital goods for given disposable income. Government consumption at the regional level will be the combination of expenditure initiated by local government and by national government. It is not implausible to assume that it negatively related to regional disposable income, as governments often have a nationally determined equity objective in which declines in regional disposable income due to depressed regional economic activity are partially offset by additional public consumption or by publicly funded private consumption through benefit payments. Hence,

$$G_r = AG_r - g Y_r (1 - \tau_r) \quad (14.4)$$

in which AG_r stands for autonomous public consumption and g measures the propensity of government consumption to be larger in regions with lower disposable income. Exports are partially autonomous (AX_r) and partially a function of income in the rest of the country and the world Z , the local price level p_r , the foreign

price level p_f , and the exchange rate e . Following Dixon and Thirlwall (1975) and others, this relationship is defined as one with constant elasticities rather than linearly. Hence,

$$X_r = AX_r Z^{\varepsilon_r} [p_f / (ep_r)]^{\eta_r} \quad (14.5)$$

The term $[p_f / (ep_r)]$ represents the price competitiveness of the regional economy in trade, with η_r the competitiveness elasticity of exports. Similarly, ε_r represents the world income elasticity of local exports (both elasticities may vary across regions).

Finally, imports are partially autonomous (AM_r) and partially a function of regional disposable income and price competitiveness of the regional economy in trade, again with potentially spatially varying elasticities, here π_r and μ_r , respectively:

$$M_r = AM_r [Y_r (1 - \tau_r)]^{\pi_r} [(ep_r) / p_f]^{\mu_r} \quad (14.6)$$

In order to make the model easily solvable, we assume that the elasticity of imports with respect to regional disposable income is one, that is, $\pi_r = 1$. This implies that for a given competitiveness of the regional economy, imports are proportional to disposable income. Defining $m_r \equiv AM_r [(ep_r) / p_f]^{\mu_r}$, Eq. (14.6) then simply becomes

$$M_r = m_r [Y_r (1 - \tau_r)] \quad (14.7)$$

Similarly, defining $x_r \equiv AX_r [p_f / (ep_r)]^{\eta_r}$, gives

$$X_r = x_r Z^{\varepsilon_r} \quad (14.8)$$

Substituting Eqs. (14.2)–(14.4), (14.7), and (14.8) into Eq. (14.1), and solving for Y_r , yields the equilibrium level of regional income:

$$Y_r = \{1 - [(c_r - m_r) + (i_r - g)](1 - \tau_r)\}^{-1} \{AC_r + AI_r + AG_r + x_r Z^{\varepsilon_r}\} \quad (14.9)$$

The first term on the right-hand side is the Keynesian multiplier. This multiplier, which we will denote by k_r , is expected to be greater than one because firstly, the marginal propensity to consume locally produced goods ($c_r - m_r$) is expected to be less than one; secondly, the regional marginal propensity to invest, corrected for countercyclical government transfers, is also expected to be between zero and one; and thirdly, the average tax rate is less than one. The Keynesian multiplier will increase when the marginal propensity to consume locally produced goods increases, when the demand for imports from other regions and countries declines, when the regional marginal propensity to invest increases, when government transfers are less countercyclical, and when the average tax rate declines.

The greatest source of regional fluctuation in autonomous demand is likely to be regional exports, which are – for given competitiveness – fully driven by incomes in

other regions and countries. If we assume that the other components of autonomous demand are constant, a change in regional exports (ΔZ^{e_r}) leads to the following change in regional income:

$$\Delta Y_r = k_r x_r \Delta Z^{e_r} \quad (14.10)$$

If q_r refers to average labor productivity in the regional economy, q_{x_r} refers to average productivity in the export sector, and these productivities are assumed to be constant in the short run, Eq. (14.10) can be transformed to one describing changes in employment:

$$\Delta T_r = k_r (q_{x_r} / q_r) \Delta B_r \quad (14.11)$$

in which T_r refers to total regional employment and B_r refers to employment in the export sector. The latter is often referred to as basic sector employment. All other sectors are then referred to as nonbasic sectors. Equation (14.11) shows that there is a multiplier relationship between basic sector employment and total regional employment. This multiplier is referred to as the economic base multiplier. The multiplier will be higher when the basic (export) sector has a relatively large demand for local inputs from nonbasic sectors. Given that labor productivity in the export/basic sector is likely to be higher than in the regional economy generally, that is, $q_{x_r}/q_r > 1$, the economic base multiplier would be larger than the Keynesian multiplier.

