Abstract

The paper aims to investigate the relation between structural change in the composition of production and the evolution of consumption patterns as affecting the pattern of economic growth across countries. Although the two dynamics are strongly linked (and self–reinforcing), they are seldomly investigated together.

We propose an agent–based micro–founded simulation model that articulates the relation between innovation on the supply side and the endogenous evolution of consumption ‘needs’ on the demand side. The micro–dynamics of both consumption patterns and innovation rely on the product defined as a vector of characteristics (in the Lancasterian fashion).

Following existing evolutionary growth models, we consider economies composed of a consumers sector and a capital sector. Unlike the existing literature, we take into consideration the whole set of innovation strategies for a firm: process, product and organisational innovation. Such extension, in fact, allows to endogenise a number of mechanisms that are shown to be responsible for the...
skewed (Pareto) distribution of incomes (e.g. economics of superstars and profit sharing).

First, changes in the production processes are modelled as investment in different capital vintages. Firms belonging to the final and capital good sectors make use of unskilled, skilled and engineering labour force, with differentiated wages and consumption preferences. By changing vintage, firm strategies alter the capital/labour composition of their technology, affecting the composition of the labour market and the income distribution in the consumers market. We also model the vertical relation between buyers and suppliers. Aggregate demand is therefore a result of the micro–dynamics of consumption patterns, which in turn depend on the skill composition of employment and income distribution dynamics.

Second, product changes are seen as a bi–univocal relation between changes in consumers preferences and consumption possibilities on the one hand, and firms’ technological competition to acquire oligopolistic shares of the market on the other hand.

Third, organisational changes affect the relative economic importance of executives by altering firms’ governance structure, therefore inducing changes in the income distribution and consumption behaviour. The latter is in fact linked to preferences formation within working classes and imitation across classes.

Further, consumers’ demand affects firms’ expectations in terms of market shares and, accordingly, constraints their plans of production, and R&D investment decisions. Consumption behaviour draws on both economic and psychological evidence collected from marketing studies, and adapts the theoretical construction developed by Valente in previous works.

Results obtained via numerical simulations of the model identify different scenarios of structural change and growth as a result of evolutionary micro–dynamics of innovation, production, skill composition of employment, income distribution and consumption patterns. The model thus provides new insights on the long–lasting debate on the relation between income distribution and growth patterns, disentangling the contribution of structural change.