Recent economic and financial crises have exposed mainstream economics to severe criticism, bringing present research and teaching styles into question. Building on a solid and vivid tradition of economic thought, this book challenges conventional thinking in the field of economics. The authors turn to the work of Luigi Pasinetti, who proposed a list of nine methodological and theoretical ideas that characterise the Classical Keynesian School. Drawing inspiration from both Keynes and Sraffa, this school has forged a long-standing and ambitious research programme often advocated as a competing paradigm to mainstream economics. Overall, the Classical Keynesian School provides a comprehensive analytical framework into which most non-mainstream schools of thought can be integrated. In this collection, a group of leading scholars critically assess the nine main ideas that, in Pasinetti’s view, characterise the Classical Keynesian approach, evaluating their relevance for both the history of economics and for present economic research.

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Pasinetti and the Classical Keynesians

Nine Methodological Issues

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Foreword
The Political Economy of Luigi Pasinetti

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Premise

We were pleased to accept the invitation from the editors of this volume, Enrico Bellino and Sebastiano Nerozzi, to write an introduction to this volume of essays, which is published in honor of Luigi Pasinetti’s ninetieth birthday. For many decades, we have been closely associated with Pasinetti’s research, though in different ways and in different capacities due to our belonging to different academic age cohorts. Through all those years, we have had many opportunities to discuss with him his contributions to economic theory, which we have always found greatly inspiring, even when following research tracks different from his. In a nutshell, we could say we all share with Pasinetti a deep commitment to the structural dynamics approach to economic theory and political economy. Our close personal and intellectual acquaintance with Pasinetti makes it difficult for us to write a standard comprehensive introduction, which would have to consider the manifold areas of our collaboration with him and involvement with his lines of research. On many occasions, we wrote essays dealing with specific features of his approach to economic theory. For this reason, we decided to focus our attention on what are, in our view, Pasinetti’s key contributions to theory-building and to highlight the unifying train of thought flowing through all of them.

Between Classical Political Economy and Keynes

Pasinetti, whose work provides the running thread of the chapters in this volume, is undoubtedly one of the most distinguished, original and inspiring theoretical economists of our time. The roots of his approach to economic analysis are to be found in the works of the classical political economists and before them in the writings of those early scholars, such as the English political arithmeticians and the French physiocrats, who addressed the economic system as a set of
relationships between ‘funds of wealth’ or productive sectors, giving rise to a structure that could be investigated independently of a direct attention to the decisions of individual or collective actors. The structural roots of Pasinetti’s approach to economic theorising are explicit in all the domains of economic research to which he contributed in scholarly writings spanning over six decades. The criticism of unwarranted generalisations from individual decision makers to the economic system as a whole, without taking into account the structural interdependencies between components of the economic system (the economic system’s internal structure), is a running thread of Pasinetti’s contributions to economic analysis, from his early appraisal of measures of productivity change to his most recent writings on structural dynamics and the theory of value. Rejection of methodological individualism is a distinctive feature of Pasinetti’s work, which, however, maintains a distance from traditional Keynesian approaches in its attention to the internal structure of production relationships and the constraints and opportunities facing a production economy evolving through time under the influence of technical progress and changing per capita consumption of physical goods and services. Pasinetti’s contribution is firmly rooted in the reappraisal and analytical development of classical and pre-classical strands of production theory that have emerged since the first half of the twentieth century with the writings of economists such as Wassily Leontief, Piero Sraffa and John von Neumann (Quadrio Curzio, 1993; Scazzieri, 1993). Pasinetti has contributed to this line of thinking by systematically linking it to the theory of structural economic dynamics and the analysis of the institutional and policy changes that are needed if economic systems are to evolve dynamically while satisfying certain desirable properties such as full employment. The beginning of Pasinetti’s intellectual path is at the crossroads between the Catholic University of Milan, where his initial academic training took place, and the University of Cambridge, where he spent most of his postgraduate training and where he started his academic career. This crossroads provides a cue to interpreting many of the intellectual routes taken by Pasinetti’s work as an economic theorist (Baranzini and Harcourt, 1993; Baranzini and Mirante, 2016, 2018). The academic setting of post–World War II Italy was one in which a distinguished tradition rooted in general equilibrium theory à la Walras–Pareto coexisted with a robust interest in the prerequisites for the successful industrial transformation of an economic system along a
growth trajectory. Economic theorising of the time at the University of Cambridge provided an ideal matching ground to Pasinetti’s original Italian training, as pupils and followers of John Maynard Keynes were exploring a variety of ways in which Keynes’s macroeconomic theory could be developed to address the conditions of dynamic economies subject to intense capital accumulation and structural change. Pasinetti’s early theoretical work shows a strong influence of the Cambridge ‘dynamic Keynesian’ tradition combined with the classical and structural influence from Sraffa, Leontief, Richard Goodwin and Richard Stone. It is at this crossroads that we may trace the origins of the intellectual path of Pasinetti as a classical economist whose work is firmly rooted in the circular approach to ‘the interdependence of means of production, production processes and produced goods’ (Quadrio Curzio, 1986, p. 314) while at the same time being interested in the view of production as a transformation apparatus leading from labour and (produced) means of production to final goods and as a structural apparatus centred on the role of produced intermediate inputs in the reproduction and expansion of the economy (Quadrio Curzio, 1986, pp. 313–314).