However, both models describe the short-run response of the regional economy to regional demand shocks but not long-run growth. In the model summarized in Eq. (14.9), sustained export-led growth requires either a sustained increase in external (“world”) demand for regional exports or continual productivity improvements in the regional economy that lead to sustained increases in regional competitiveness (i.e., increases in x_r and decreases in m_r). The next section describes such a model of trade and productivity growth.

14.4 The Kaldor-Dixon-Thirlwall Model

This model was first formulated in Dixon and Thirlwall (1975) but was based on ideas discussed by Kaldor (1970). In turn, the fundamental mechanism that drives regional growth along Kaldorian lines is the so-called Verdoorn’s law (following Verdoorn 1949) which states that labor productivity growth is positively correlated with output growth. Following Armstrong and Taylor (2000), we will assume that this correlation can be interpreted as a causal relationship in which output growth in any period causes productivity growth in the following period. Adoption of the notation that * refers to the growth rate of a variable, for example, $*Y_{rt} = (Y_{rt} - Y_{rt-1})/Y_{rt-1}$, Verdoorn’s law can then be expressed as follows:

$$*q_{rt} = *a_r + \lambda_r *Y_{rt-1} \quad (14.12)$$

with q_{rt} again being regional labor productivity and Y_{rt-1} regional output (which equals income), as in the previous section. Equation (14.12) states that the growth in regional labor productivity ($*q_{rt}$) in any given period is partially exogenous ($*\alpha_r$) and partially a function of output growth in the previous period ($*Y_{rt-1}$), with coefficient λ_r . Clearly, an empirically detected correlation between output growth and productivity growth is in itself not informative of the channels through which an increase in the scale of production leads to greater labor productivity. A range of models with increasing returns or agglomeration economies discussed elsewhere in this section of the major reference work and also included in the bottom right quadrant of Fig. 14.1 may yield such a relationship. What distinguishes the present model from those supply-side-driven models is that in the present context, the accumulation of resources is not made explicit. Nonetheless, it is clear that steady-state growth triggered by an expansion of demand can only exist if resource capacity utilization is stable in the long run (e.g., Setterfield 2010).

As is typical in a model of Keynesian origin, prices are a markup on costs. Consequently, regional price inflation $*p_{rt}$ is directly related to labor cost inflation $*w_r$, which is assumed exogenous, and to productivity growth:

$$*p_{rt} = *w_r - *q_{rt} \quad (14.13)$$

To close the model, current output growth $*Y_{rt}$ is assumed to be driven by export growth. In the simplest form,

$$*Y_{rt} = \gamma_r *X_{rt} \quad (14.14)$$

in which γ_r measures the export elasticity of regional output. To solve the model, we first linearize Eq. (14.5) by expressing the export demand function in terms of growth rates:

$$*X_{rt} = *AX_{rt} + \varepsilon_r *Z_t + \eta_r (*p_{ft} - *e_t - *w_{rt} + *q_{rt}) \quad (14.15)$$

The Kaldor-Dixon-Thirlwall model now consists of the four Eqs. (14.12)–(14.15) that can be solved to yield the following first-order linear difference equation for the growth rate of regional income:

$$*Y_{rt} = \gamma_r [*AX_{rt} + \varepsilon_r *Z_t + \eta_r (*p_{ft} - *e_t - *w_{rt} + *q_{rt})] + \gamma_r \eta_r \lambda_r *Y_{rt-1} \quad (14.16)$$

