Summary

The paper investigates under what conditions an economy generates constant production levels. Prominent Post-Keynesian macroeconomic theories are used to examine this question theoretically. The mechanisms responsible for growth vary between different types of Post-Keynesian theories. This variety is used in order to develop an understanding of the diversity of conditions that are necessary for a post-growth economy to be stable. Central to the analysis are: the size and composition of government expenditures; technological progress and the marginal productivity of capital; taxation policies; the distribution of income and the composition of consumption; and the dominant type of business ownership in the economy.

Extended abstract

According to neoclassical theory, consumption is the prime determinant of welfare. This means that higher income will always make an individual happier. From this line of reasoning comes one of the most prominent convictions in economic thought: that an increases in income and consumption will increase human welfare (Boadway and Bruce, 1984). This line of reasoning has been discredited by several persuasive arguments. The increasing size of economic activities harm the environment to such an extend, that the disadvantages outweigh the benefits (Daly, 2005). High-income countries have reached a level of material wealth, where absolute consumption has become irrelevant for social welfare (not for individual welfare) (Easterlin and McVey, 2010). Distribution is now the important issue in welfare discussions (Wilkinson et al., 2009). In a saturated economy, it has become increasingly difficult to generate high growth rates (Chancel and Waisman, 2013). The societal structures that go along with such attempts have become detrimental to the well-being of the members of society (Rosa, 2013). Finally, under such conditions, it makes sense that the resources and environmental space available should be used for economic development in low-income, instead of high-income countries (Shrivastava and Kothari, 2012). If one takes such arguments seriously, the question arises, how to organize the economies of high-income countries without economic growth. Long standing macroeconomic approaches have been very silent on this issue. There are (besides some recent contributions) barely any explicit investigations on it. This is also true for postkeynesian theories. This paper contributes to filling this gap within the postkeynesian literature. Several theories are investigated concerning the question, 'under what macroeconomic conditions does an economy generate zero growth rates over a longer time period?'. Overall, the theories come to very differnent answers concerning the research question. In most instances, these answers are complementary rather than contradicting though.

Keynes, Harrad and Domar

The works of Keynes, Harrod and Domar lay the ground for postkeynesian growth theories and already entailed central concepts concerning the growth level and stable growth paths.

(a) In Harrad's theory, there is (first) a warranted growth rate, which is determined by the

savings rate and the capital coefficient. Second there is the actual growth rate. It depends upon the investments and the capital coefficient. Third, the natural growth rate is determined by population growth, the preferences of individuals to work and technological changes. Given the capital and labor coefficients, population growth and preferences to work determine the labor supply. Technological change alters the labor coefficient (Harrod, 1939). A zero-growth economy would be characterized by a low savings rate, little investments, and either a stagnating population or a reduction in average hours of work. There is - within this model - no reason why it should be unstable, lead to inequalities or have other detrimental effects on social welfare.

(b) Domar (1946) combines two lines of thought. The first one concerns the supply side: If labor productivity increases due to technological change, then the overall output needs to rise in order to prevent unemployment. As the capital and labor coefficients are given by the state of technology, capital accumulation and therefore investments are needed in order to facilitate output growth. Investments increase potential output, this is called the capacity effect. The second line of thought concerns the demand side. Investments lead to higher demand by a direct effect (e.g. rising demand for machinery) and an indirect effect (e.g. more workers are needed to produce the machinery, they earn more income of which they spend a fraction on some other goods - which means a further increase in demand). This is called the demand effect. In this model, zero growth takes only place, when investments are and stay zero. In this case, there is neither a demand nor a capacity effect and and the overall output stays the same over time.

(c) Keynes (2006) argues, that the amount of effective demand determines the size of production in the short run. Effective demand is the point where aggregate demand and supply meet. Aggregate demand consists of consumption and investments. The amount of consumption depends primarily on the size and distribution of income. Investments depend on the costs and expected revenues from additional production. On the supply side, the state of technologies and capital equipment determine the level of employment related to a certain production level. Employment is an important determinant of the size of income and therefore consumption. Additionally, the state of technologies and capital equipment influence the prospects to earn profits by new investments. We have a circular economic causal relationship: Consumption and investments (the demand side) lead to a certain production level. This leads (on the supply side) to a certain level of employment and incentives to invest, which in turn influences the demand side. For a stable zero-growth economy, effective demand would have to be of the same size over time. This would be the outcome of a specific combination between the distribution of income, cost (in particular wage) levels, the labor coefficient (and in how far new technologies change it) and monetary policy (which influences the interest rate and hence investments decisions).

2. Monetary theories

Some recent contributions have extended the possibilities of postkeynesian analyses on zero-growth economies. They emphasize the role of monetary issues in the economy. Here we look in particular at the theories of Binswanger and Lavoie.

(a) Binswanger: In Binswanger's theory (Binswanger, 2013) firms take bank credits to buy

labor from households and produce goods. They sell the goods to the households and receive payments, which they use to pay back the credits. Central to his theory is the idea that the goods produced in this period need to be sold with profit in the next period. The argument goes as follows: Firms' profits are the firms' income of the current period minus their expenditures of the former period. The firms' income of the current period is equal to the housholds' income of the current period, as firms pay wages and dividends that the households directly spend on consumption. It is also equal to the money firms spend on the production process of the current period. The firms' expenditures of the former period are equal to the amount of money the firms spend on the production process in the former period. Hence, in order for the firms to make profits on average, the firms need to spend more money in each period. The increasing firms' expenditures are facilitated by the creation of additional money. Firms take additional credits from banks and this creates additional money. Within Binswanger's theory, zero growth is not possible, as firms would – on average – not make profit and stop producing.

(b) Lavoie: As many other authors, Lavoie works with stock-flow consistent models. These models use balance sheets of firms, banks, central banks and households in order to analyze economies. In Lavoie's theory (Godley and Lavoie) firms produce what they can expect to sell and that the conditions of their production are given - that they have no means to alter them. These conditions include the technological state, the labor coefficient, the wage level, the interest rate, etc. Employment is therefore given by the technological state and the wage bill is in general exogenous to the model. The firms determine the prices due to their price-setting that is based on unit costs (majorly determined by the wage level) and some "normal" profit rate. Firms always want to keep a certain level of inventories in order to be able to react to fluctuating demand on short notice. If demand is higher than expected, inventories are being depleted. This makes firms produce more in the next period, on the one hand in order to restore their inventories, on the other hand because they expect the demand to be similar as in the last period. For a zero-growth economy to be stable, in this model it is most important that balance sheets stay roughly the same – so that no economic actor becomes overly indebted. It can be shown, that under certain conditions (concerning the wage level, central bank interest rate, price-setting, etc.), balance sheet transactions stay completely the same in a zero-growth environment.

Overall, it has been seen that specific sets of conditions lead to stable zero-growth environments in postkeynesian theories. The situation is essentially the same as is the case for growth-scenarios: Under certain conditions they are stable, these conditions are not necessarily in place though. Further investation is therefore needed what mechanisms could be implemented that support a stabilization, if the economy is set out of a zero-growth path.

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