Structural Interdependence, Savings and Capital Accumulation

Structural interdependence is a distinctive feature of Pasinetti’s contributions to economic theory, both in his criticism of unwarranted generalisations from individual behaviour to systemic properties and in his criticism of macroeconomic theorising carried out without considering that changes in the composition of aggregate magnitudes are inevitable due to the very impulses driving the overall system’s dynamics. Pasinetti’s early work on the measurement of productivity changes was already a clear instance of this attitude, leading him to argue that productivity changes cannot be effectively measured unless the interdependence between productive sectors is fully accounted for; this insight resulted in highlighting the reproducible character of capital goods as means of production: ‘There have been some attempts by economists … to introduce capital into the picture, by making use of theoretical notions like the production function, but these attempts – in the writer’s opinion – have neglected an important characteristic of capital – that it is reproducible and that its process of production is also subject to technical change’ (Pasinetti, 1959, p. 270). In a
complementary vein, Pasinetti’s reformulation of the so-called Cambridge equation \( r^* = \frac{n}{s_c} \) emphasises the importance of entering the black box of macroaggregates (in this case, the aggregate propensity to save) to analyse the way in which changes in the composition of the income received by different social groups may be a trigger of macroeconomic dynamics. Pasinetti’s reformulation of the Cambridge equation provides an analytical benchmark highlighting that, in a macroeconomy of pure profit receivers (called ‘capitalists’), the rate of profits \( r^* \) compatible with full employment at a ‘natural rate’, determined by the rates of population growth and technical progress, is independent of the propensity to save of the other category of income receivers (labelled ‘workers’), whose propensity to save \( s_w \) does not enter the equation. This analytical benchmark opens the analysis of the conditions for steady growth to the consideration of the differentiated saving and consumption behaviour of different groups in society (Baranzini, 1975, 1987, 1991, 1993). This provides a bridge between the dynamics of the macroeconomy and the long-term evolution of social and demographic structures, highlighting ‘the link between the composition of income, the attitude towards the next generation, and the development, existence, and survival of different socio-economic groups or dynasties in the long-run equilibrium’ (Baranzini, 1991, p. 220).