It is clear from Eq. (14.16) that when the exogenous variables are assumed time invariant, the time path of the regional growth rate is fully determined by the product of three parameters, namely, the elasticity of regional output with respect to “world income” (γ_r), the elasticity of regional exports with respect to regional competitiveness (η_r), and the extent of increasing returns in the regional economy (λ_r). A steady-state growth rate requires $\gamma_r \eta_r \lambda_r < 1$. Given

that regional exports are roughly a constant proportion of regional output, $\gamma_r = 1$. Similarly, in a small regional economy that is a price taker in global markets, the export price elasticity may be at most around one as well. These empirically based assumptions can be combined with estimates of the Verdoorn coefficient that are around 0.5 (e.g., Fingleton and McCombie 1998). Together, this suggests that Eq. (14.16) indeed may converge to a steady-state growth rate:

$${}^*Y_r = \{\gamma_r [{}^*AX_r + \varepsilon_r {}^*Z + \eta_r ({}^*p_f - {}^*e - {}^*w_r + {}^*\alpha_r)]\} / [1 - \gamma_r \eta_r \lambda_r] \quad (14.17)$$

which shows that the steady-state growth rate will be (i) positively related to local returns to scale or agglomeration benefits (a larger λ_r and/or a larger ${}^*\alpha_r$), (ii) positively related to sustained growth in external demand (a larger *Z), (iii) positively related to export-facilitating policies such as growth in port or airport infrastructure or structural change that benefits export industries (a larger *AX_r and/or ε_r), and (iv) negatively related to regional cost inflation (a larger *w_r or smaller η_r). Note also that according to Eq. (14.17), a change in world prices and/or the nominal exchange rate will have regionally specific impacts that depend on the regionally specific parameters γ_r , η_r , and λ_r .

If we combine the growth path of regional income as defined by Eq. (14.16) with regional expenditure given in Eq. (14.1), which is largely endogenous, it becomes clear that any net surplus (deficit) in a region's trade in goods and services with other regions and countries, given by $(X_r - M_r)$ in Eq. (14.1), is balanced by the region's net acquisition (disposal) of assets from elsewhere, or

$$Y_r - A_r = X_r - M_r \quad (14.18)$$

in which $A_r = C_r + I_r + G_r$ refers to regional absorption of income. It has been argued by Thirlwall (1980, 1997) that such a spatial redistribution of equity and debt cannot last forever. If a region has a balance of payments deficit, this deficit must be financed by borrowing from other regions or countries, which effectively increases the claims of outsiders on regional assets. Conversely, a region with a balance of payments surplus will acquire assets outside the region. Although this may be considered a less severe situation than a balance of payments deficit, sustained surpluses constrain the disposable income of other regions and countries, net of borrowing costs. Consequently, in the long run, the regional balance of payments will tend to equilibrium, which implies that export receipts (in foreign currency) equal import payments, that is,

$$e p_r X_r = p_f M_r \quad (14.19)$$

Rewriting Eq. (14.19) in growth terms gives

$${}^*e + {}^*p_r + {}^*X_r = {}^*p_f + {}^*M_r \quad (14.20)$$

If we assume that in the long run the exchange rate will adjust to a difference in the growth of local prices and foreign prices, that is, purchasing power parity holds in the long run or $*e + *p_r = *p_f$, then

$$*X_r = *M_r \quad (14.21)$$

From Eq. (14.6) we can derive that $*M_r = \pi_r *Y_r$ and from Eq. (14.5) that $*X_r = \varepsilon_r *Z$. Substituting this in Eq. (14.21), we see that long-run balance of payments equilibrium is only compatible with the following long-run growth rate of regional income:

$$*Y_r = \varepsilon_r *Z / \pi_r \quad (14.22)$$

In long-run balance of payments equilibrium, the growth rate of regional income is proportional to the growth in external income. The proportionality constant is regionally specific and equal to the ratio of elasticity of regional exports with respect to global income over the regional income elasticity of the demand for imports.

Given that $*Z$ does not vary across regions, Eq. (14.22) is an empirically testable proposition that long-run balance-of-payments-constrained regional growth rates are proportional to ε_r / π_r . Unfortunately due to data deficiencies, it is not easy to test this relationship, referred to as Thirlwall's law in the literature, at the regional level. The relationship has instead been tested empirically with cross-country and panel data. These econometric tests have yielded mixed results. Nonetheless, McCombie (2011) concludes in a recent review of this literature that "After over thirty years since its development, Thirlwall's Law is still proving a powerful explanation of why growth rates differ" (pp. 388–389). Both the evidence of contagion in the international economy (financial crises that start in one country quickly spread to countries that have a strong trading relationship with the former country) and the evidence of spatial spillovers in regional modeling indeed provide convincing support for the idea that economic growth in small open economies is strongly dependent on demand elsewhere. The challenge is, however, to derive policy recommendations from this empirical regularity. In this respect, Krugman (1989) argues that causation in Eq. (14.22) runs in the opposite direction: output growth leads to productivity growth. Sustained output growth coincides with an increase in varieties of output, quality improvement, other forms of innovation, and/or agglomeration. These processes lower unit production costs and enable regions to compete more effectively. Such scale effects may also lessen the reliance on imports. Together, these phenomena lead to a greater ε_r / π_r ratio.

In conclusion, demand-driven growth models and endogenous growth models have more in common than proponents of either tend to admit. The distinction is a matter of emphasis, both in terms of the underlying engine of growth and in terms of the time frame (e.g., Setterfield 2010). Verdoorn's (1949) law and Myrdal's (1957) theory of cumulative causation are consequences of behavioral and

technological phenomena that lead to increasing returns and that have been analytically formulated and empirically tested in endogenous growth models. Moreover, demand-driven growth theories emphasize short- to medium-term constraints in demand that lead to less than full resource capacity utilization, combined with slowly changing regional structures and some price and wage stickiness. In contrast, neoclassical growth theories emphasize the mobility of production factors and relative price adjustments in the long run that lead to trade following the emerging patterns of comparative advantage. As already illustrated in [Fig. 14.1](#), these different perspectives provide complementing rather than contradicting insights into regional economic development.

14.5 The Benefits of High Wages and Public Expenditure for Growth

From the end of the Second World War until the early 1980s, regional development in the Western world was heavily influenced by the principles of Keynesian economic management. Development policy, then, was highly interventionist and aimed to promote growth in less-favored regions through income redistribution and welfare programs (bolstering local aggregate demand), the provision of state-funded incentives to induce firms to locate in these regions, and through the funding of large-scale infrastructural investment with the dual aims of improving the productivity of existing firms and inducing new firms to locate in the region (Amin 1999, p. 365). As a consequence of such capital-oriented bolstering of demand, regional output and employment may be expected to grow, as shown in [Sect. 14.3](#). In the presence of increasing returns to scale, as modeled by Verdoorn's law in the previous section, the region's long-run growth rate may then be expected to increase. Martin (2005, pp. 2–7) provides a useful summary of the Keynesian approach (see [Table 14.1](#)).

In keeping with the reorientation of mainstream economics to micro-foundations and supply-side-oriented general equilibrium theory, Keynesian approaches to regional development, and demand-driven policies in general, fell from favor. However, this was more pronounced in the theorizing of regional development than in the practice, with practitioners and regional policymakers often resisting attempts by central government at introducing regional policy inspired by neoclassical economics. The move away from Keynesian approaches was not solely a function of hegemony of neoclassicism but also reflected the rather modest results achieved by Keynesian policy in lifting the long-run growth rate of particularly peripheral or “rust belt” regions. While there were conspicuous successes in implementing these policies, such as the Tennessee Valley Authority, there were (at least) an equal number of spectacular failures. Furthermore, there was a lack of theorizing of how growth could be maintained, a tendency for regional development agencies to fund activities that would have taken place at any rate (Pike et al. 2006, p. 77) or, worse, investment in activities for primarily short-run political

Table 14.1 Key elements of Keynesian theory

Key assumptions	Key driving factors
<ul style="list-style-type: none"> • Price adjustments might be slow, leading to adjustments in quantity • Markets are not necessarily in equilibrium • Shortages on demand or supply side • Possibility of “false” trading (i.e., with non-equilibrium prices) • Capital and labour are complementary 	<ul style="list-style-type: none"> • Capital intensity • Investment • Government spending, such as investment in the public domain and subsidies/tax cuts for enterprises
Implications for (regional) competitiveness	
<ul style="list-style-type: none"> • Governments can intervene successfully in the cycles of the economy: timing is crucial • Assumption of imperfect markets allows for regional differences • Convergence of regions can only be achieved through economic policy 	

Source: Martin (2005)

purposes. In addition, much investment in Keynesian policies was directed at maintaining declining industries in less-favored regions (LFR) that stood little chance of success once support was removed rather than in facilitating the growth of new industry or the mobility of workers both between regions and between industries or occupations. More generally it was difficult to see how the indiscriminate application of Keynesian policy would, in isolation, lead to higher levels of employment for the most disadvantaged or how these policies would contain inflationary dynamics (Mitchell and Juniper 2006, p. 14).