Towards a Theory of Structural Economic Dynamics

The search for the analytical linkages between systemic conditions and compositional changes of macroaggregates is also at the root of Pasinetti’s decades-long investigation into the long-run evolution of an industrial economic system subject to the twin impulses of technical progress and of changes in per-capita consumption of physical goods and services. The challenge of structural transformation has been fundamental in stimulating the analysis of economic interdependencies among different sectors of the economy and their relationship with the overall dynamics of the wealth of nations since the beginning of systematic economic thinking (Quadrio Curzio, 1967, 1975, 1986; see also Hagemann, Landesmann and Scazzieri, 2003). Seventeenth- and eighteenth-century scholars, such as the political arithmeticians and the physiocrats, contributed insights into the anatomy of economic systems that economists such as James Steuart, Adam Smith, Thomas Robert Malthus and David Ricardo developed into a comprehensive
assessment of the fundamental dynamic impulses leading to the transformation of economic structures. Later economists, such as Friedrich List, Werner Sombart, Joan Robinson, Nicholas Kaldor, Paolo Sylos Labini and John Hicks, followed suit when examining the long-run dynamics of structural change in economic systems subject to the discontinuities induced by technical change, mechanization and increasing competitive challenges at the international level (Quadrio Curzio and Pellizzari, 1999). Pasinetti’s decades-long theoretical endeavour in the latter part of the twentieth century and up to the present has been pivotal in establishing the economics of structural change as a distinctive approach to the analysis of economic dynamics. Starting with the PhD dissertation he submitted to the Faculty of Economics and Politics of the University of Cambridge in September 1962 (Pasinetti, 1962), Pasinetti has identified structural change as the fundamental feature of the long-run dynamics of economic systems since the First Industrial Revolution and has consistently pursued the objective of a theory of structural economic dynamics as a means to understanding the constraints and opportunities facing any economic system following a trajectory of sustained long-run expansion. The gist of Pasinetti’s contribution is to be found in the dual belief that (i) since the First Industrial Revolution, the evolution of industrial economies has been subject to producer learning in the shape of technical progress and to consumer learning in the shape of the Engel’s law and that (ii) it is possible to identify analytical conditions turning the uneven dynamics generated by the two above dynamic factors into an orderly process in which non-proportional changes of productive sectors follow a path compatible with the maintenance over time of the full employment of the labour force and with the full utilisation of productive capacity (Pasinetti, 1965, 1981, 1993).

Vertical Integration in Economic Analysis: Measuring Technical Progress and Assessing the Economy’s Dynamic Potential

The search for a conceptual framework suitable to the analysis of structural dynamics under full employment and full capacity utilisation led Pasinetti to outline central analytical contributions to the theories of production, growth, value and income and wealth distribution. These contributions are rooted in an original combination of classical and Keynesian lines of investigation, which are developed by also building
on Sraffa’s theory of a multisectoral production economy. Pasinetti’s exploration of the notion of vertical integration in economic analysis (Pasinetti, 1973) is a central building-block in the construction of a theory of structural dynamics that, consistently with Pasinetti’s early view of capital goods as reproducible means of production whose production process is subject to technical change (see Pasinetti, 1959), gives prominence to the need of measuring changes in the productive capacity of heterogeneous capital goods whose physical characteristics may change from one period to another. Vertical integration allows for addressing this problem by representing the production system as an apparatus for transforming a certain collection of production facilities (such as certain stocks of capital goods and certain quantities of labour) into a collection of final consumer or investment goods. In particular, vertical integration leads to the construction of a particular unit of measurement, the unit of vertically integrated productive capacity, which ‘continues to make sense, as a physical unit, whatever complications technical change may cause to its composition in terms of ordinary commodities’ (Pasinetti, 1973, p. 24). The representation of a production economy in terms of vertically integrated productive capacity and vertically integrated labour coefficients has remarkable analytical implications for the measurement of technical progress: ‘With technical progress, any relation in which capitals goods are expressed in ordinary physical units becomes useless for dynamic analysis. But relations expressed in physical units of productive capacity continue to hold through time, and actually acquire an autonomy of their own, quite independently of their changing composition’ (Pasinetti, 1973, p. 28). What is also remarkable is that, in contrast to aggregate measures of the capital stock frequently used in economic literature, measuring the capital stock in terms of vertically integrated productive capacity does not conceal the physical identity of particular collections of capital goods at any given time: by running the vertical integration algorithm backwards, it is possible to return ‘to the ordinary physical units any time that this is necessary, within each period’, even if ‘a different result will be obtained for each single period’ (Pasinetti, 1973, p. 28). Building on his original vertical integration algorithm, Pasinetti subsequently introduced a new

1 For a discussion of this feature of Pasinetti’s theoretical framework and of its relationship with Smith’s representation of the economy, see Quadrio Curzio and Scazzieri, 1984, 1990.
set of vertically integrated subsystems (the ‘vertically hyper-integrated sectors’), which include ‘not only the labour and the means of production for the reproduction of each subsystem, but also the labour and the means of production necessary to its expansion at its particular rate of growth \((g+r_i)\)’ (Pasinetti, 1988, pp. 126–127). Vertical integration and vertical hyper-integration provide building-blocks to the analysis of the fundamental properties of an economic system that expands over time along a structural change trajectory. This type of dynamic analysis is carried out in terms of what Pasinetti considers to be ‘pure theory’, which he identifies as a type of investigation in which it is necessary to achieve ‘a clear distinction between givens and unknowns; and in which it should be possible (when necessary) to introduce ad hoc hypotheses in order to make manageable the transformation and simplification of systems that would otherwise be difficult to solve’ (Pasinetti, 2013, p. 52). This approach should allow the economic theorist to move beyond the stage of static or stationary analysis and to fully engage with the complexities of dynamic systems subject to structural change:

I think that ‘pure theory’ can move beyond the ‘photography’; in other words, that it could also ‘film’ a moving economic system. We know that the world, especially the industrial world, is continuously evolving, and the direction of some of its movements shows features of persistence that are typical of a first stage of economic analysis (the stage concerning fundamental relationships). Let us think of the progressive and inevitable changes of productivity, of the tendency towards the mechanization of production processes, and of the tendency implicit in Engel’s law and conditioning consumer demand. (Pasinetti, 2013, p. 52)

Distinguishing between the Fundamental and the Contingent Properties of Economic Systems: ‘Objective Efficiency’ and the Theory of Value

The emphasis on the fundamental properties of the economic system, as distinct from the contingent and transitory features of it, is a constant element of Pasinetti’s view of economic theorising which had already been clearly expressed in his inaugural lecture delivered at the Catholic University of Milan on 27 January 1965:

There are economic relationships that are so fundamental to an industrial society that they can be defined independently of the institutional-political-
juridical set-up that a society has adopted. Think of the structural interdependence linking together the industrial sectors of an economic system, or else of the relationships among the increases of average productivity, of the level of wages, of investments, and of the general level of prices. These relationships can be stated in terms of objective efficiency, or as they have been called: in ‘natural’ terms. They remain the same in any institutional set-up, whether it is a market economy or a centrally planned economy. They are relationships which usually admit causal-type chains, even if they contain interdependent sub-systems. (Pasinetti, 1964–1965 [2019], p. 362)

Many years later, Pasinetti further refined this point of view when introducing what he called a ‘separation theorem’ for economic investigations:

This theorem states that we must make it possible to disengage those investigations that concern the foundational bases of economic relations – to be detected at a strictly essential level of basic economic analysis – from those investigations that must be carried out at the level of the actual economic institutions, which at any time any economic system is landed with, or has chosen to adopt, or is trying to achieve. (Pasinetti, 2007, p. 275)

The fundamental level of investigation provides the analytical context to Pasinetti’s theory of structural economic dynamics. It is at this level of inquiry that Pasinetti carries out his search for the pattern of non-proportional changes compatible with a dynamic trajectory associated with full employment and full utilisation of productive capacity (Pasinetti, 1981). And at this level of inquiry, Pasinetti outlines the simplified framework of a pure labour economy allowing him to formulate what he has called a ‘genuinely macroeconomic condition’ (the condition $\sum c_d = 1$), which represents ‘a characteristic of the economic system as a whole, not of its sectoral features’ (Pasinetti, 1993, p. 20). At the same time, the condition avoids the simplification of the aggregate approach by maintaining a focus on the pattern of connectivity that links together economic activities and makes them subject to a systemic constraint. The fundamental level of investigation is also the analytical context of Pasinetti’s exploration into the theory of value, which Pasinetti develops by transforming Ricardo’s search for an ‘invariable measure of value’ into the search for a ‘dynamic standard commodity’, which he defines as that composite commodity that ‘always “commands” through time as many physical commodities as correspond to the quantity of (augmented) labour embodied into them’ (Pasinetti, 1993, p. 74). The dynamic standard commodity meets the Ricardian requirement of an ‘invariable standard
of value’ in the setting of a dynamic economy with technical progress. This ensures that changes in prices expressed in terms of this standard could be explained in terms of changes in the value of the commodity being measured rather than in terms of changes in the commodity used as standard of value. Under these conditions, the problem arises of how to ensure that the structural requirement of the proportionality of ‘natural’ relative prices to the corresponding physical quantities of labour, which is fundamental in a pure labour economy, is also satisfied in a dynamic economy under technical progress and inter-personal debt-credit relations. Pasinetti’s way of addressing this problem has been to introduce a ‘natural’ rate of interest defined as ‘that rate of interest that maintains through time the equality between labour embodied and labour commanded, i.e. that maintains unaltered through time all purchasing power relations in terms of labour’ (Pasinetti, 1993, p. 92). The switch to the setting of a capital-using economy does not change the essence of the problem to be addressed. For, in this case, the economy has to face the reproducibility and expansion issue (the self-replacement and enlargement of the stocks of intermediate inputs needed in production processes), but it still has to ensure that relative prices meet the structural coordination requirements that proportionality with relative quantities of labour is intended to ensure in a pure labour economy (Quadrio Curzio, 1980). In this case, Pasinetti identifies the need for each vertically integrated sector to meet a profitability requirement that is normally different from one sector to another, thereby introducing the need for a ‘natural’ economic system to allow for a range of differentiated ‘natural’ rates of profits ensuring both the reintegration of the used-up productive capacity and the expansion of the stocks of intermediate commodities in each sector according to the ‘own’ rate of growth of that sector (Pasinetti, 1981, 1988).