The regional development policy arising from neoclassical theorizing, however, fared arguably no better than the Keynesian in changing the fate of LFR with some, such as Amin (1999, p. 365) arguing that the results of the implementation of these policies were a “far worse outcome, by removing financial and income transfers which have proven to be vital for social survival, by exposing the weak economic base of the LFRs to the chill wind of ever enlarging free market zones, and by failing singularly to reverse the flow of all factor inputs away from the LFRs (i.e., no proof of price-seeking inflow of opportunities leading to regional specialisation in the appropriate industries).”

This failure, and subsequent events, such as the global financial crisis beginning in 2007, revived interest, particularly among those with social democratic or corporatist orientations, to look for alternate approaches. One such approach argues for demand- or wage-led strategies to underpin long-run sustainable growth as opposed to profit-led strategies that purportedly dominate “New Right” policy agendas.

The history of this wage-led growth approach is long with a lineage stretching back to debates in eighteenth- and nineteenth-century political economy on the possibility of what was then called “underconsumption.” Contemporary debates tend to take as their starting point the seminal works of Rowthorn (1981) and Dutt (1987), all influenced by Kalecki and to a lesser extent Keynes, and have been taken up by more recent authors such as Stockhammer, Palley, Lavoie, Naastepad, and others (see the *International Journal of Labour Research*, 2011, 3(2) for a recent compilation of work on this topic).

Taking Palley (2011) as an example of the wage-led approach to economic growth, it can be argued that prior to the 1980s, the economies of the Western world could largely be described by a Keynesian growth model “built on full employment and wage growth tied to productivity growth” (Palley 2011, p. 222). The logic of this model was that productivity growth drove wage growth which led to increased demand and hence full employment. This in turn incentivized investment which underpinned further increases in productivity thus the elements of this mode of development were linked together in a “virtuous circle,” which is consistent with Myrdal’s (1957) theory of cumulative causation and with the Verdoorn (1949) effect. Post 1980, this pattern of development was displaced by supply-oriented models of growth which renounced two key elements of the Keynesian growth model – namely, the commitment to full employment and the linkage of wage growth to productivity growth – replacing them with a focus on maintaining low levels of inflation, removing impediments to capital mobility, and reducing “rigidities” in the labor market. The shortfall in aggregate demand generated by stagnant or falling wages was met by increasing levels of debt and speculation-driven asset price inflation which ultimately compromised the systemic stability and reproduction of the global economy.

Hence, in Palley’s (2011) narrative, the current economic crisis is primarily a crisis of demand. Supply-side measures are therefore unlikely to improve matters and – in so far as they seek to reduce real wages in an attempt to restore profitability – may very well worsen matters considerably. Thus, the only alternative in his view is to rebuild the virtuous circle of the Keynesian growth model. To achieve this, he has a number of clear policy suggestions:

- Rebuild the wage-productivity link.
- Large-scale use of public expenditure to compensate for inadequate levels of private demand – particularly in private infrastructure.
- Refocus monetary policy on full employment.
- Reregulate the finance sector and focus it on the needs of the real sector rather than on speculation.
- Reform corporate governance to emphasize long-term objectives and to direct investment to the real sector.
- Direct any tax cuts at those with high propensities to consume, thus bolstering aggregate demand.
- Coordinate economic policy at an international level to eliminate long-run balance of payments deficits and surpluses and to protect the ability of nation states to engage in demand-led policies.

What then does this mean for regional development? A return to Keynes in terms of regional development requires a high level of national, probably international, coordination as without this it is hard to see that regions “going it alone” and pursuing Keynesian policies would not suffer from the equivalent of a balance of payments constraint or significant problems with debt financing, akin to nations pursuing such strategies in a currency union. Thus, demand-led growth is not a regional development policy as such but rather a national or international project within which regional strategies can be articulated.

Perhaps of more direct relevance to regional development is the work of Mitchell and Juniper (2006) and others advocating a new “spatial Keynesianism.” Speaking from a modern monetary theory (MMT) perspective, they eschew both the supply-side policies of neoclassicism and the generalized expansionist policies favored by Keynesians. Instead, they advocate policies that aim to achieve full employment, price stability, and environmental sustainability while preserving social settlements. The preservation of social settlements is justified both on equity grounds and to preserve networks and spatial spillovers (Mitchell and Juniper 2006, p. 20). Central to this approach is a job guarantee scheme designed to ensure full employment through the use of regionally targeted public sector employment at the minimum wage.

Under the job guarantee scheme, the state functions as an employer of last resort, providing a buffer stock of jobs that are available upon demand and as of right. This approach minimizes the impact of fluctuation in private sector demand – expanding in downturns and contracting as the private sector recovers. As the employment is at the minimum wage rate, the effects of the scheme are neither likely to distort the structure of the wage distribution nor prove inflationary. This last point is particularly important as the Keynesian approach lacks an explicit means of containing wage and price inflation, relying usually on income policy which has proved relatively ineffective and often counterproductive as it weakens the resolve of employers to rationalize and tends to hurt efficiency and investment projects.

14.6 Institutional Theories of Regional Growth

Institutional views on regional economic growth can be seen as belonging to one of two distinctly different viewpoints – “old institutional economics (OIE)” and “new institutional economics (NIE),” both of which emphasize the centrality of institutions in determining the economic trajectory of regions. While both OIE and NIE share a focus on institutions, they differ markedly in their conceptualizations of what constitutes an institution and are positioned very differently with respect to neoclassical economics. NIE is essentially a branch of neoclassical theory that emphasizes micro-foundations, although it rejects two central ideas of conventional neoclassical theory, namely, costless transactions and neutral institutions (Lakshmanan and Button 2009). OIE is however much closer to a wholesale rejection of the neoclassical paradigms.

Given that the focus of this chapter is on demand-driven theories of regional growth, this section will largely be concerned with the OIE though it should be noted that while the OIE and NIE share little in the way of common ground, at an abstract level their policy recommendations are often surprisingly similar, stemming from a shared view that regional-level industrial configurations, supply-side characteristics, and institutional arrangements, can play a critical role in securing the economic success of a region (Amin 1999, p. 368). As such the policy recommendations of institutionalists tend to go considerably beyond the traditional preserves of economic development, concentrating their attention on building the

wealth of a region, rather than the individual firm and often arguing for comprehensive renovation of the economic and social infrastructure of a region as a necessary precursor to the revitalization of economic activity in an area (Amin 1999, p. 370). Lakshmanan and Button (2009) provide an NIE perspective on regional development in which they emphasize the importance of institutions to benefit from positive externalities from education, healthcare, and infrastructure, as well as the importance of institutions for fostering entrepreneurship and innovation.

Following a line of theory development dating back to the works of Veblen, Ayres, Commons, and Mitchell, the OIE tradition argues that institutions not only act as constraints on economic actors but also are constitutive, in large part, of an individual's habits, preferences, and values as well as the range of actions available to them. Though the individual is born into a preexisting web of social relations, the relationship between the individual and the ensemble of institutions they are born into is not one of pure subordination but is reflexive in that the individual and institution(s) are mutually constitutive of each other, though institutions tend to have temporal priority over the individual. This line of reasoning is rooted in a conception of institutions that is considerably broader than those that conceive of them as largely being made up of the various organs of the state apparatus plus various legally constituted entities such as firms and trade unions. The OIE view of institutions is founded in Veblen's (1961) formulation, and its subsequent extensions, that institutions are "the settled habits of thought of the generality of men" or "systems of established and prevalent social rules that structure social interactions."

In terms of its methodological commitments, the OIE views with considerable antipathy the assumptions of neoclassical economics or of the new economic geography as developed by Krugman (1991, 1994) and others. OIE criticizes these approaches on the grounds of their (alleged) lack of realism and failure to adequately appreciate that economic processes are "embedded," operating within a social framework shaped by the history and culture of a region. Against the methodological individualism of neoclassicism, the OIE adopt holistic qualitative approaches such as in-depth case study research and largely reject formal econometric modeling on the grounds that it is incapable of capturing place-specific qualitative factors (such as culture and institutions) which they view as central to understanding differences in the economic trajectory of regions.