Institutions and Institutional Change: From Natural Dynamics to Policy Assessment

The analysis of the ‘natural’ (i.e., structural) profitability conditions that a dynamic economy should meet on a structural change trajectory is one of the routes along which Pasinetti’s theoretical work has opened up to the analysis of institutions and institutional change (Scanzieri, 1996, 2012a, 2012b). This field has been central in the most recent of Pasinetti’s contributions, going back at least to his volume Keynes and the Cambridge Keynesians (Pasinetti, 2007). Here, Pasinetti’s objective
to explore the manifold implications of a theory of structural dynamics for the analysis of economic institutions and the design of economic policies becomes fully visible:

The natural economic system, as I see it, does not come down to reality from heaven. It does not automatically come into being by itself. It has to be brought into actual existence – by us. But it is a moving framework (not a stationary one). This means that, within it, many profound tendencies are constantly at work, from its very foundations, which are continually making it evolve, i.e. change in its structure . . . To bring the natural economic system into existence, to close its degrees of freedom and then to keep it going through time, a set of procedures, rules, regulations, administrative bodies is required, which for short I have called institutions. (Pasinetti, 2007, p. 306)

The consideration of the natural economic system becomes a structural benchmark in which specific assumptions give transparency to constraints conditioning individual actors or collective bodies, as well as to opportunities that individual actors or collective bodies may or may not take up along dynamic trajectories subject to tendencies continuously at work such as technical progress and Engel’s law (Scazzieri, 2018; Cardinale and Scazzieri, 2019). Pasinetti’s intellectual path comes full circle in his most recent explorations of monetary and debt-credit relationships. In this connection, Pasinetti highlights the dual character of money between means for transacting in the exchange sphere and means for governing deep relational and institutional structures in the social sphere (a conception partly derived from the work of Philip Grierson at Cambridge; see Grierson, 1977). This point of view has led Pasinetti to explore the relationship between rates of interest in the financial sphere and rates of profits in the production sphere and to highlight that, while the concept of ‘rate of interest’ emerges very early as regulator of interpersonal debt-credit relationships, the concept of ‘rate of profits’ has acquired prominence only at a much later stage due to the central position of productive capital since the First Industrial Revolution (Pasinetti, 2019). The institutional turn taken by Pasinetti’s explorations into the long-term dynamics of industrial economies has reinforced his commitment to assessing institutions and policies from the point of view of the constraints and opportunities generated by fundamental interdependencies in the economic system as a production economy (Pasinetti, 2022).
A Summing Up

Pasinetti’s contribution to economic scholarship has been invaluable. It has given new prominence and theoretical foundations to a research field of pressing relevance in the contemporary world. His distinctive style of economic theorising is characterised by a selective concentration of attention on aspects he considers to be indispensable to the understanding of a modern industrial economy (Pasinetti, 1986). At the same time, the analytical framework he has provided is open to a multiplicity of developments that may be inspired by the consideration of stylised facts that are different from those central in his framework (such as the relationship between technical progress and resource utilisation under structural or environmental scarcity or the relationship between accumulation behaviour and demographic dynamics) and yet may be conducive to further explorations into the links between the conditions for structural change on a ‘natural’ path and the actual institutions and policies that may get us closer or more distant from that path. This openness to further developments is a characteristic feature of Pasinetti’s work in economic theory and will surely be a feature of its enduring influence in economic scholarship.

References