How then do these largely theoretical concerns translate into an understanding of the growth trajectory of a particular region? Martin (2005, p. 79) suggests that the starting point for enquiry within the OIE tradition is to pose the question "to what extent and in what ways are the processes of geographically uneven capitalist economic development shaped and mediated by the institutional structures?" The answer in the OIE literature emphasizes that regional economies are not collections of atomistic optimizing firms and markets, propelled by rational preferences operating under a common set of rules (Amin 1999, p. 367). Instead, OIE stresses the importance of geographical proximity, networking, embeddedness, and the development trajectories of regions, institutions, and technology in determining regional economic outcomes. Specifically Amin (1999, p. 368) derives a number of general axioms of economic governance associated with an institutionalist approach:

- “First, a preference for policy actions designed to strengthen networks of association, instead of actions which focus on individual actors.
- Second, that policy action should involve a plurality of decentralised and autonomous organisations since effective economic governance extends beyond the reach of both the state and market institutions (Hirst 1994).
- Third, within a frame of plural and autonomous governance, the role of the state, as the prime collective organisation with societal reach and legal power, should be that of providing resources, arbitrating between decentralised authorities, securing collective results, and, above all, establishing the strategic goal, rather than that of central planner or market facilitator (Hausner 1995).
- Fourth, the aim of policy action should be to encourage voice and negotiation, together with procedural and recursive rationalities of behaviour, rather than self-serving or rule-following behaviour, in order to secure strategic vision, learning and adaptation (Amin and Hausner 1997).
- Fifth, solutions have to be context-specific and sensitive to local path-dependencies.
- Sixth, there is a need to encourage intermediate forms of governance, building up to a local ‘institutional thickness’ (Amin and Thrift 1994) which includes enterprise support systems, political institutions, and social citizenship.
- Finally, and as a consequence, building economic success is as much a matter of devising appropriate economic policies as wider social and political reforms to encourage the formation of social capabilities for autonomous action (Putnam 1993).”

Hence, institutionalist strategies to promote regional economic development are highly place specific as they are largely reliant on the ability to mobilize, foster, and coordinate local institutions which are the product of a unique developmental trajectory. The local cannot however be abstracted from its macro context. Regions, while perhaps possessing considerable latitude at times, are subsumed within nation states who set national-level macroeconomic and social policy which may not be congruent with the development of optimal institutional arrangements at a regional level.

14.7 Conclusions

In this chapter, we contrasted the neoclassical perspectives on economic growth with a range of alternative perspectives that we broadly referred to as demand-driven models of regional economic growth. Such demand-driven models have a number of important elements in common that were emphasized in the chapter (see also Setterfield 2010). Firstly, we showed how aggregate demand and in particular exports can affect the long-run growth path. Moreover, changing demand conditions can create path dependencies in regional development trajectories. Secondly, technological change is driven by a complex and broad range of processes that from this perspective are best modeled by the increasing returns to a greater scale of production, as formulated by Verdoorn’s law. Thirdly, full

resource utilization is not guaranteed given limited substitution possibilities, particularly in the short run. Fourthly, long-run stability is not ensured but dependent on a range of behavioral parameters. Additionally, economic expansion may face a balance of payments constraint and economies may diverge, even at the regional level. Fifthly, institutions matter and they embody a concern for equity and the potential feedback mechanisms of income inequality on growth.

We showed in [Sect. 14.2](#) how growth in exports yields regional income growth via a multiplier that is positively associated with the propensity to consume locally produced output and the propensity to invest but negatively related to regional tax rates and the extent to which government transfers are countercyclical. We then formulated the Dixon-Thirlwall model in which Verdoorn's law – economic expansion generates productivity growth – leads to both sustained export growth and steady-state income growth, with the latter in balance of payments equilibrium equaling the rate of growth of exports divided by the income elasticity of the demand for imports. We also reviewed theories that suggest that policies that encourage regional growth in wages and public expenditure can be growth enhancing. Finally, we argued that the effectiveness of such demand-driven growth policies depends on institutional settings.

All theories of regional development have positive and normative elements. They may lead to testable hypotheses that highlight incompatibilities to the extent that acceptance of empirical evidence of a key feature of one theory is incompatible with the predictions of another. However, the greater the level of abstraction and the more aggregate the nature of the data, the greater the likelihood that various competing theories may lead to predictions that are observationally equivalent. In general, as [Fig. 14.1](#) attempted to point out, the broad range of available theories may all contribute to a better understanding of the complex reality that we refer to as regional economic growth.

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